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Volume I, 1953-54

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LEADERS IN AMERICAN SCIENCE

*An Illustrated Biographical Directory of
Eminent Leaders in Research, Industrial, Governmental,
and Educational Scientific Fields in the
United States and Canada*

ROBERT C. COOK, B.S., M.A., ED.D. (Columbia), Fellow, A.A.A.S.
Editor-in-Chief

MISS ELEANOR CARROLL (Sophia Newcomb)
Associate Editor

First Edition (Vol. I, 1953-54)

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PREFACE

This is the first volume of a biennial series to be known as **LEADERS IN AMERICAN SCIENCE**. Herein we are listing in biographical form, with many photographs, and in name notations, the men and women we believe to be the leaders in scientific work in the United States and Canada.

Like many new ventures, the compilation of this volume has had many difficulties. First, there was the antipathy of many scientists in filling out questionnaires. As a group, scientists are busy people and have little time for such routine tasks. Second, a great many of those receiving questionnaires were rather of the opinion that the distinguished volume, **AMERICAN MEN OF SCIENCE**, was complete and sufficient in the field of biographical science. Third, a few thought of the new **LEADERS IN AMERICAN SCIENCE** as a mere money making scheme. Little did this small group know that the editor was risking \$25,000 of his own money in research, editorial work, advertising, printing, and binding in order to assure the success of the new volume.

We hope you will like this initial **LEADERS IN AMERICAN SCIENCE**. It must be pointed out that every biographical sketch included is written from original data supplied by the biographee. Where only names are listed, we have requested data and have failed to receive them. Most positively, it must be stated that the eminence of the biographee was the reason for the inclusion of sketches and that in no case was a financial motive involved in the inclusion of any biographical sketch.

In the beginning, our plan was to have the scientific societies, associations, and organizations make recommendations for names to be included in the volume. After corresponding with over 600 such groups, we came to the conclusion that these scientific organizations could not be of too much help with the problem. Quite logically, very few were willing to point out their most eminent members. In many cases it would have been obviously impossible; for example, the American Chemical Society has over 63,000 members. We therefore decided to include: (1) all Fellows in national science organizations; (2) all members of the National Academy of Science, Sigma Xi, and a few others; (3) the men and women who were personally recommended by reputable scientists, and, (4) officers in national scientific organizations. In addition, we checked the columns of **TIME** for the past four years for newsworthy names, and the past issues of the **WORLD ALMANAC** for winners of science awards.

All told, we have done everything within our power to include names which will really make this new volume worthy of the title, **LEADERS IN AMERICAN SCIENCE**. This is an original work and no check whatever has been made with the eminent volumes **WHO'S WHO IN AMERICA** and **AMERICAN MEN OF SCIENCE**. No doubt we have unintentionally omitted many, many worthy names. We hope that our omissions will not be too severely criticized in view of the newness of the volume.

One section of which we are very proud is the "Poll of Distinguished Scientists." For many years there has been a need for such a compilation. The outstanding volume, **WHO KNOWS—AND WHAT**, approached this problem on a more inclusive basis. The purpose of our compilation is to list the opinions of the scientists themselves as to the most distinguished men and women in their own specialized fields. To obtain this information, we sent out over 50,000 questionnaires to every conceivable kind of scientist. From these we obtained over 2400 recommendations. If a scientist recommended himself (and some did), we discarded the questionnaire. Some men and women were recommended by as

many as twenty people. Our first inclination was to star the leading person in each specialized field. We found this procedure to be impractical because of the small number of recommendations in highly specialized fields. Again, this list of distinguished scientists is not of our choosing; it is based on the choices of thousands of reputable scientists who themselves did the choosing. In order to check the complete compilation, we sent out the list in mimeographed form to hundreds of scientists and asked for criticisms on those included and suggestions for additional names. All of these suggestions are reflected in the final published list included in this volume.

We are often criticized for the inclusion of pictures in our biographical volumes. Personally, we feel this is one of the most valuable features of the volumes. Suppose you want to meet a stranger, Dr. X, at the A.A.A.S. meeting. What better introduction could you have than a picture of him together with his biographical material? Others scoff at pictorial biographical volumes as being *vanity* volumes. This might be true of some in the past. WHO'S WHO IN CANADA uses pictures and our policy will be to continue the publication of as many pictures as possible.

Some data not easily available from other sources are included in LEADERS IN AMERICAN SCIENCE. This includes the main field of specialization, certain personal data, war record, and several other items of interest.

Will LEADERS IN AMERICAN SCIENCE be continued as a publication every other year? This question will be answered in the main by those who find it to be a worthwhile and useful volume. It should have great use in college, public, business, and industrial libraries for reference. The editor will welcome frank appraisals of the volume for both present and future use. The area of science is a constantly changing field and some attempt should be made at frequent intervals to seek out the hundreds of younger men and women who are deserving of recognition for teaching, research, and other achievements in the science fields.

We wish to thank the hundreds of scientific men and women who have been helpful through recommendations and suggestions. The editor is a busy college president (and not the eminent geneticist of the same name, as some would think) and he is indebted to his associate editor, Miss Eleanor Carroll, and to his editorial assistants, Miss Mary Armstrong, Mrs. Betty Hall, Miss Jean Claire Jones, and to Mrs. Aileen Butler, for diligent work in making this volume possible.

ROBERT C. COOK, *Editor*

October 1, 1953.

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ACOUSTICS

BERANEK, LEO L., Prof. of Communications Engrng. and Technical Dir. of Acoustics Lab., Mass. Inst. of Tech., Cambridge, Mass.
BOLT, R. H., Mass. Inst. of Tech., Cambridge, Mass.
DRYDEN, HUGH, N. A. C. A., 1724 F St., Washington 25, D. C.
FLETCHER, HARVEY, Bell Telephone Labs., N. Y. C.
HUNSAKER, JEROME C., M. I. T., Cambridge, Mass.
KOCK, WINSTON E., Bell Telephone Labs., Murray Hill, N. J.

ACTUARIAL SCIENCE

PERRYMAN, FRANCIS S., Asst. U. S. Manager and Actuary, Royal Liverpool Insurance Group, 150 William St., N. Y. 38, N. Y.

AERODYNAMICS and AERONAUTICAL RESEARCH

ALLEN, H. JULIAN, Aeronautical Rsch. Scientist, NACA, Moffet Field, Calif.
DRYDEN, H., N.A.C.A.
DURAND, WILLIAM F., Stanford Univ., Palo Alto, Calif.
FURNAS, C. C., Dir. Management of Rsch., Cornell Aeronautical Lab., Inc., Box 235, Buffalo 21, N. Y.
JONES, ROBERT T., Aeronautical Rsch. Scientist, NACA, Moffet Field, Calif.
KARMAN, TH. VON, Calif. Inst. of Tech., Pasadena.
MILLIKAN, CLARK B., Calif. Inst. of Tech., Pasadena, Calif.
ORGDEN, HUGH, Natl. Adv. Com. for Aeron., Washington, D. C.
PICCARD, JEAN F., Univ. of Minn., Minneapolis, Minn.
STOCK, JOHN, Langley Field, N.A.C.A.
THEODORSEN, THEODORE, 7203 Meadow Lane, Chevy Chase, Md.
TSIEN, HSUE-SHEN, Calif. Inst. of Tech., Pasadena.

AGRICULTURAL ECONOMICS

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WARREN, STANLEY W., Prof. of Farm Management, Cornell Univ., Ithaca, N. Y.

AGRICULTURAL RESEARCH

AAMODT, OLAF S., U. S. D. A., Beltsville, Md.
CHAPMAN, P. J., N. Y. Agri. Expt. Sta., Geneva, N. Y.
CHESTER, K. STARR, Agril. Rsch., Battelle Memorial Inst., Columbus 1, Ohio.
DRECHSLER, CHARLES, Plant Indus. Sta., Beltsville, Md.
HAMBLETON, JAMES I., U. S. Dept. of Agri. Bureau of Entomol., Beltsville, Md.
HOPKINS, E. S., Central Exptl. Farm, Ottawa, Ont., Can.
JENNY, HANS, Soils Dept., Coll. of Agri., Univ. of Calif., Berkeley, Calif.
KELLEY, WALTER P., Univ. of Calif., Berkeley, Calif.
LERNER, I. M., Univ. of Calif., Berkeley, Calif.
MOWERY, DAVID, Monsanto Chem. Co., St. Louis, Mo.
NEATBY, K. M., Dir. Sci. Service, Sci. Service Bldg., Ottawa, Ont., Canada.
PEARSON, R. W., Dept. of Agron. and Soils, Auburn, Ala.
STAKMEN, E. C., Univ. Farm, St. Paul, Minn.
TATE, H. D., U. S. Rubber Co., Bethany, Conn.

AGRONOMY

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ROMER, ALFRED SHERWOOD, Harvard Univ.
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ANATOMY, VETERINARY

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ANIMAL HUSBANDRY

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WINTERS, L. M., Animal Husbandry, Univ. Farm, St. Paul, Minn.

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BOHSTEDT, GUSTAV, Animal Husbandry Dept., Univ. of Wis., Madison, Wis.
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LOOSLI, J. K., Lab. of Animal Nutrition, Cornell Univ., Ithaca, N. Y.
MITCHELL, H. H., Animal Nutrition Dept., Univ. of Ill., Urbana, Ill.
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ANIMAL PARASITOLOGY

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ANTIBIOTICS

WAKSMAN, SELMAN A., N. J. Agril. Expt. Sta., New Brunswick, N. J.

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HOOTON, E. A., Peabody Museum, Harvard Univ., Cambridge, Mass.
KLUCKHOHN, CLYDE, Harvard Univ., Cambridge, Mass.
KROEBER, A. L., Dept. of Anthropol., Univ. of Calif., Berkeley 4, Calif.
LINTON, RALPH, Dept. of Anthropol., Yale Univ., New Haven, Conn.
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BROUWER, DIRK, Yale Univ. Observatory, New Haven, Conn.
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SHANE, C. D., Lick Observatory, Mt. Hamilton, Calif.
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BROADHURST, JEAN, retired, Columbia Univ., N. Y., N. Y.
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LOCHHEAD, ALLEN GRANT, Div. of Bacteriol. & Dairy Rsch., Sci. Service, Dept. of Agri., Ottawa, Ont., Canada.
McCULLOUGH, NORMAN B., Natl. Insts. of Health, Bethesda, Md.
MACHEAD, COLIN, New York Univ. Med. Scho., N. Y., N. Y.
MEYER, KARL F., Hooper Foundation, Univ. of Calif. Med. Center, San Francisco, Calif.
SHERWOOD, NOBLE P., Univ. of Kans., Lawrence, Kans.
STIMPert, F. D., Parke Davis & Co., Detroit, Mich.
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WINSLOW, C. E. A., Yale Med. Coll., New Haven, Conn.

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- WEST, C. J., The Inst. of Paper Chem., Appleton, Wis.

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ALLISON, JAMES B., Rutgers Univ., New Brunswick, N. J.
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BALLS, ARNOLD KENT, Dept. of Chem., Purdue Univ., W. Lafayette, Ind.
BELIREUS, OTTO K., Eli Lilly & Co., Indianapolis, Ind.
BERNFELD, PETER, 30 Bennet St., Boston, Mass.
CARTER, HERBERT E., Univ. of Ill., Urbana, Ill.
CHAIKOFF, I. L., Div. of Physiol., Univ. of Calif. Schl. of Med., Berkeley, Calif.
CHERNICK, S. S., Natl. Inst. of Health, Bethesda, Md.
CLARK, W. MANSFIELD, Johns Hopkins Univ., Baltimore, Md.
CORI, C. F., Dept. of Biochem., Washington Univ., St. Louis, Mo.
CORWIN, ALSOPH, Dept. of Chem., Johns Hopkins Univ., Baltimore, Md.
DOISY, E. A., St. Louis Univ. Schl. of Med., St. Louis, Mo.
DU VIGNEAUD, VINCENT, Dept. of Biochem., Cornell Med. Coll., N. Y., N. Y.
EILER, JOHN J., Univ. of Calif. Coll. of Pharmacy, San Francisco, Calif.
ELVEJHEM, C. A., Univ. of Wis., Madison, Wis.
EVANS, EARL, Univ. of Chicago, Chicago, Ill.
HENDRICKS, S. B., Plant Indus. Sta., Beltsville, Md.
KING, C. G., Columbia Univ., New York, N. Y.
LIPMANN, FRITZ, Mass. Gen. Hospital, Boston, Mass.
OCHOA, SEVERO, Dept. of Pharmacol., N. Y. Univ. Coll. of Med., N. Y., N. Y.
ROBERTS, R. B., Carnegie Inst., Washington, D. C.
ROBOZ, ELIZABETH, Assoc. Prof. Biochem. Dept., Schl. of Med., Georgetown Univ., 3900 Reservoir Rd., N. W., Washington, D. C.
ROSE, WILLIAM C., Univ. of Ill., Urbana, Ill.
STANLEY, WENDELL, Univ. of Calif., Berkeley, Calif.
TRIEBOLD, HOWARD O., Dept. of Agri. Biochemistry, State Coll., Pa.
VAN SLYKE, D. D., Brookhaven, N. Y.
WILLIAMS, ROGER, Univ. of Tex., Austin, Tex.
WOOD, HARLAND G., Biochem. Dept., Western Reserve Univ. Schl. of Med., Cleveland, Ohio.

BIOCHEMISTRY and ENZYMES

- ADAMS, MILDRED, Bureau of Human Nutrition, U. S. Dept. of Agri., Washington, D. C.
BARON, S., Univ. of Chicago, Chicago, Ill.
BECHMANN, C. D., Columbia Univ., New York, N. Y.
DAWSON, C. R., Columbia Univ., New York, N. Y.

FRENCH, DEXTER, Iowa State Univ., Ames, Iowa.
FRUTON, DR., Yale University, New Haven, Conn.
KING, GLEN CHARLES, Prof. of Chem., Columbia Univ., New York, N. Y.
KUNITZ, DR., Princeton Univ., Princeton, N. J.
SMITH, FRED, Univ. of Minn., St. Paul, Minn.
WOLFROM, M. L., Ohio State Univ., Columbus, Ohio.

BIOCHEMISTRY and GENETICS

BEADLE, G. W., Kerckhoff Lab., Calif. Inst. of Tech., Pasadena, Calif.
MITCHELL, H. K., Kerckhoff Lab., Calif. Inst. of Tech., Pasadena, Calif.

BIOCHEMISTRY and NUTRITION

BIRD, H. R., Bureau of Animal Industry, Beltsville, Md.
DEUEL, HARRY, Dean of Grad. Coll., Univ. of So. Calif., Los Angeles, Calif.
ELVEHJEM, CONRAD, Dean of Grad. Coll., Univ. of Wis., Madison, Wis.
JUKES, THOMAS H., Dept. of Nutrition & Physiol. Rsch., Lederle Labs., Pearl River, N. Y.

BIOLOGY

BILLINGS, W. D., Box 9005, Univ. St., Reno, Nev.
KINTNER, EDWARD, Prof., Manchester Coll., N. Manchester, Ind.
SCHRADER, FRANZ, Prof. of Biol., Columbia Univ., N. Y., N. Y.
SHAVER, JOHN R., Dept. of Zool., Univ. of Mo., Columbia, Mo.
WEISS, PAUL ALFRED, 5816 Blackstone Ave., Chicago 37, Ill.
WHALEY, W. GORDON, Univ. of Tex., Austin, Tex.
WILSON, WALTER, Brown Univ., Providence, R. I.

BIOLOGY, AQUATIC

DOUDOROFF, P., Environmental Health Center, 1014 Broadway, Cincinnati 2, Ohio.
JACKSON, C. F., Prof., Univ. of N. H., Durham, N. H.
TARZWELL, C. M., Environmental Health Center, 1014 Broadway, Cincinnati 2, Ohio.

BIOLOGY, OYSTER

LOOSANOFF, VICTOR L., U. S. Fish & Wildlife Service, Milford, Conn.
NELSON, THURLOW, Dept. of Zool., Rutgers Univ., New Brunswick, N. J.

BIOLOGY, SOCIAL

POPENOE, PAUL, Gen. Dir., Amer. Inst. Family Relations, 607 S. Hill St., Los Angeles, Calif.

BIOMETRICS

COCHRAN, W. G., Johns Hopkins Univ., Biostatistics Dept., Baltimore, Md.

BIOPHYSICS

BRONK, D. W., Pres., Rockefeller Institute, N. Y. C.
BRONK, DETLEV, John Hopkins Univ., Baltimore, Md.
GLASSER, OTTO, Cleveland Clinic, Dept. of Biophysics, Cleveland, Ohio.
HARTLINE, H. KEEFER, Chmn. Biophysics Dept., Johns Hopkins Univ., Baltimore, Md.
JOHN, THEODORE L., Univ. of Calif., Los Angeles, Calif.
LAUFFER, MAX A., Dept. of Biophysics, Univ. of Pittsburgh, Pittsburgh, Pa.
LUND, E. J., Univ. of Texas, Austin, Texas.
MILNE, LORUS J., Univ. of N. H., Durham, N. H.
POLLARD, ERNEST C., Sloane Physics Lab., Yale Univ., New Haven, Conn.

BOTANY

ANDERSON, EDGAR, Washington Univ., St. Louis, Mo.
BABCOCK, E. B., Coll. of Agri., Univ. of Calif., Berkeley 4, Calif.
BAILEY, I. W., Harvard Univ., Cambridge, Mass.
BARTLETT, H. H., Univ. of Mich., Ann Arbor, Mich.
ESAU, KATERINE, Coll. of Agri., Univ. of Calif. at Davis, Davis, Calif.
FRIESNER, RAY C., Dean of Butler Univ., Indianapolis, Ind.
FULLER, HARRY J., Dept. of Botany, Univ. of Ill., Urbana, Ill.
LAWRENCE, H. M., Cornell Univ., Ithaca, N. Y.
MERRILL, ELMER DREW, Arnold Arboretum, Jamaica Plain, Mass.
MORTON, C. V., Div. Ferns, U. S. N. M., S. I., Washington 25, D. C.
ROLLINS, REED C., Harvard Univ., Cambridge, Mass.
SINNOTT, EDMUND, Yale Univ., New Haven, Conn.
SMITH, A. C., Div. Phanerogams, Div. Botany, U. S. N. M., S. I.

SMITH, ALBERT C., Smithsonian Inst., Washington, D. C.
STEBBINS, G. LEDYARD, JR., Univ. of Calif., Dept. of Genetics, Davis, Calif.
SWALLEN, JASON R., Hd. Cur., Dept. Bot., U. S. N. M., Washington 25, D. C.
WETMORE, RALPH H., Harvard Univ., Cambridge, Mass.

BRYOLOGY

EVANS, A. W., Osborn Botanical Lab., Yale Univ., New Haven, Conn.
STEERE, WILLIAM C., Dept. of Biol. Sci., Stanford Univ., Stanford, Calif.

CANCER RESEARCH

FARBER, SIDNEY, Children's Med. Center, Harvard Univ., Boston, Mass.
LITTLE, C. C., Jackson Mem. Lab., Bar Harbor, Me.
PAPANICOLAOU, GEORGE N., Cornell Univ. Coll. of Med., New York, N. Y.
PORTER, KEITH R., Rockefeller Inst. for Med. Resch., New York, N. Y.
RHOADS, CORNELIUS, 68th and 1st Ave., New York, N. Y.
THOMPSON, U. S. Naval Cancer Research Center, Washington, D. C.

CARDIAC RESEARCH

COURNAND, ANDRE, Bellvue Hosp., New York, N. Y.

CARTOGRAPHY

LOBECK, ARMIN K., Columbia Univ., N. Y., N. Y.
ROBINSON, ARTHUR, Univ. of Wis., Madison, Wis.

CERAMICS

DANIELSON, RALPH R., Metal & Thermit Corp., Carteret, N. J.
SOSMAN, R. B., Rutgers Univ., Schl. of Ceramics, New Brunswick, N. J.

CHEMICAL ENGINEERING

BROWN, GEORGE GRANGER, Dean of Engrng., Univ. of Mich., Ann Arbor, Mich.
CHILTON, THOMAS H., Engrng. Dept., E. I. Du Pont De Nemours, 10498 Nemours Bldg., Wilmington, Del.
COLBURN, ALLAN P., Univ. of Del., Newark, Del.
COOPER, C. M., Du Pont Co., Wilmington, Del.
CURTIS, HARRY A., Commissioner TVA, Knoxville, Tenn.
DODGE, B. F., Prof. of Chem. Engrng., Yale Univ., New Haven, Conn.
DREW, T. B., Columbia Univ., New York, N. Y.
GILLILAND, E. R., Prof., Dept. of Chem. Engrng., Mass. Inst. of Tech., Cambridge, Mass.
HOUGEN, O. A., Prof. of Chem. Engrng., Univ. of Wis., Madison, Wis.
JOHNSTONE, H. F., Univ. of Ill., Urbana, Ill.
KATZ, DONALD H., Chem. Engrng. Dept., Univ. of Mich., Ann Arbor, Mich.
LACEY, WILLIAM N., 1201 E. California St., Pasadena 4, Calif.
LEWIS, WARREN K., Chem. Engrng. Dept., Mass. Inst. of Tech., Cambridge, Mass.
NEWMAN, ALBERT B., 120 Cabrini Blvd., N. Y. 33, N. Y.
SAGE, BRUCE H., 1201 E. Calif. St., Pasadena 4, Calif.
SCHOCK, E. P., Bureau of Industrial Chem., Univ. of Tex., Austin, Tex.
SHERWOOD, T. K., Mass. Inst. of Tech., Cambridge, Mass.
SIMONS, J. H., 1122 S. W. 11th Ave., Gainesville, Fla.
WATSON, K. M., Dir. Resch. of Pure Oil Co., Crystal Lake, Ill.
WILHELM, R. H., Princeton Univ., Princeton, N. J.

CHEMICAL ENGINEERING EDUCATION

LEWIS, WARREN K., 85 Lombard St., Newton, Mass.

CHEMICAL ENGINEERING—GASEOUS DIFFUSION

BENEDICT, MANSON, Dept. of Chem. Engrng., Mass. Inst. of Tech., Cambridge, Mass.
DUECKER, W. W., Tex Gulf Sulphur Co., 75 E. 45th St., New York, N. Y.
JOHNSTONE, H. F., Univ. of Ill., Urbana, Ill.

CHEMICAL KINETICS

BURTON, M., Prof., Univ. of Notre Dame, Notre Dame, Ind.
LAIDLER, KEITH J., Chem. Dept., Catholic Univ. of Amer., Washington, D. C.
TAYLOR, HUGH S., Prof., Princeton Univ., Princeton, N. J.

CHEMICAL PHYSICS

KIRKWOOD, J. G., Yale Univ., New Haven, Conn.
MAYER, JOSEPH E., Univ. of Chicago, Chicago, Ill.
SEITZ, FREDERICK, Univ. of Ill., Urbana, Ill.
SLATER, JOHN C., Mass. Inst. of Tech., Cambridge, Mass.
WILSON, E. BRIGHT, JR., Harvard Univ., Cambridge, Mass.

CHEMISTRY, GENERAL

- ADAMS, ROGER, Chem. Dept., Univ. of Ill., Urbana, Ill.
 AUDRIETH, L. F., Univ. of Ill., Urbana, Ill.
 BAILAR, J. C., Univ. of Ill., Urbana, Ill.
 BARTLETT, PAUL D., Dept. of Chem., Harvard Univ., Cambridge, Mass.
 BOYD, GEORGE E., Oak Ridge National Lab., Oak Ridge, Tenn.
 BROWN, HERBERT C., Purdue Univ., Lafayette, Ind.
 BRUSON, HERMAN A., Manager Polymer Div. of Industrial Rayon Corp., Cleveland, Ohio.
 COGHILL, ROBERT D., Dir. of Rsch., Abbott Labs., N. Chicago, Ill.
 CONANT, JAMES B., Harvard Univ., Cambridge, Mass.
 CONNOR, R., 5000 Richmond St., Philadelphia, Pa.
 CORYELL, CHARLES D., Mass. Inst. of Tech., Cambridge, Mass.
 CROSS, PAUL C., Dept. of Chem., & Chem. Engrng., Univ. of Wash., Seattle, Wash.
 DANIELS, FARRINGTON, Head of Chem. Dept., Univ. of Wis., Madison, Wis.
 DEBYE, PETER, Cornell Univ., Ithaca, N. Y.
 DINSMORE, R. P., V. Pres., Goodyear Tire & Rubber Co., Akron, Ohio.
 DOERING, W., Prof., Yale Univ., New Haven, Conn.
 DOOLITTLE, ARTHUR K., 11 W. 8th Ave., So. Charleston, W. Va.
 DOTY, PAUL, Dept. of Chem., Harvard Univ., Cambridge, Mass.
 DUGGAR, BENJAMIN, Lederle Labs., Pearl River, N. Y.
 EMMETT, P. H., Mellon Inst., Pittsburgh, Pa.
 EYRING, HENRY, Univ. of Utah, Salt Lake City, Utah.
 FLORY, PAUL J., Cornell Univ., Ithaca, N. Y.
 FUOSS, RAYMOND, Yale Univ., New Haven, Conn.
 FURMAN, N. H., Prof., Princeton Univ., Princeton, N. J.
 FUSON, R. C., Chem. Dept., Univ. of Ill., Urbana, Ill.
 GIAUQUE, W. F., Chem. Dept., Univ. of Calif., Berkeley, Calif.
 GILMAN, HENRY, Dept. of Chem., Iowa State Coll., Ames, Iowa.
 GLOCKLER, GEORGE, State Univ. of Iowa, Iowa City, Iowa.
 GROSS, PAUL M., Duke Univ., Durham, N. C.
 HALLER HERBERT L., Bureau of Entomol. & Plant Quarantine, U. S. Dept. of Agri., Washington, D. C.
 HASS, H. B., Sugar Rsch. Foundation, Philadelphia, Pa.
 HICKMAN, K. O. N., Distillation Products Div., Eastman Kodak Co., Rochester, N. Y.
 KIRK, RAYMOND E., Poly. Inst. of Brooklyn, Brooklyn, N. Y.
 KISTIAKOWSKY, G., Dept. of Chem., Harvard Univ., Cambridge, Mass.
 KOELSCH, C. F., Dept. of Chem., Univ. of Minn., Minneapolis, Minn.
 KOLTHOFF, I. M., Univ. of Minn., Inst. of Tech., Minneapolis, Minn.
 KRAUS, DR., Brown Univ., Providence, R. I.
 KUHN, WAYNE E., Technical & Rsch. Div., The Texas Co., 135 E. 42nd St., N. Y.
 LAIDLER, KEITH, Catholic Univ. of Amer., Washington 17, D. C.
 LANGMUIR, IRVING, General Electric, Schenectady, N. Y.
 LEWIS, WARREN K., Emer. Prof. of Chem., Engrng. Mass. Inst. of Tech., Cambridge, Mass.; 85 Lombard St., Newton, Mass.
 LIND, S. C., Carbide & Carbon Chem. Co., Oak Ridge, Tenn.
 LONG, NORMAN O., Head of Chem. Dept., Evansville Coll., Evansville, Ind.
 MARK, HERMAN, Brooklyn Poly. Inst., Brooklyn, N. Y.
 MARTELL, ARTHUR E., Clark Univ., Worcester 10, Mass.
 MARVEL, C. S., Univ. of Ill., Urbana, Ill.
 MINER, CARL S., 9 S. Clinton St., Chicago 6, Ill.
 MOORE, WALTER J., Catholic Univ. of Amer., Washington 17, D. C.
 NOYES, W. A., JR., Dept. of Chem., Univ. of Rochester, Rochester, N. Y.
 ONSAGER, LARS, Yale Univ., New Haven, Conn.
 OSTERHOF, H. J., Dir. of Rsch., Goodyear Tire & Rubber Co., Akron, Ohio.
 PACSU, EUGENE, Frick Chem. Labs., Princeton Univ., Princeton, N. J.
 PAULING, LINUS, Calif. Institute of Tech., Pasadena, Calif.
 REID, ERNEST W., 17 Battery Pl., c/o Corn Prod. Ref. Co., New York, N. Y.
 RICE, F. O., Catholic Univ. of Amer., Washington 17, D. C.
 RICCI, J. E., Dept. of Chemistry, New York Univ., New York, N. Y.
 ROBLIN, RICHARD O., J., Stamford Rsch. Labs., Amer. Cyanamid Co., Stamford, Conn.
 ROSE, W. C., Univ. of Ill., Urbana, Ill.
 SHERNDAL, A. E., Winthrop-Stearns Inc., 33 Riverside Ave., Rensselaer, N. Y.
 SMITH, J. FREDERICK, Univ. of Ill., Urbana, Ill.
 SMITH, L. I., Chem. Dept., Univ. of Minn., Minneapolis, Minn.
 SPARKS, WILLIAM JOSEPH, Dir. Rsch. Chem. Div. Standard Oil Development Co. of N. J., 405 Colonial Ave., Westfield, N. J.
 STOCKMEYER, WALTER H., Prof., Mass. Inst. of Tech., Cambridge, Mass.
 SUGARMAN, NATHAN, Univ. of Chicago, Chicago, Ill.
 SUTER, C. M., Sterling-Winthrop Rsch. Inst., Rensselaer, N. Y.

TARBELL, D. S., Dept. of Chem., Univ. of Rochester, Rochester, N. Y.
TAYLOR, HUGH S., Princeton Univ., Princeton, N. J.
THOMAS, CHARLES A., Monsanto Chem. Co., 1700 S. Second St., St. Louis 4, Mo.
TURKEVICH, ANTHONY, Univ. of Chicago, Chicago, Ill.
UREY, HAROLD C., Univ. of Chicago, Chicago, Ill.
VAN HOOK, ANDREW, Coll. of the Holy Cross, Worcester 10, Mass.
WEBSTER, GEORGE L., Dept. of Chem., Pharmacy Schl. Univ. of Ill., 808 S. Wood St., Chicago 12, Ill.
WILLARD, HOBART H., Univ. of Mich., Dept. of Chem., Ann Arbor, Mich.
WINSTEIN, PAUL, Univ. of Calif. at Los Angeles, Los Angeles, Calif.
WOODWARD, ROBERT B., Harvard Univ., Cambridge, Mass.

CHEMISTRY, ANALYTICAL

ALBER, H. K., 6 Windsor Circle, Springfield, Pa.
DEFORD, DONALD D., 619 Juniper, Glenview, Ill.
ELVING, PHILIP J., Pa. State Coll., State College, Pa.
FLAGG, JOHN F., Knolls Atomic Power Lab., G. E. Co., Schenectady, N. Y.
FOWLER, ROBERT M., Electrometallurgical Rsch. Labs., Niagara Falls, N. Y.
FURMAN, N. HOWELL, Princeton Univ., Princeton, N. J.
KOLTHOFF, I. M., Univ. of Minn., Minneapolis, Minn.
LINGANE, J. J., Harvard Univ., Cambridge, Mass.
MELLON, M. G., Purdue Univ., Lafayette, Ind.
MURRAY, W. M., JR., Dir. S. Resch. Inst., Birmingham, Ala.
RODDEN, CLEMENT J., U. S. Atomic Energy Comm., New Brunswick, N. J.
SHEPARD, MARTIN, U. S. Bureau of Standards, Washington, D. C.
SMITH, G. F., Univ. of Ill., Urbana, Ill.
SWIFT, E. H., Calif. Inst. of Tech., Pasadena, Calif.
WILLARD, H. H., Chem. Dept., Univ. of Mich., Ann Arbor, Mich.
YOE, J. H., Univ. of Va., Charlottesville, Va.

CHEMISTRY, BIOCHEMISTRY

CORI, CARL FERDINAND, Washington Univ., St. Louis, Mo.
NORTHROP, JOHN HOWARD, Univ. of Calif., Berkeley, Calif.
STANLEY, WENDELL, Univ. of Calif., Berkeley, Calif.
SUMNER, JAMES B., Cornell Univ., Ithaca, N. Y.

CHEMISTRY, CARBOHYDRATE

COX, HENRY, c/o Corn Products Refining Co., Argo, Ill.
HIXON, RALPH, c/o Iowa State Coll. of Agri. & Mechanical Arts, Ames, Iowa.
WOLFROM, M. L., Ohio State Univ., Columbus, Ohio.
YANOVSKY, ELIAS, Potato Starch Section, Eastern Regional Rsch. Lab., U. S. D. A., Chestnut Hill St., Philadelphia 18, Pa.

CHEMISTRY, CEREAL

GEDDES, W. F., Chief, Div. of Agril. Biochem., Univ. of Minn., Minneapolis, Minn.
SULLIVAN, BETTY, Russell-Miller Milling Co., Minneapolis, Minn.

CHEMISTRY, CHROMATOGRAPHY

CASSIDY, HAROLD G., Dept. of Chem., Yale Univ., New Haven, Conn.
STRAIN, HAROLD H., Argonne Nat. Lab., Chicago, Ill.
ZECHMEISTER, L., Dept. of Chem., Calif. Inst. of Tech., Pasadena, Calif.

CHEMISTRY, CLINICAL

ANDERSCH, MARIE, Univ. of Md. Med. Coll., Baltimore, Md.
DOTT, LOUIS, St. Luke's Hosp., New York, N. Y.
GAST, J. H., Baylor Med. Coll., Houston, Tex.
GIBSON, ROBERT B., Univ. Hosp., Iowa City, Iowa.
VAN SLYKE, D. D., Brookhaven Natl. Lab., New York, N. Y.
WARE, ARNOLD, County Hosp., Los Angeles, Calif.

CHEMISTRY, COAL

STORCH, H. H., U. S. Bureau of Mines, Bruceton, Pa.
NEUWORTH, MARTIN, Pittsburgh Consolidation Coal Co., Library, Pa.

CHEMISTRY, COLLOID

ALBRECHT, W. A., 136 Mumford, Columbia, Mo.
MARSHALL, C. E., Univ. of Mo., Columbia, Mo.
MARSHALL, EDWIN, 137 Mumford, Columbia, Mo.
THOMAS, ARTHUR, Prof., Columbia Univ., New York, N. Y.

CHEMISTRY, ENZYME

BALL, ERIC G., Harvard Med. Schl. Boston, Mass.
BARON, E. S. G., Univ. of Chicago Med. Schl., Chicago, Ill.

CHEMISTRY, HIGHWAY

HILL, G. ALBERT, Conn. State Hwy. Comm., 165 Capitol Ave., Hartford, Conn.
HVEEM, F. N., Calif. Dept. of Hwys., Sacramento, Calif.
MCDONALD, THOMAS H., U. S. Comm. of Public Roads, General Services Bldg., Washington, D. C.

CHEMISTRY, HIGH POLYMER

FLORY, P. J., Cornell Univ., Ithaca, N. Y.
MARK, H., Poly. Inst. of Brooklyn, Brooklyn, N. Y.
MARVEL, C. S., Noyes Lab., Univ. of Ill., Urbana, Ill.
SPARKS, W. J., Standard Oil Development Co., Box 51, Linden, N. J.

CHEMISTRY, HISTOCHEMISTRY

LILLIE, RALPH D., Chief, Lab. of Pathol. and Pharmacol., Natl. Insts. of Health, Bethesda, Md.

CHEMISTRY, IMMUNOCHEMISTRY

ECKER, E. E., Inst. of Pathol., Western Reserve Univ. Cleveland 6, Ohio.
HEIDELBERGER, MICHAEL, Coll. of Physicians and Surgeons, Columbia Univ., N. Y. 32, N. Y.
PILLEMER, LOUIS, Inst. of Pathol., Western Reserve Univ., Cleveland 6, Ohio.

CHEMISTRY, INORGANIC

BURG, ANTON B., Univ. of Southern Calif., Los Angeles 7, Calif.
CAMPBELL, GEORGE W., Jr., 2043 W. 79th, Los Angeles 47, Calif.
FERNELIUS, W. CONRAD, Head Dept. of Chem., Pa. State Coll., State College, Pa.
KRAUS, CHARLES A., Brown Univ., Providence, R. I.
QUILL, LAWRENCE L., Dept. of Chem., Mich. State Coll., E. Lansing, Mich.
SEABORG, G. T., Natl. Radiation Lab., Berkeley, Calif.
YOST, DON M., Dept. of Chem., Calif. Inst. of Tech., Pasadena, Calif.

CHEMISTRY, INSTRUMENTAL METHODS OF ANALYSIS

KOLTHOFF, I. M., Univ. of Minn., Minneapolis, Minn.
LINGANE, J. J., Harvard Univ., Cambridge, Mass.

CHEMISTRY, MAGNETOCHEMISTRY

SELWOOD, PIERCE W., Dept. of Chem., Northwestern Univ., Evanston, Ill.

CHEMISTRY, NUCLEAR

CORYELL, CHARLES D., Mass. Inst. of Tech., Cambridge, Mass.
GARDEN, NELSON, Univ. of Calif., Berkeley, Calif.
GHIORSO, ALBERT, Radiation Lab., Univ. of Calif., Berkeley 4, Calif.
GIFFORD, J. F., General Electric Co., Richland, Wash.
KENNEDY, J. W., Head, Chem. Dept., Washington Univ., St. Louis, Mo.
PERLMAN, ISADORE, Radiation Lab., Univ. of Calif., Berkeley 4, Calif.
RUEHLE, WILLIAM, Univ. of Calif., Berkeley, Calif.
THOMPSON, STANLEY G., Radiation Lab., Univ. of Calif., Berkeley 4, Calif.

CHEMISTRY, ORGANIC

ADAMS, ROGER, Noyes Chemical Labs., Univ. of Ill., Urbana, Ill.
BREWSTER, RAY Q., Kans. Univ., Lawrence, Kans.
BROWN, HERBERT C., Purdue Univ., Lafayette, Ind.
BRUSON, HERMAN A., Industrial Rayon Corp., Cleveland, Ohio.
CONANT, J. B., High Commissioner, U. S., Germany.
CRAWFORD, H. MARJORIE, Prof. of Chem., Vassar Coll., Poughkeepsie, N. Y.
DAISY, EDWARD A., St. Louis Univ., St. Louis, Mo.
DJERASSI, CARL, Wayne Univ., Detroit, Mich.
DOERING, W., Yale Univ., New Haven, Conn.
FIESER, LOUIS F., Chem. Dept., Harvard Univ., Cambridge, Mass.
FUSON, R. C., Noyes Chemical Lab., Univ. of Ill., Urbana, Ill.
GILMAN, HENRY, Chem. Dept., Iowa State Coll., Ames, Iowa.
HARTUNG, WALTER, Univ. of N. C., Chapel Hill, N. C.
HURD, C. D., Northwestern Univ., Evanston, Ill.
KHORASCH, MORRIS S.
IPATIEFF, V. N., 190 E. Pearson St., Chicago 11, Ill.
JOHNSON, WILLIAM S., Univ. of Wis., Madison, Wis.
LAVER, Univ. of Minn., Minneapolis, Minn.
LEONARD, NELSON, Univ. of Ill., Urbana, Ill.
MARVEL, C. S., Noyes Chemical Lab., Univ. of Ill., Urbana, Ill.
MCELVAIN, S. M., Univ. of Wis., Madison, Wis.
PRICE, CHARLES C., Dept. of Chem., Univ. of Notre Dame, South Bend, Ind.
REEVES, RICHARD E., S. Regional Lab., 2100 R. E. Lee Blvd., New Orleans, La.

REID, E. EMMET, 203 E. 33rd St., Baltimore, Md.
ROBERTS, JOHN D., Mass. Inst. of Tech., Boston, Mass.
ROBLIN, RICHARD O., J., Amer. Cyanamid Co., Stamford, Conn.
SHEEHAN, JOHN, Mass. Inst. of Tech., Cambridge, Mass.
SCATCHARD, GEORGE, Prof., Dept. of Chem., Mass. Inst. of Tech., Cambridge, Mass.
SMITH, LEE IRVIN, Univ. of Minn., Minneapolis, Minn.
ULLYOT, GLENN E., Smith, Kline, and French Labs., 1350 Spring Garden St., Philadelphia, Pa.
WISE, LOUIS E., Inst. of Paper Chem., Appleton, Wis.
WISELOGLE, I. Y., Squibb Inst. for Rsch., New Brunswick, N. J.
WOODWARD, ROBERT BURNS, Dept. of Chem., Harvard Univ., Cambridge, Mass.

CHEMISTRY, PHOTOGRAPHIC

JAMES, T. H., Eastman Kodak Co., Rochester, N. Y.

CHEMISTRY, PHYSICAL

ALEXANDER, JEROME, 50 E. 41st., N. Y. 17, N. Y.
DANIELS, FARRINGTON, Prof. of Chem., Dept. Head, Univ. of Wis., Madison, Wis.
DAVIDSON, NORMAN, Dept. of Chemists, Calif. Inst. of Tech., Los Angeles, Calif.
DEBYE, PETER, Dept. of Chem., Cornell Univ., Ithaca, N. Y.
EYRING, HENRY, Dean of Grad. Schl., Univ. of Utah, Salt Lake City, Utah.
FAJANS, KASIMIR, Prof. of Chem., Univ. of Mich., Ann Arbor, Mich.
GLASSTONE, SAMUEL, Frick Chem. Lab., Princeton Univ., Princeton, N. J.
HENDRICKS STERLING, U. S. Bureau of Plant Chem., College Park, Md.
HILDEBRAND, JOEL H., 500 Coventry Rd., Berkeley, Calif.
KIRKWOOD, JOHN G., Dept. of Chem., Yale Univ., New Haven, Conn.
KISTIAKOWSKY, GEORGE B., Harvard Univ., Cambridge, Mass.
LIND, S. C., Chem. Div., Oak Ridge Natl. Lab., Oak Ridge, Tenn.
MARSHALL, C. EDMUND, 412 S. Garth St., Columbia, Mo.
ONSAGER, LARS, Prof., Sterling Chem. Lab., Yale Univ., New Haven, Conn.
PAULING, LINUS, Dept. of Chem., Calif. Inst. of Tech., Berkeley, Calif.
SCATCHARD, GEORGE, Prof., Mass. Inst. of Tech., Cambridge 39, Mass.
SCOVILLE, HERBERT, JR., P. O. Box 3610, Washington, D. C.
SEABORG, GLENN, Univ. of Calif., Berkeley, Calif.
STAMM, ALFRED J., Forest Products Lab., Madison, Wis.
TAYLOR, NELSON W., Minn. Mining and Mfg. Co., St. Paul, Minn.
UREY, HAROLD C., Univ. of Chicago, Chicago, Ill.

CHEMISTRY, PHYSICAL BIOCHEMISTRY

BULL, HENRY B., Prof. and Chmn. Dept. of Biochem., State Univ. of Iowa, Iowa City, Iowa.
KLOTZ, IRVING M., Prof. of Chem., Northwestern Univ., Evanston, Ill.

CHEMISTRY, PHYSICAL ORGANIC

ASTON, J. G., Chem. Dept., Pa. State Coll., State College, Pa.
BARTLETT, PAUL D., Dept. of Chem., Harvard Univ., Cambridge, Mass.
HAMMETT, L. P., Dept. of Chem., Columbia Univ., New York, N. Y.
WINSTEIN, SAUL, Dept. of Chem., Univ. of Calif. at Los Angeles, Los Angeles, Calif.

CHEMISTRY, PHYSICS

LIBBY, WILLIAM F., Univ. of Chicago, Chicago, Ill.

CHEMISTRY, POLYMER

CHOLLAR, ROBERT G., Dir. of Rsch., The Natl. Cash Register Co., Dayton, Ohio.

CHEMISTRY, RUBBER

DUNBROOK, R. F., Firestone Co., Akron, Ohio.
FISHER, HARRY L., Dir. of Education and Rsch., Tlrgi Rubber Tech. Foundation, Univ. of Calif., Los Angeles, Calif.
JUVE, A. E., B. F. Goodrich Co., Brecksville, Ohio.

CHEMISTRY, SOIL

JACKSON, M. L., Soils Dept., Univ. of Wis., Madison, Wis.
JENNY, HANS, Soils Dept., Univ. of Calif., Berkeley, Calif.

CHEMISTRY, STARCH

FRENCH, DEXTER, Iowa State Coll., Ames, Iowa.
KERR, RALPH W., Corn Products Refining Co., Argo, Ill.

CHEMISTRY, STERIOD

LIEBERMAN, S., Columbia Univ., Med. Schl., N. Y., N. Y.

CHEMISTRY, SUGAR

ZERBAN, FREDERICK W., New York Sugar Trade Lab., 113 Pearl St., N. Y., N. Y.

CHEMISTRY, SULPHUR

BALL, J. S., U. S. Bureau of Mines, Laramie, Wyo.

RAID, E. EMMETT, Johns Hopkins Univ., Baltimore, Md.

CHEMISTRY, SYNTHETIC

FUSON, R. C., Univ. of Ill., Urbana, Ill.

HILL, E. L., Augustana Rsch. Foundation, Rock Island, Ill.

MARVEL, C. S., Univ. of Ill., Urbana, Ill.

CHEMISTRY, TRACER

COLLINS, C. G. Oak Ridge Natl. Lab., Oak Ridge, Tenn.

TOBERT, B. M., Univ. of Calif., Radiation Lab., Berkeley, Calif.

CHEMISTRY, WOOD

HARRIS, ELWIN E., 4121 Mineral Pt. Rd., Madison, Wis.

STAMM, ALFRED J., 3509 Blackhawk Dr., Madison, Wis.

CITY AND REGIONAL PLANNING

OPPERMANN, PAUL, Dir. of Planning, City and Co. of San Francisco, 100 Larkin Plaza, San Francisco, Calif.

SEGOE, LADISLAS, Consulting Engr., 517 Provident Bank Bldg., Cincinnati, Ohio.

CLIMATOLOGY

THOM, H. C. S., U. S. Weather Bureau, Washington 25, D. C.

COLEOPTEROLOGY

BLACKWELDER, RICHARD E., U. S. Natl. Museum, Washington, D. C.

DARLINGTON, P. J., JR., Museum of Comparative Zool., Cambridge, Mass.

COMBUSTION

BAILEY, A. E., Babcock and Wilcox Co., New York, N. Y.

LEWIS, BERNARD, U. S. Bureau of Mines, Pittsburgh, Pa.

POTTER, A. A., Purdue Univ., Lafayette, Ind.

VON KARMAN, THEODORE, Calif. Inst. of Tech., Pasadena, Calif.

Also: A. J. NERAD, K. WOHL, A. G. CATTANEO.

COMPUTING MACHINES

MCCANN, GILBERT D., Calif. Inst. of Tech., Pasadena, Calif.

TOBEN, G. J. c/o IBM Labs., Poughkeepsie, N. Y.

WOODBURY, W. W., c/o IBM Labs., Poughkeepsie, N. Y.

CONCRETE RESEARCH

POWERS, TREVAL C., 33 W. Grand Ave., Chicago, Ill.

STEELE, BYRAM W., 3103 S. W. 23rd St., Miami, Fla.

CYTOGENETICS—CYTOTAXONOMY

BABCOCK, E. B., Univ. of Calif., Berkeley, Calif.

CLAUSEN, JENS, Stanford Univ., Palo Alto, Calif.

STEBBINS, G. L., Univ. of Calif., Davis, Calif.

CYTOLOGY

BEAMS, HAROLD, Univ. of Iowa, Iowa City, Iowa.

DAIRYING, GENERAL

DAHLE, CHESTER DISDAD, Pa. State Coll., State College, Pa.

DAIRY BACTERIOLOGY

HAMMER, B. W., Sarasota, Fla.

SHERMAN, J. M., Cornell Univ., Ithaca, N. Y.

DAIRY CHEMISTRY

NELSON, F. E., Iowa State Coll., Ames, Iowa.

SOMMER, H. H., Univ. of Wis., Dept. of Dairy Indus., Madison, Wis.

TARASSUK, N. P., Prof. of Dairy Chem., Univ. of Calif., Davis, Calif.

DAIRY TECHNOLOGY

SOMMER, HUGO H., Dairy Husbandry Dept., Univ. of Wis., Madison, Wis.

WEBB, BYRON H., Natl. Dairy Crop. Rsch., Labs., Oakdale, L. I., N. Y.

DEMOGRAPHY

WILLCOX, WALTER F., Cornell Univ., Ithaca, N. Y.

DENTAL RESEARCH

GLICKMAN, IRVING, Tufts College Dental School, Medford, Mass.
MANLY, RICHARD SAMUEL, Tufts College Dental School, Medford, Mass.
MARSHALL-DAY, CYRIL D., Tufts College Dental School, Medford, Mass.
SCHOONOER, I. C., Natl. Bureau of Standards, Washington 25, D. C.

DEMATOLOGY, BIOCHEMISTRY

MAHONEY, JOHN F., 125 Worth St., New York, N. Y.
ROTHMAN, STEPHEN, Univ. of Chicago, Chicago, Ill.

DIELECTRICS

SMYTH, C. P., Princeton Univ., Princeton, N. J.
VON HIPPEL, A., Mass. Inst. of Tech., Cambridge, Mass.

ECOLOGY

ALLEE, WARDER C., 114 Leigh Hall, Univ. of Fla., Gainesville, Fla.
BRAUN, E. LUCY, Emer. Univ. of Cincinnati, Box 41C Salem Pike, Cincinnati, Ohio.
BRAUN, E. LUCY, Stanford Univ., Stanford, Calif.
PEARSE, ARTHUR S., Zool. Dept., Duke Univ., Durham, N. C.
SEARS, PAUL B., Yale Univ., New Haven, Conn.
SHELFORD, VICTOR E., Vivarium Bldg., Wright and Healey St., Champaign, Ill.

ELECTRIC POWER

JOHNSON, A. A., Westinghouse Electric and Mfg. Co., E. Pittsburgh, Pa.
WAGNER, C. F., Westinghouse Electric and Mfg. Co., E. Pittsburgh, Pa.

ELECTRICAL ENGINEERING—GENERAL

BROWN, GORDON S., Head Electrical Engineering, General of Dept. of Elec. Engrng., Mass. Inst. of Tech., Cambridge, Mass.
BUSH, VANNEVAR, Carnegie Inst. of Washington, 1530 P St., N. W., Washington 5, D. C.
CAMPELL, DONALD P., Prof. of Elec. Engrng., Mass. Inst. of Tech., Cambridge, Mass.
CHU, LAN JEN, Prof. of Elec. Engrng., Mass. Inst. of Tech., Cambridge, Mass.
CONRAD, ALBERT G., Dunham Lab., Yale Univ., New Haven, Conn.
GLENNAN, T. KEITH, Pres. of Chase Inst. of Tech., Cleveland, Ohio.
MCEACHRON, KARL B., SR., General Electric Co., Pittsfield, Mass.
MCILROY, MALCOLM S., Franklin Hall, Cornell Univ., Ithaca, N. Y.
RUDENBERG, R., Prof. of Harvard Univ., Cambridge, Mass.
SMITH, S. M., Univ. of Calif., Berkeley, Calif.

ELECTRICAL ENGINEERING—COMMUNICATIONS

CHAFFEE, E. L., Prof., Cruft Lab., Harvard Univ., Cambridge, Mass.
GUILLEMIN, ERNST A., Prof. of Electrical Communications Engrng., Mass. Inst. of Tech., Cambridge, Mass.
SHANNON, CLAUDE E., Bell Telephone Labs., Inc., Murray Hill, N. J.
WAYNICK, ARTHUR H., Pa. State Coll., State College, Pa.
WIENER, NORBERT, Mass. Inst. of Tech., Cambridge, Mass.
WIESNER, JEROME B., Prof. of Electrical Engrng. and Dir. of Rsch. Lab. of Electronics, Mass. Inst. of Tech., Cambridge, Mass.

ELECTRICAL ENGINEERING—LIGHTING PROTECTION

BEWLEY, L. V., Prof., Dept. of Elec. Engrng. and Dir. of Curriculum in Elec. Engrng., Lehigh Univ., Bethlehem, Pa.
MCEACHRON, K. B., Dir. of Rsch., Gen. Elec. Co., Pittsfield, Mass.

ELECTRICAL ENGINEERING—NETWORK THEORY

FOSTER, R. M., Prof., Polytechnic Inst. of Brooklyn, Brooklyn, N. Y.

ELECTRICAL MEASUREMENTS

BROOKS, H. B., Natl. Bureau of Standards, Washington 25, D. C.
WENNER, FRANK, Natl. Bureau of Standards, Washington 25, D. C.

ELECTROCHEMISTRY

BURNS, R. M., Bell Telephone Labs., Summit, N. J.
HAGNER, CARL, Dept. of Metallurgy, Mass. Inst. of Tech., Cambridge, Mass.
UHLIOG, H. H., Dept. of Metallurgy, Mass. Inst. of Tech., Cambridge, Mass.
WAGNER, CARL, Mass. Inst. of Tech., Cambridge, Mass.
WARNER, J. C., Pres., Carnegie Inst. of Tech., Pittsburgh, Pa.

ELECTRONICS

FERENCE, MICHAEL, JR., Evans Signal Lab., Belmar, N. J.
GOLAY, MARCEL, J. E., Squier Signal Lab., Fort Monmouth, N. J.

HILLIER, JAMES, RCA Labs., Princeton, N. J.
PIERCE, JOHN R., Bell Telephone Labs., Murray Hill, N. J.
SHOCKLEY, WILLIAM, Bell Telephone Labs., Murray Hill, N. J.
TERMAN, FREDERICK E., Stanford Univ., Stanford, Calif.
ZWORYKIN, VLADIMIR K., RCA Rsch. Labs., Princeton, N. J.

EMBRYOLOGY

AREY, LESLIE BRAINARD, Prof. of Anatomy, Northwestern Univ., Chicago, Ill.
CORNER, GEORGE A., Carnegie Foundation for Embrol., Baltimore, Md.
WILLIER, BENJAMIN H., Dept. of Biol., Johns Hopkins Univ., Baltimore, Md.

ENDOCRINOLOGY

ADAMS, A. ELIZABETH, Zool. Dept., Mount Holyoke Coll., S. Hadley, Mass.
EVANS, HERBERT M., Univ. of Calif., Berkeley, Calif.
WILKINS, LAWSON, Dept. of Pediatrics, Johns Hopkins Univ., Baltimore, Md.

ENDOCRINOLOGY, CLINICAL RESEARCH

ALBRIGHT, FULLER, Mass. Gen. Hosp., Boston, Mass.
AUB, JOSEPH C., Mass. Gen. Hosp., Boston, Mass.
BROWNE, J. S. L., Royal Victoria Hosp., Montreal, Que., Can.
HISAW, F. L., Harvard Univ., Cambridge, Mass.
KENYON, ALLAN T., Billings Memorial Hosp., Chicago, Ill.
NATHANSON, IRA T., Mass. Gen. Hosp., Boston, Mass.
RAWSON, RULON W., Sloan-Kettering Inst., New York, N. Y.
THORN, GEORGE W., Peter Bent Brigham Hosp., Boston, Mass.
WILKINS, LAWSON, Johns Hopkins Hosp., Baltimore, Md.

ENGINEERING, GENERAL

BARROW, W. L., Sperry Gyroscope Co., Great Neck, N. Y.
BEGEMAN, M. L., Univ. of Tex., Austin, Tex.
BUCKINGHAM, EARLE, Prof., Mass. Inst. of Tech., Cambridge, Mass.
CROSS, HARDY, Dept. of Civil Engrng., Yale Univ., New Haven, Conn.
KETTERING, CHARLES, Gen. Motors Corp., Detroit, Mich.
MACGREGOR, CHARLES W., Univ. of Pa., Philadelphia, Pa.
RUSHTON, J. H., 5128 S. Hyde Park, Chicago 15, Ill.
SHANNON, CLAUDE, Bell Telephone Labs., Murray Hill, N. J.
ZWORYKIN, VLADAMIR, RCA Labs., Princeton, N. J.

ENGINEERING DRAWING

RULE, JOHN, Prof., Mass. Inst. of Tech., Boston, Mass.
SPENCER, H. C., Ill. Inst. of Tech., Chicago, Ill.

ENGINEERING, MECHANICAL

DURAND, W. F., Palo Alto, Calif.
POTTER, A. A., Purdue Univ., Lafayette, Ind.
SODERBERG, C. RICHARD, Mass. Inst. of Tech., Cambridge, Mass.

ENGINEERING, STRUCTURAL

SHEDD, THOMAS CLARK, Univ. of Ill., Urbana, Ill.

ENTOMOLOGY

ALEXANDER, CHARLES P., Head, Dept. of Entomol., Mass. State Coll., Amhurst, Mass.
BISHOPP, FRED C., Asst. Chief of U. S. Bureau of Entomol. and Plant Quarantine, Washington 25, D. C.
BOYCE, ALFRED M., Citrus Exp. St., Univ. of Calif., Riverside, Calif.
CALVERT, PHILIP P., P. O. Box 14, Cheyney, Pa.
COTTON, RICHARD T., 343 No. 14th, Manhattan, Kans.
DAVIS, J. J., Agril. Expt. Sta., Lafayette, Ind.
DECKER, GEORGE C., Dept. of Entomol., Ill. Natural History Survey, Urbana, Ill.
DELONG, DWIGHT M., Dept. of Entomol., Ohio State Univ., Columbus, Ohio.
DU PORTE, E. M., Assoc. Prof. in Entomol., Macdonald Coll., Que., Can.
ESSIG, E. O., Coll. of Agri., Agril. Expt. Sta., Univ. of Calif., Berkeley 4, Calif.
FENTON, F. A., Head, Prof. of Entomol., Okla. A. and M. Coll., Stillwater, Okla.
HAMBLETON, JASPER I., Chf., Div. of Bee Culture and Biol. Control Bureau of Entomol. and Plant Quarantine, U. S. Dept. of Agri., Agri. Rsch. Center, Beltsville, Md.
HUNGERFORD, H. B., Univ. of Kans., Lawrence, Kans.
HURD, PAUL D., Dept. of Entomol., Univ. of Calif., Berkeley, Calif.
HYSLOP, JAMES A., retired, Chief of Insect Pest Survey, 1320 Stateside Dr., Silver Spring, Md.

KNIPLING EDWARD F., Bureau of Entomol. and Plant Quarantine, U. S. Dept. of Agri., Washington 25, D. C.
 LINSLEY, EARLE GORTON, Univ. of Calif., Entomol. Dept., Berkeley, Calif.
 MACSWAIN, J. W., Dept. of Entomol., Univ. of Calif., Berkeley, Calif.
 MATHESON, ROBERT, Cornell Univ., Ithaca, N. Y.
 METCALF, Z. PAYNE
 METCALF, ROBERT L., Citrus Expt. Sta., Univ. of Calif., Riverside, Calif.
 MICHENER, CHARLES DUNCAN, Kans. Univ., Entomol. Dept., Lawrence, Kans.
 MUESEBECK, CARL F. W., Bureau of Entomol. and Plant Quarantine, U. S. Dept. of Agri., Washington, D. C.
 NEEDHAM, JAMES G., Cornell Univ., Ithaca, N. Y.
 OSBORN, HERBERT, Ohio State Univ., Columbus, Ohio.
 PETERSON, ALVAH, Dept. of Zool. and Entomol., Ohio State Univ., Columbus, Ohio.
 REED, DOYLE S., Office of Chief of Engrs., Sanitary Engrng., Dept., Washington, D. C.
 RICHARDSON, CHARLES HOWARD, Rsch. Prof., Dept. of Zool. and Entomol., Iowa State Coll., Ames, Iowa.
 RILEY, W. A., Univ. of Minn., St. Paul, Minn.
 ROEDER, KENNETH E., Dept. Biology, Tufts College, Medford, Mass.
 WALKER, E. M., Dept. of Biol., Univ. of Toronto, Toronto 5, Ontario, Canada.

ETHNOLOGY

HARRINGTON, JOHN P., Bur. Amer. Ethn., S. I., Wash. 25, D. C.
 KRIEGER, H. W., Div. Ethnol., U. S. N. M., S. I., Wash. 25, D. C.

EVOLUTION

DOBYHAUSKY, TH., Columbia Univ., New York City, N. Y.
 SIMPSON, G. G., Amer. Museum of Natural History, N. Y., N. Y.
 MYER, ERNEST, Amer. Museum, New York City, N. Y.

FIBERS

ALFREY, TURNER, Rsch. Chemist, Dow Chem. Co., Midland, Mich.
 HARRIS, MILTON, Milton Harris Associates, Washington, D. C.
 SLAYTER, JAMES, Owens-Corning Glass Co., Newark, Ohio.

FISHERIES

GUNTER, GORDON, Inst. of Marine Sci., Port Aransas, Tex.
 HOPKINS, S. H., Dept. of Biol., A. and M. Coll., College Station, Tex.
 THOMPSON, WILL F., Fisheries Rsch. Inst., Univ. of Wash., Seattle, Wash.
 VAN CLEVE, R. C., Schl. of Fisheries, Univ. of Wash., Seattle, Wash.

FLUID MECHANICS

VON KARMAN, THEODORE, Guggenheim Aeronautics Lab., Calif. Inst. of Tech., Pasadena, Calif.
 Also: C. C. LIN, W. R. SEARS, A. FERRI, C. B. MILLIKAN, W. B. OSWALD, A. E. PUCKETT.

FOOD TECHNOLOGY

CRUESS, WILLIAM V., Prof., Univ. of Calif., Berkeley, Calif.
 FELLERS, C. R., Dept. of Food Tech., Univ. of Mass., Amherst, Mass.
 KERTESZ, Z. I., Agril. Expt. Sta., Geneva, N. Y.
 PRESCOTT, SAMUEL C., retired, Mass. Inst. of Tech., Boston, Mass.

FORESTRY

BAILEY, REED, Dir. of Intermountain Forest and Range Expt. Sta., Forest Service Bldg., Ogden, Utah.
 DANA, SAMUEL T., Ann Arbor, Mich.
 ERRINGTON, PAUL E., Dept. of Zool., Iowa Univ., Ames, Iowa.
 GARRETT, GEORGE A., Schl. of Forestry, Yale Univ., New Haven, Conn.
 HARTLEY, CARL, Div. of Forest Pathol., Plant Indus. Sta., Beltsville, Md.
 HEPTING, GEORGE H., Southeastern Forest Expt. Sta., Asheville, N. C.
 KRESS, OTTO, Inst. of Paper Chem., Appleton, Wis.
 MCARDLE, R. E., Chief, U. S. Forest Service, Dept. of Agri., Washington, D. C.
 MARTIN, A. C., Fish and Wildlife Service, Patuxent Refuge, Laurel, Md.
 MUNGER, THORNTON T., 2755 S. W. Buena Vista Dr., Portland, Ore.
 MUNNS, EDWARD N., 1639 Garnet Lane, Concord, Calif.
 PRICE, RAYMOND, Dir. of Southwestern Forest and Range Expt. Sta., Tucson, Ariz.
 SCHUMACHER, FRANCIS X., Schl. of Forestry, Duke Univ., Durham, N. C.
 UHLER, FRANCIS M., Patuxent Rsch. Refuge, Laurel, Md.
 WEAVER, J. E., Prof., Univ. of Nebr., Lincoln, Nebr.
 ZON, RAPHAEL, Doswell Ave., St. Paul, Minn.

FOUNDRY TECHNOLOGY

EASTWOOD, L. W., Kaiser Aluminum Co., Spokane, Wash.
PHILLIPS, A. J., Amer Smelting and Refining Co., Barber, N. J.

GENETICS

ANDERSON, E. G., Calif. Inst. of Tech., Pasadena, Calif.
BABCOCK, ERNEST B., Div. of Genetics, Univ. of Calif., Berkeley, Calif.
BEADLE, GEORGE W., Calif. Inst. of Tech., Pasadena, Calif.
BLAKESLEE, A. F., Smith Coll., Northampton, Mass.
CASTLE, W. E., Univ. of Calif., Berkeley, Calif.
COOK, ROBERT C., Journal of Heredity, Washington, D. C.
DEMEREC, M., Carnegie Inst., Cold Spring Harbor, L. I., N. Y.
DOBZHANSKY, THEODOSIUS, Columbia Univ., N. Y., N. Y.
IRWIN, M. R., Univ. of Wis., Madison, Wis.
LITTLE, C. C., Jackson Lab., Bar Harbor, Maine.
LUSH, JAY, Dept. of Animal Husbandry, Iowa State Coll., Ames, Iowa.
MACKENSEN, OTTO, Southern States Bee Culture Lab., Univ. Sta., Baton Rouge, La.
MULLER, H. J., Ind. Univ., Bloomington, Ind.
RUGH, ROBERTS, Columbia Univ., New York, N. Y.
SCHRADER, FRANZ, Columbia Univ., New York, N. Y.
SONNEBORN, T. M., Ind. Univ., Bloomington, Ind.
STERN, KURT, Dept. of Zool., Univ. of Calif., Berkeley, Calif.
STURTEVANT, A. H., Calif. Inst. of Tech., Pasadena, Calif.
WRIGHT, SEWALL, Univ. of Chicago, Chicago, Ill.

GENETICS, HUMAN

PATTERSON, J. T., Univ. of Tex., Austin, Tex.
SNYDER, L. H., Univ. of Okla., Norman, Okla.

GENETICS, POPULATION

DOBZHANSKY, THEODOSIUS, Columbia Univ., New York, N. Y.
WRIGHT, SEWALL, Univ. of Chicago, Chicago, Ill.

GEOCHEMISTRY

BOWEN, N. L., Geophysical Lab., Washington, D. C.
GARRELS, R. M., Northwestern Univ., Evanston, Ill.
TUTTLE, O. F., Geophysical Lab., Washington, D. C.

GEODESY

LAMBERT, WALTER D., Box 687, Canaan, Conn.
MILLER, O. M., Amer. Geographical Society, Broadway at 156th St., N. Y. 32, N. Y.
SINGLETON, ROBERT, 404 Burd St., Pennington, N. J.

GEOGRAPHY

CRESSEY, GEORGE B., Prof., Syracuse Univ., Syracuse, N. Y.
HARTSHORNE, R., Dept. of Geography, Univ. of Wis., Madison 6, Wis.
JONES, CLARENCE F., Geog. Dept., Northwestern Univ., Evanston, Ill.
RUSSELL, RICHARD JOEL, La. State Univ., Baton Rouge, La.
SAUER, CARL O., Univ. of Calif., Berkeley, Calif.
VAN VALKENBURG, SAMUEL, Dir. Grad. Schl. of Geography, Clark Univ., Worcester, Mass.
WHITAKER, J. RUSSELL, George Peabody Coll., Nashville, Tenn.

GEOLOGY

BATEMAN, ALAN M., Dept. of Geol., Yale Univ., New Haven, Conn.
BERKEY, C. P., Columbia Univ., Dept. of Geol., New York, N. Y.
BIRCH, FRANCIS, Harvard Univ., Cambridge, Mass.
BLACKWELDER, ELIOT, Emer., Head of Dept. of Geol., Stanford Univ., Stanford, Calif.
BOWEN, NORMAN LEVI, Geophysical Lab., 2801 Upton St., N. W., Washington 8, D. C.
BOYD, JAMES, New York, N. Y.
BUTLER, BERT S., Univ. of Ariz., Tucson, Ariz.
CALLAGHAN, EUGENE, N. M. Bureau of Mines & Mineral Resources, N. M. Inst. of Mining and Tech., Socorro, N. M.
COOPER, GUSTAV A., Div. Invert. Paleon. and Palebot., U. S. N. M., S. I., Wash. 25, D. C.
DALY, REGINALD A., 23 Hawthorn St., Cambridge, Mass.
EARDLEY, ARMAND J., Univ. of Utah, Salt Lake City, Utah.
FOSHAG, W. F., Head, Dept. Geol., U. S. N. M., S. I., Wash. 25, D. C.
FRYXELL, FRITLOFF, Augustana Coll., Rock Island, Ill.

GAZIN, Div. Vert. Paleon., U. S. N. M., S. I., Wash. 25, D. C.
 GILLULY, JAMES, U. S. Geol. Survey, Denver Federal Center, Denver 14, Colo.
 GROUT, F. F., Univ. of Minn., Minneapolis, Minn.
 INGERSON, EARL, Carnegie Institution, Washington, D. C.
 KAY, G. MARSHALL, Dept. of Geol., Columbia Univ., N. Y., N. Y.
 KNOPE, ADOLPH, Stanford Univ., Palo Alto, Calif.
 KRUMBEIN, W. C., Northwestern Univ., Evanston, Ill.
 KRYNINE, P. D., Pa. State Coll., State College, Pa.
 LEITH, C. K., Madison, Wis.
 MOORE, RAYMOND C., Dept. of Geol., Univ. of Kans., Lawrence, Kans.
 RUBEY, WILLIAM W., U. S. Geol. Survey, Washington, D. C.
 WOODRING, WENDELL, P., U. S. Geol. Survey, Washington, D. C.

GEOLOGY, ECONOMIC

BURBANK, WILBUR S., U. S. Geol. Survey, Washington 25, D. C.
 JORALEMON, IRA B., 315 Montgomery St., San Francisco, Calif.
 LOVERING, T. S., U. S. Geol. Survey, Washington, D. C.
 MCLAUGHLIN, DONALD H., Pres. Homestake Mining Co., 100 Bush St., San Francisco, Calif.
 RANKAMA, T., Univ. of Chicago, Chicago, Ill.
 SINGLEWALD, JOSEPH T., JR., Johns Hopkins Univ., Baltimore 18, Md.

GEOLOGY, ENGINEERING

BOWEN, NORMAN L., 3 E. Kirke St., Chevy Chase, Md.
 BUERGER, MARTIN J., Dept. of Geol., Mass. Inst. of Tech., Cambridge, Mass.
 BURWELL, EDWARD B. J., Office Chief of Engrs., Washington 25, D. C.
 CLINE, L. M., Dept. of Geol., Tex. Technological Coll., Lubbock, Tex.
 LANDON, L. R., Dept. of Geol., Univ. of Wis., Madison, Wis.
 PHILBRICK, SHAILEY, S., U. S. Corps of Engrs., Federal Bldg., Pittsburgh, Pa.

GEOLOGY, EXPLORATION

CAINSELL, CHARLES, Victory Bldg., Ottawa, Canada.
 ECKHARDT, E. A., P. O. Drawer 2038, Pittsburgh 30, Pa.
 LEE, FREDERICK W., McDonogh Rd., Owings Mills, Md.

GEOLOGY, GEOMAGNETISM

MCNISH, ALVIN G., Natl. Bureau of Standards, Washington 25, D. C.
 VESTINE, E. H., 5241 Broad Branch Rd., N. W., Washington 15, D. C.

GEOLOGY, GLACIAL

FLINT, RICHARD FOSTER, Prof. Dept. of Geol., Yale Univ., New Haven, Conn.
 SHARP, ROBERT P., Dept. of Geol., Calif. Inst. of Tech., Pasadena, Calif.

GEOLOGY, GROUND-WATER HYDROLOGY

FERRIS, JOHN G., District Engr., 612 Capitol Sav. and Loan Bldg., 112 E. Allegan St., Lansing, Mich.
 PIPER, ARTHUR M., Box 3418, 607 P. O. Bldg., Portland, Ore.
 SAYRE, A. NELSON, 2211 N. Interior Bldg., Washington, D. C.
 THEIS, C. V., U. S. Geol. Survey, P. O. Box 443, Albuquerque, N. M.
 THOMAS, H. E., U. S. Geol. Survey, P. O. Box 503-A, Salt Lake City, Utah.

GEOPHYSICS AND SEISMOLOGY

BENIOFF, HUGO, Calif. Inst. of Tech., Pasadena, Calif.
 BYERLY, PERRY, Univ. of Calif., Chem. Dept. of Geological Sci., Berkeley, Calif.
 EWING, MAURICE, Prof., Lamont Geol. Observatory, Columbia Univ., Salisades, N. Y.
 FLEMING, JOHN A., 1530 P St., N. W., Washington 5, D. C.
 GUTENBERG, BENO, Calif. Inst. of Tech., Pasadena, Calif.
 RICHTER, C. F., Calif. Inst. of Tech., Pasadena, Calif.

GERONTOLOGY

LANSING, A. I., Washington Univ. Schl. of Med., St. Louis, Mo.
 LAWTON, GEORGE, 41 W. 81st St., New York City, N. Y.
 SIMMS, H. S., Coll. of Physicians and Surgeons, New York, N. Y.

GUIDED MISSILES

GOSS, WILBUR H., 8621 Georgia Ave., Silver Spring, Md.
 KERSHNER, RICHARD B., 8621 Georgia Ave., Silver Spring, Md.

GYNECOLOGY

ENGLE, EARL T., Columbia Univ., N. Y., N. Y.
 NOVAK, EMIL, 26 E. Preston St., Baltimore, Md.

HEAT STERILIZATION OF FOODS

BALL, COLIN, Rutgers Univ., Food Tech. Dept., New Brunswick, N. J.
BENJAMIN, H. A., Amer. Can Co. Rsch. Lab., Maywood, Ill.

HEAT TRANSFER

COLBURN, A. P., Univ. of Del., Newark, Del.
KJAKOB, MAX, Ill. Inst. of Tech., Chicago, Ill.
MCADAMS, WILLIAM H., Mass. Inst. of Tech., Cambridge 39, Mass.

HEMATOLOGY

DOAN, CHARLES A., Ohio State Univ., Columbus, Ohio.
WINTROBE, MAXWELL, Univ. of Utah, Salt Lake City, Utah.

HERPETOLOGY

DUNN, E. R., Haverford Coll., Haverford, Pa.
KLAUBER, L. M., San Diego, Calif.
SCHMIDT, KARL P., Chicago Natl. History Museum, Chicago, Ill.
SMITH, H. M., Univ. of Ill., Urbana, Ill.
SMITH PHILIP, Univ. of Ill., Urbana, Ill.

HORTICULTURAL RESEARCH

MAGNESS, JOHN R., Plant Indus. Sta., Beltsville, Md.
STOREY, WILLIAM B., Univ. of Hawaii Agril. Expt: Sta., Honolulu, T. H.

HORTICULTURE

BAILEY, LIBERTY HYDE, Cornell Univ., Ithaca, N. Y.
DARROW, GEORGE M., U. S. D. A., Bureau of Plant Indus., Beltsville, Md.
DAVIS, L. D., Dept. of Pomology, Univ. of Calif., Davis, Calif.
EMSWELLER, SAMUEL, U. S. D. A., Beltsville, Md.
KRAUS, E. J., Ore. State Coll., Corvallis, Ore.
POST, KENNETH, Cornell Univ., Ithaca, N. Y.

HYDRODYNAMICS

LIN, C. C., Dept. of Math., Mass. Inst. of Tech., Cambridge, Mass.
SCHUBAUER, B., Natl. Bureau of Standards, Washington, D. C.

HYDROLOGY

JACOB, C. E., Dept. of Geophysics, Univ. of Utah, Salt Lake City, Univ.
LINSLEY, ROY K., Dept. of Civil Engrng., Stanford Univ., Stanford, Calif.
POLAND, JOSEPH F., U. S. Geol. Survey, Ground Water Br., Sacramento, Calif.

ICHTHYOLOGY

HUBBS, CARL L., Scripps Inst. of Oceanography, La Jolla, Calif.
SCHULTZ, LEONARD P., U. S. Natl. Museum, Washington, D. C.
THOMPSON, DAVID H., Cooke Co. Forest Preserve District, Harlem, River Forest, Ill.

ILLUMINATION

LEVERENZ, H. W., RCA Labs., Princeton, N. J.
LUCKIESH, MATTHEW, General Electric Co., Nela Park, Cleveland, Ohio.
MOON, PARRY, Prof. of Elec. Engrng., Mass. Inst. of Tech., Cambridge, Mass.

IMMUNOGENETICS

FREUND, JULES, Chief, Div. of Applied Immunol. and Lecturer, Cornell Univ. Med. Schl., Public Health Inst. of the City of New York, Inc., E. 15th St., N. Y. 9, N. Y.
IRWIN, MALCOLM ROBERT, Univ. of Wis., Madison 6, Wis.
SNELL, George D., Jackson Memorial Lab., Bar Harbor, Maine.

IMMUNOLOGY

HEIDELBERGER, MICHAEL, Coll. of Physicians and Surgeons, Columbia Univ., N. Y. N. Y.
STUART, CHARLES A., Brown Univ., Providence, R. I.

INDUSTRIAL MINERALS

GILLSON, JOSEPH L., DuPont Co., Rm. D-8060 DuPont Bldg., Wilmington, Del.

INDUSTRIAL SOCIOLOGY

FITZPATRICK, REV., S. J., Fordham Univ., N. Y., N. Y.

INSECT TAXONOMY

FORBES, W. T. M., Prof. of Entomology, Cornell Univ., Ithaca, N. Y.
HOOD, J. D., Prof. of Biol., Cornell Univ., Ithaca, N. Y.
NORTON, LELAND B., Dept. of Entomol., Cornell Univ., Ithaca, N. Y.

INTERFERONETRY

PETERS, C. G., 1104 21st St., S., Arlington, Va.

IRRIGATION AND DRAINAGE

ISRAELSEN, O. W., Utah State Agril. Coll., Logan, Utah.

LEATHER CHEMISTRY

MERRILL, HENRY B., B. D. Eisendrath Memorial Lab., Racine, Wis.

LIMNOLOGY

CHANDLER, DAVID C., Dept. of Entomol. and Limnol., Cornell Univ., Ithaca, N. Y.
WELCH, PAUL S., Univ. of Mich., Dept. of Zool., Ann Arbor, Mich.

LINGUISTICS

BLOCH, BERNARD, Yale Univ., New Haven, Conn.
HARRIS, ZELLIG, Univ. of Pa., Philadelphia, Pa.

LUBRICATION

LORSEN, R. G., Shell Development Co., Emeryville, Calif.
ZISMAN, W. A., Naval Rsch. Lab., Washington, D. C.

MAMMALOGY

BURT, WILLIAM H., Univ. of Mich., Ann Arbor, Mich.
HALL, RAYMOND E., Museum of Natural History, Univ. of Kans., Lawrence, Kans.
HAMILTON, WILLIAM J., Cornell Univ., Ithaca, N. Y.
KELLOGG, REMINGTON, Dir., U. S. N. M., S. I., Wash. 25, D. C.
MANVILLE, RICHARD, Dept. of Zool., Mich. State Coll., E. Lansing, Mich.

MANAGEMENT OF RESEARCH AND DEVELOPMENT

HUTCHESON, J. A., Westinghouse Labs.
KELLY, M. J., Bell Telephone Labs., N. Y. C.
MUELLER, GEORGE J., 11845 Olympic Blvd., Los Angeles 64, Calif.
SUITS, C. G., General Electric Co.
WARNER, ARTHUR H., c/o Office of Naval Rsch., E. Green St., Pasadena, Calif.

MATHEMATICAL LOGIC

CHURCH, ALONZO, Princeton Univ., Princeton, N. J.
QUINE, W. V. O., Harvard Univ., Cambridge, Mass.
TARSKI, ALFRED, Univ. of Calif., Berkeley, Calif.

MATHEMATICAL STATISTICS

WILKS, S. S., Princeton Univ., Princeton, N. J.

MATHEMATICS

AHLFORS, L. V., Harvard Univ., Cambridge, Mass.
ALBERT, A. A., Univ. of Chicago, Chicago 37, Ill.
BERS, LIPMAN, Prof., N. Y. Univ., New York, N. Y.
BING, R. H., Prof. of Math., Univ. of Wis., Madison, Wis.
BRAUER, ALFRED T., Prof. of Math., Univ. of N. C., Chapel Hill, N. C.
BOCHNER, S., Princeton Univ., Princeton, N. J.
COBLE, A. B., Haverford Coll., Haverford, Pa.
COXTER, H. S. M., Univ. of Toronto, Toronto, Ont., Can.
DICICCO, JOHN, De Paul Univ., Chicago, Ill.
EINSTEIN, ALBERT, Princeton Institute for Advanced Study.
HESTENES, M. R., Chairman Dept. of Math., U.C.L.A., Los Angeles, Calif.
HILLE, EINER, Yale Univ., New Haven, Conn.
KAC, MARK, Cornell Univ., Ithaca, N. Y.
LEVINSON, NORMAN, Prof., Math. Dept., Mass. Inst. of Tech., Cambridge, Mass.
MACLANE, SAUNDERS, Chairman Dept. of Math., Univ. of Chicago, Chicago, Ill.,
Member N.A.S., American Phil. Soc., Past President Math. Assn. of America.
MACSHANE, E. J., Univ. of Virginia, Charlottesville, Va., Chairman Section of
Mathematics of N.A.S., Past President Math. Assn. of America.
MARTIN, WILLIAM TED, Prof., Math. Dept., Mass. Inst. of Tech., Cambridge, Mass.
MOORE, ROBERT LEE, Dept. of Pure Math., Univ. of Tex., Austin, Tex.
MORSE, MARSTON, Institute for Advanced Study, Princeton, N. J.
ROSSER, BARKLEY, Cornell Univ., Ithaca, N. Y.
SELBERG, ATLE, Prof., Inst. for Advanced Study, Princeton, N. J.
SLADE, J. J., Coll. of Engrng., Rutgers Univ., New Brunswick, N. J.
SMITH, PAUL, Ex-Chairman Dept. of Math., Columbia, Univ., N. Y. C.
STONE, M. H., Ex-Chairman Dept. of Math., Univ. of Chicago, Chicago, Ill.
STRIGHT, I. L., State Teachers Coll., Indiana, Pa.

THOMAS, T. Y., Ind. Univ., Bloomington, Ill.
 VEBLEN, OSWALD, Inst. for Advanced Study, Princeton, N. J.
 VON NEUMANN, JOHN, Inst. for Advanced Study, Princeton, N. J.
 WALLACE, ROBERT J., Cornell Univ., Ithaca, N. Y.
 WEYL, HERMAN, Inst. for Advanced Study, Princeton, N. J.
 WHITNEY, HASSLER, Institute for Advanced Study, Princeton, N. J.
 WHYBURN, GORDON THOMAS, Prof. of Math., Univ. of Va., Charlottesville, Va.
 WHYBURN, W. M., Head Math. Dept., Univ. of N. C., Chapel Hill, N. C.
 WIENER, NORBERT, Mass. Inst. of Tech., Cambridge, Mass.
 WILLIAMS, KENNETH P., Ind. Univ., Bloomington, Ind.
 ZARISKI, O., Harvard Univ., Cambridge, Mass.

MATHEMATICS, APPLIED

BERS, DR., New York Univ., N. Y. C.
 BRAUER, RICHARD, Harvard Univ., Cambridge, Mass.
 COURANT, RICHARD, New York Univ., N. Y. C.
 FRIEDRICKS, DR., New York Univ., N. Y. C.
 JOHN, F., New York Univ., N. Y. C.

MATHEMATICS, HISTORY OF

ARCHIBALD, R. C., Brown Univ., Providence, R. I.
 NEUGEBAUER, OTTO, Brown Univ., Providence, R. I.

MEASUREMENT LARGE-SCALE NUCLEAR REACTIONS

KRAUSE, E. H., Chief of Radiation Div., Naval Rsch. Lab., Washington 25, D. C.

MECHANICAL PROPERTIES OF HIGH POLYMERS

ALFREY, TURNER, Dow Chem. Co., Midland, Mich.
 TOBOLSKY, A. V., Frick Chem. Lab., Princeton Univ., Princeton, N. J.

MECHANICS

DOLAN, THOMAS J., Dept. of Theoretical and Applied Mechanics, Univ. of Ill., Urbana, Ill.
 FREUDENTHAL, A. M., Dept. of Civil Engrng., Columbia Univ., N. Y., N. Y.
 GOODIER, J. M. Stanford Univ., Stanford, Calif.
 IRWIN, GEORGE R., Supt. of Mechanics Div., Naval Rsch. Lab., 6005 39th Pl., Hyattsville, Md.
 MINDLIN, R. D., Columbia Univ., New York, N. Y.
 TIMOSHENKO, S., Stanford Univ., Palo Alto, Calif.

MECHANICS, ORGANIC

DAY, ALLEN R., Univ. of Pa., 34th and Spruce St., Philadelphia, Pa.

MEDICAL CHEMISTRY

BUCK, JOHANNES S., Sterling Winthrop Rsch. Inst., Rensselaer, N. Y.
 BURGER, ALFRED, Univ. of Va., Charlottesville, Va.
 SUTER, C. M., Sterling Winthrop Rsch. Inst., Rensselaer, N. Y.

MEDICAL ENTOMOLOGY

BRANCH, HAZEL E., 3756 East Douglas and Univ. of Wichita, Wichita, Kans.
 FREEBORN, STANLEY B., Dean of Agri., Univ. of Calif., Berkeley, Calif.
 MATHESON, ROBERT, Prof. Emer., Cornell Univ., Ithaca, N. Y.
 NEEDHAM, JAMES, Prof. Emer., Cornell Univ., Ithaca, N. Y.

MEDICAL GEOGRAPHY

CHARLIER, ROGER H., Grove St., Chester, N. J.
 LEE, DOUGLAS K., Johns Hopkins Univ., Baltimore, Md.

METALLURGY

ABORN, ROBERT H., U. S. Steel Rsch. Lab., Kearny, N. J.
 BAIN, E. C., Vice-Pres., U. S. Steel Co., Pittsburgh, Pa.
 BARRETT, CHARLES S.
 CHIPMAN, JOHN, Prof., Mass. Inst. of Tech., Cambridge, Mass.
 COHEN, MORRIS, Mass. Inst. of Tech., Cambridge, Mass.
 JEFFERIES, ZAY, 280 Holmes Rd., Pittsfield, Mass.
 KUZELL, CHARLES R., Box 872, Douglas, Ariz.
 MEHL, ROBERT F., Carnegie Inst. of Tech., Pittsburgh, Pa.
 SMITH, CYRIL STANLEY, Inst. for the Study of Metals, Univ. of Chicago, Chicago 37, Ill.
 ZENER, C.

METALLURGY, PHYSICAL

BECK, PAUL A., 205 Transportation Bldg., Urbana, Ill.
 HANSEN, MAX, Armour Rsch. Foundation, Tech. Center, Chicago 16, Ill.
 WERT, CHARLES A., 106 Transportation Bldg., Urbana, Ill.

METEORITICS

LAPAZ, LINCOLN, Dir. Inst. of Meteoritics, Univ. of N. M., Albuquerque, N. M.
LEONARD, F. C., Prof. of Astronomy, Univ. of Calif., Los Angeles, Calif.
NININGER, H. H., Amer. Meteorite Museum, P. O. Box 1171, Winslow, Ariz.
PERRY, STUART H., Pub. of Adrian Daily Telegram, Adrian, Mich.
WHIPPLE, FRED L., Harvard Univ., Cambridge, Mass.

METEOROLOGY

ABBOT, CHARLES G., Smithsonian Inst., Washington, D. C.
BJERKNES, J. A. B., Dept. of Meteorol., Univ. of Calif., Los Angeles 24, Calif.
BRAHAM, ROSCOE R. J., Univ. of Chicago, Chicago, Ill.
BYERS, HORACE, Univ. of Chicago, Chicago, Ill.
CHARNEY, J. G., Inst. for Advanced Study, Princeton, N. J.
NAMIAS, J., U. S. Weather Bureau, Washington, D. C.
PALMER, C. E., Inst. of Geophysics, Univ. of Calif., Los Angeles 24, Calif.
PETERSSEN, SVERRE, Prof., Dept. of Meteorol., Univ. of Chicago, Chicago 37, Ill.
WEXLER, H., U. S. Weather Bureau, Washington 26, D. C.
WILLETT, HURD C., Dept. of Meteorol., Mass. Inst. of Tech., Cambridge 39, Mass.
WHIPPLE, FRED L., Harvard Coll. Observatory, Cambridge 38, Mass.

MICROBIOLOGY

EMERSON, RALPH, Prof., Botany Dept., Univ. of Calif., Berkeley, Calif.
SALLE, A. J., Univ. of Calif., Los Angeles 24, Calif.
SPIEGELMAN, SOL, Univ. of Ill., Champaign, Ill.
SYVERTON, J., Univ. of Minn., Minneapolis, Minn.
TATUM, E. L., Dept. of Biol. Sci., Stanford Univ., Stanford, Calif.
VAN NIEL, C. B., Hopkins Marine Sta., Pacific Grove, Calif.

MICROCHEMISTRY

BENEDETTI-PICHLER, Queens Coll., New York, N. Y.

MICROPALEONTOLOGY

COLE, W. STORRS, Prof., Dept. of Geol., Cornell Univ., Ithaca, N. Y.
GALLOWAY, J. J., Prof., Dept. of Geol., Ind. Univ., Bloomington, Ind.

MICROSCOPIC ANATOMY

MAGOUN, H. W., Prof. of Anatomy, Univ. of Calif., Los Angeles 21, Calif.

MICROSCOPY

MASON, C. W., Prof., Schl. of Chem. Engrng., Cornell Univ., Ithaca, N. Y.
MCCRONE, W. C., Armour Rsch. Foundation, Chicago 16, Ill.

MINERALOGY

GRUNER, JOHN W., Dept. of Geol., Univ. of Minn., Minneapolis, Minn.
MCCAUGHEY, WILLIAM J., Lord Hall, Ohio State Univ., Columbus, Ohio.

MOLECULAR STRUCTURE

HERZBERG, G., Natl. Rsch. Council of Can., Ottawa, Ont., Canada.
MULLIKEN, ROBERT S., Physics Dept., Univ. of Chicago, Chicago 37, Ill.
NIELSEN, HAROLD H., Physics Dept., Ohio State Univ., Columbus 10, Ohio.

MOLLUSCAN SHELLFISH BIOLOGY

NELSON, T. C., Dept. of Zool., Rutgers Univ., New Brunswick, N. J.

MORPHOLOGY

CHAMBERS, ROBERT, Marine Biol. Exptl. St., Woods Hole, Mass.
TIPPO, OSWALD, Dept. of Botany, Univ. of Ill., Urbana, Ill.

MOTION STUDY ENGINEERING

GILBRETH, LILLIAN, Founder, Motion Study, 130 the Crescent, Montclair, N. J.

MUSHROOM RESEARCH

LAMBERT, E. B., U. S. Dept. of Agri., Plant Indus. Sta., Beltsville, Md.
SINDEN, JAMES W., Gossau-Zerich, Switzerland.

MYCOLOGY

CONANT, N. F., Duke Univ., Durham, N. C.
COUCH, JOHN N., Dept. of Botany, Univ. of N. C., Chapel Hill, N. C.
CUMMINS, G. B., Purdue Univ., Lafayette, Ind.
DODGE, CARROL WILLIAM, Prof., Dept. of Botany, Washington Univ., St. Louis, Mo.
DODGE, B. O., (retired), The New York Botanical Garden, N. Y., N. Y.

DRECHSLER, CHARLES, Plant Ind. Sta., Beltsville, Md.
 EMERSON, R., Univ. of Calif., Berkeley, Calif.
 EMMONS, C. W., U. S. Dept. of Public Health, Bethesda, Md.
 KARLING, S. S., Purdue Univ., Lafayette, Ind.
 MARTIN, G. W., Dept. of Botany, State Univ. of Iowa, Iowa City, Iowa.
 ROPER, KENNETH B., SR., Microbiologist, Northern Regional Lab., U. S. Dept. of Agri., Peoria, Ill.
 ROPER, K. B., Univ. of Wis., Madison, Wis.
 SEAVER, F. J., (retired), The New York Botanical Garden, N. Y., N. Y.
 SPARROW, F. K., Univ. of Mich., Ann Arbor, Mich.
 STEVENSON, J. A., U. S. D. A. Bureau of Plant Indus., Beltsville, Md.
 WESTON, W. H., Prof., Harvard Univ., Cambridge, Mass.

NATURE & CONSERVATION EDUCATION

GORDON, EVA L., Cornell Univ., Ithaca, N. Y.
 PALMER, E. LAURENCE, Cornell Univ., Ithaca, N. Y.

NEUROLOGY

BAILEY, PEARCE, 4725 Sedgwick, N. W., Washington 16, D. C.
 BAILEY, PERCIVAL, 912 S. Wood St., Chicago, Ill.
 BUCY, PAUL, 25 E. Washington St., Chicago, Ill.
 COBB, DR. STANLEY, Mass. Gen. Hospital, Boston, Mass.
 PUTNAM, TRACY, J., 416 N. Bedford Dr., Beverly Hills, Calif.
 SAHS, ADOLPH S., State Univ. of Iowa Hospitals, Iowa City, Iowa.
 Also: J. S. FULTON, Yale, H. S. GOSSER and DETLEV BRONK.

NEUROPHYSIOLOGY

DAVIS, HALLOWELL, Central Inst. for the Deaf, St. Louis, Mo.
 DE NO, R. LORENTE, Rockefeller Inst. for Med. Rsch., New York, N. Y.
 FORBES, ALEXANDER, Biol. Inst., Harvard Univ., Cambridge, Mass.
 GALAMBOS, DR. ROBERT, Walter Reed Hospital, Washington, D C
 LLOYD, DR. DAVID, Rockefeller Institute, N. Y. C.

NUCLEAR ENGINEERING

HENDERSON, R. W., Sandia Corp., Sandia Base, Albuquerque, N. M.

NUTRITION

BIRD, H. R., Univ. of Wis., Poultry Husbandry Dept., Madison, Wis.
 MITCHELL, H. H. Dept. of Animal Nutrition, Univ. of Ill., Urbana, Ill.
 SEBRELL, WILLIAM H., JR., Natl. Inst. of Health, Bethesda, Md.
 SPIES, TOM, Northwestern Med. Schl., Chicago, Ill.
 TANNENBAUM, ALBERT, Michael Reese Hosp., Chicago, Ill.

OCEANOGRAPHY

MONTGOMERY, RAY, Prof., Brown Univ., Providence, R. I.
 THOMPSON, T. G., Prof., Univ. of Wash., Seattle, Wash.
 Also: FLEMING and EWING.

OPHTHALMOLOGY

ADLER, FRANCIS HEED, 313 S. 17th St., Philadelphia, Pa.
 FRIEDENWALD, JONAS, Wilmer Inst., Johns Hopkins Hosp., Baltimore, Md.
 KRONFELD, PETER C., 111 N. Wabash Ave., Chicago, Ill.
 VAIL, DERRICK T., Northwestern Univ. Med. Schl., 303 E. Chicago Ave., Chicago 11, Ill.

OPTICS

BROOKER, L. G. S., Eastman Kodak Co., Kodak Pk., Rochester, N. Y.
 LAND, E. H., Pres., Poloroid Corp., Cambridge 39, Mass.
 LEERMAKERS, JOHN A., Eastman Kodak Co., Kodak Pk., Rochester, N. Y.
 O'BRIEN, BRIAN, Univ. of Rochester, Rochester, N. Y.

ORGANIC REACTION MECHANISMS

BROWN, HERBERT C., Purdue Univ., Lafayette, Ind.
 BROWN, WELDON G., Chicago Univ., Chicago, Ill.
 ROBERTS, JOHN D., Mass. Inst. of Tech., Cambridge, Mass.

ORNITHOLOGY

HANN, H. W., Dept. of Zool., Univ. of Mich., Ann Arbor, Mich.
 MAYR, ERNST WALTER, Amer. Museum of Natural History, N. Y., N. Y.
 MILLER, ALDEN H., Museum of Vertebrate Zool., Berkeley, Calif.
 PALMER, RALPH S., N. Y. State Museum, Albany, N. Y.
 PETTINGILL, OLIN SEWALL, Dept. of Zool., Carleton Coll., Northfield, Minn.
 SUTTON, GEORGE MIKSCH, Dept. of Zool., Univ. of Okla., Norman, Okla.
 WETMORE, ALEXANDER, Smithsonian Inst., Washington, D. C.

OTOLARYNGOLOGY

HIRSCH, OSCAR, 186 Commonwealth Ave., Boston 16, Mass.
LEMPERT, JULIUS, 119 E. 74, N. Y. 19, N. Y.

PALEOBOTANY

ANDREWS, HENRY N., Washington Univ., St. Louis, Mo.
AXELROD, DANIEL I., Univ. of Calif., Dept. of Geology, Los Angeles, Calif.
CHANEY, RALPH W., Dept. of Paleontol., Univ. of Calif., Berkeley 4, Calif.
DORF, ERLING, Princeton University, N. J.

PALEONTOLOGY

COLBERT, E. H., Amer. Museum of Natural History, N. Y., N. Y.
DUNBAR, C. O., Yale Univ., New Haven, Conn.
GOLDRING, WINIFRED, State Paleontologist, N. Y. State Museum, Albany, N. Y.
JEPSEN, G. L., Princeton Univ., Princeton, N. J.
MOORE, R. C., Univ. of Kans., Lawrence, Kans.
NEWELL, N. D., Amer. Museum of Natural History, N. Y., N. Y.
OLSON, E. C., Univ. of Chicago, Chicago, Ill.
PATTERSON, B., Chicago Natural History Museum, Chicago, Ill.
ROMER, A. S., Harvard Univ., Cambridge, Mass.

PALEONTOLOGY, VERTEBRATE

ROMER, ALFRED S., Museum of Comparative Zool., Harvard Univ., Cambridge, Mass.
SIMPSON, GEORGE GAYLORD, Amer. Museum of Natural History, New York, N. Y.

PARASITOLOGY

ACKERT, JAMES E., Kans. State Coll., Manhattan, Kans.
CHANDLER, ASA C., Dept. of Biol., Rice Inst., Houston, Tex.
CRAM, ELOISE, Zool. Div., Natl. Inst. of Health, Bethesda 14, Md.
FAUST, ERNEST CARROLL, The Tulane Schl. of Med., New Orleans, La.
HUFF, CLAY G., Naval Med. Rsch. Inst., Naval Med. Center, Bethesda, Md.
LARUE, GEORGE H., Dept. of Zool., Univ. of Mich., Ann Arbor, Mich.
LARUE, GEORGE R., Rice Inst., Houston, Tex.
PRICE, E. W., Zool. Div., B. A. I., A. R. C., Beltsville, Md.
STOLL, NORMAN R., Rockefeller Inst, 66th and York Ave., N. Y., N. Y.
STUNKARD, HORACE, Dept. of Biol., N. Y. Univ., N. Y., N. Y.
TALIAFERRO, WILLIAM, Univ. of Chicago, Chicago 37, Ill.
TREMBLEY, HELEN LOUISE, Lab. of Tropical Diseases, Natl. Inst. of Health, Bethesda 14, Md.
VAN CLEAVE, H. J., Univ. of Ill., Urbana, Ill.
WEHR, E. E., Zool. Div., B. A. I., A. R. C., Beltsville, Md.
WRIGHT, WILLARD R., Lab. of Tropical Diseases, U. S. Public Health Service, Natl. Inst. of Health, Bethesda 14, Md.

PATHOLOGY

CANNON, PAUL R., Univ. of Chicago, Chicago, Ill.
DUFF, G. LYMAN, Prof. of Pathol., McGill Univ., Montreal, Que., Can.
FABER, SIDNEY, Harvard Med. Schl., Boston, Mass.
FORBUS, WILEY, Duke Univ., Durham, N. C.
GESCHICKER, CHARLES F., Prof. of Pathol., Georgetown Univ. Med. Center, Washington, D. C.
KARSNER, HOWARD THOMAS, c/o Navy Dept., Washington 25, D. C.
LUCKE, BALDWIN, Univ. of Pa. Med. Schl., Philadelphia, Pa.
MCDONALD, JOSEPH, Mayo Clinic, Rochester, Minn.
MASSON, PIERRE, Dept. of Pathol., Univ. of Montreal, Montreal, Que., Can.
MOORE, ROBERT A., Washington Univ. Schl. of Med., Euclid Ave. and Kings-highway, St. Louis 10, Mo.
MORITZ, ALLAN R., 2085 Adelbert Rd., Cleveland 6, Ohio.
NETTLESHIP, ANDERSON, Dept. of Pathol., Univ. of Ark. Med. Schl., Little Rock, Ark.
POPPER, HANS, Cook County Hosp., Chicago 12, Ill.
RICH, ARNOLD, Johns Hopkins Univ., Baltimore, Md.
SHIELDS, WARREN, Deaconess Hosp., Boston, Mass.
SMADEL, JOSEPH E., Army Med. Service Graduate Schl., Washington 12, D. C.
WHIPPLE, G. H., Univ. of Rochester, Rochester, N. Y.
ZIMMERMAN, H. M., Montefiore Hosp., N. Y., N. Y.

PATHOLOGY, PLANT

BENNETT, CARLYLE W., P. O. Box 31, Riverside, Calif.
CHUPP, CHARLES, Dept. of Plant Pathol., Coll. of Agri., Ithaca, N. Y.

COMMONER, BARRY, Washington Univ., St. Louis, Mo.
 DICKSON, JAMES G., Univ. of Wis., Madison 6, Wis.
 DUGGAR, B. M., Lederle Lab., Pearl River, N. Y.
 HORSFALL, J. G., Conn. Agril. Expt. Sta., New Haven, Conn.
 JONES, HENRY A., Plant Indus. Sta., Beltsville, Md.
 LOOMIS, WALTER E., Iowa State Coll., Ames, Iowa.
 MCNEW, G. L., Boyce Thompson Inst. for Plant Rsch., Yonkers, N. Y.
 RIKER, A. J., Univ. of Wis., Madison, Wis.
 SNYDER, W. C., Univ. of Calif., Berkeley 4, Calif.
 STAKMAN, E. C., Dept. of Plant Pathol. & Botany, Univ. Farm, St. Paul, Minn.
 WALKER, J. C., Dept. of Plant Pathol., Univ. of Wis., Madison 6, Wis.
 WOLF, F. A., Duke Univ., Durham, N. C.

PATHOLOGY, SPEECH

JOHNSON, WENDELL
 TROVIS, LEE EDWARD
 WEST, ROBERT, Speech Clinic, Brooklyn Coll., Brooklyn, N. Y.

PATHOLOGY, VETERINARY

GOSS, LEONARD W., Ohio State Univ., Columbus, Ohio.
 RODERICK, LEE M., Dept. of Veterinary Pathol., Kans. State Coll., Manhattan, Kans.

PETROLEUM

FENSKE, MERRELL R., Pet. Ref. Lab., Pa. State Coll., State College, Pa.
 FRANKLIN, W. B., Humble Oil Co., Baytown, Tex.
 HANSFORD, R. C., 706 N. Pickering Ave., Whittier, Calif.
 KALICHEVSKY, V. A., Magnolia Petroleum Co., Beaumont, Tex.
 MATISIC, M. M., 841 Douglas Ave., Elgin, Ill.
 ROGERS, T. H., Dune Acres, Chesterton, Ind.
 ROSSINI, F. D., Carnegie Inst. of Tech., Pittsburgh, Pa.
 SHERBORNE, JOHN E., Union Oil Rsch. Dept., P. O. Box 218, Brea, Calif.
 YUSTER, SAM, Univ. of Calif. at Los Angeles, Los Angeles, Calif.

PHARMACEUTICAL CHEMISTRY

KAMM, OLIVER, Parke, Davis & Co., Detroit 32, Mich.
 KAWILER, ERNST H., Abbott Labs., N. Chicago, Ill.
 WAGNER, JOHN GARNET, 2156 Sunbury Rd., Columbus 11, Ohio; Coll. of Pharmacy, Ohio State Univ., Columbus, Ohio.

PHARMACOLOGY

BEUTNER, RHEINHARD, New England Coll. of Pharmacy, Boston 8, Mass.
 CATTELL, MCKEEN, Cornell Univ. Med. Coll., N. Y., N. Y.
 CHEN, K. K., Eli Lilly Co., Indianapolis, Ind.
 DRAGSTEDT, CARL A., Northwestern Univ., Chicago, Ill.
 GEILING, E. M. K., Univ. of Chicago, Chicago, Ill.
 GILMAN, ALFRED, Dept. of Pharmacol., Columbia Univ. Coll. of Physicians and Surgeons, N. Y., N. Y.
 GOODMAN, LOUIS SANFORD, Prof. & Head of Dept. of Pharmacol., Univ. of Utah Schl. of Med., Salt Lake City, Utah.
 MCINTYRE, A. ROSS, Univ. of Neb., Omaha, Neb.
 MARSHALL, E. K., Johns Hopkins Med. Schl., Baltimore, Md.
 NELSON, E. E., U. S. Food & Drug Admin., Washington, D. C.
 PFEIFFER, C. C., Schl. of Med., Univ. of Ill., 1853 W. Polk St., Chicago 12, Ill.
 SCHMIDT, CARL FREDERICK, Prof. of Pharmacol., Univ. of Pa., Philadelphia, Pa.
 SOLLMANN, TORALD H., Dept. of Pharmacol., Western Reserve Univ., Cleveland 6, Ohio.
 VAN DYKE, HARRY, Columbia Univ., Coll. of Physicians & Surgeons, N. Y., N. Y.
 WOODBURY, ROBERT A., Div. of Pharmacol., Univ. of Tenn. Coll. of Med., Memphis, Tenn.

PHARMACOLOGY, VETERINARY

DUKES, H. H., N. Y. State Veterinary Coll., Ithaca, N. Y.
 FELDMAN, WILLIAM H., 926 8th Ave., S.W., Rochester, Minn.

PHYSICAL ANTHROPOLOGY

STEWART, T. DALE, Div. Phys. Anthropol., U. S. N. M., S. I., Wash. 25, D. C.

PHYSICS

ALVAREZ, LUIS W., Radiation Lab., Univ. of Calif., Berkeley, Calif.
 ANDERSON, CARL D., Calif. Inst. of Tech., Pasadena, Calif.

ANSLOW, GLADYS A., Smith Coll., Northampton, Mass.
 BARDEEN, JOHN, Dept. of Physics, Univ. of Ill., Urbana, Ill.
 BEAMS, J. W., Univ. of Virginia, Charlottesville, Va.
 BECKER, JOSEPH A., Bell Telephone Labs., Murray Hill Lab., Summit, N. J.
 BETHE, H. A., Cornell Univ., Ithaca, N. Y.
 BLEWETT, JOHN F., Brookhaven Natl. Lab., Upton, L. I., N. Y.
 BOWIE, ROBERT, 550 Fifth Ave., c/o Sylvania Elec. Products, N. Y., N. Y.
 BRATTAIN, W. H., Dept. of Physics, Univ. of Ill., Urbana, Ill.
 BRIGMAN, P. W., Harvard Univ., Cambridge, Mass.
 BROWN, F. W., Tech. Dir., U. S. N. O. T. S., China Lake, Calif.
 CARRIER, GEORGE, Harvard Univ., Cambridge, Mass.
 CHAPMAN, SEVILLE, Cornell Aeronautical Lab., Inc., Box 235, Buffalo 21, N. Y.
 CHIPMAN, JOHN, Mass. Inst. of Tech., Cambridge, Mass.
 CONDON, E. U., Corning Glass Works, Corning, N. Y.
 DEUTSCH, MARTIN, Mass. Inst. Tech., Cambridge, Mass.
 DRYDEN, H. L., Natl. Advisory Com. for Aeronautics, Washington 25, D. C.
 DYSON, F. J., Cornell Univ., Ithaca, N. Y.
 FERMI, E., Inst. for Nuclear Studies, Univ. of Chicago, Chicago 37, Ill.
 FEYNMAN, RICHARD P., Calif. Inst. of Tech., Pasadena, Calif.
 FOLDY, L. L., Case Inst. of Tech., Cleveland 6, Ohio.
 GOODIER, V. N., Stanford Univ., Stanford, Calif.
 GREEN, GEORGE K., Brookhaven Natl. Lab., Upton, L. I., N. Y.
 HAVAS, P., Lehigh Univ., Bethlehem, Pa.
 HERB, R. G., Univ. of Wis., Madison, Wis.
 HERZFELD KARL F., Catholic Univ. of Amer., Washington, D. C.
 HILLIER, JAMES, RCA Labs., Princeton, N. J.
 HOLSTEIN, T., Consulting Physicist, Westinghouse Rsch. Labs., E. Pittsburgh, Pa.
 KARPLUS, R., Harvard Univ., Cambridge 38, Mass.
 KRASIK, SYDNEY, Westinghouse, Atomic Power Div., Pittsburgh, Pa.
 LARK-HOROVITZ, K., Purdue Univ., W. Lafayette, Ind.
 LAWRENCE, ERNEST O., Radiation Lab., Univ. of Calif., Berkeley, Calif.
 LOEB, L. B., Prof., Univ. of Calif., Berkeley, Calif.
 MILLAN, EDWIN M., Univ. of Calif., Berkeley, Calif.
 MILLIKAN, R. A., Calif. Inst. of Tech., Pasadena, Calif.
 MORRIS, CHARLES, Manchester Coll. N. Manchester, Ind.
 MUELLER, HANS, Prof., Dept. of Physics, Mass. Inst. of Tech., Cambridge, Mass.
 MURCH, LESLIE FERGUSON, Prof. of Physics, Dartmouth Coll., Hanover, N. H.
 NIELSEN, HAROLD H., Chmn., Dept. of Physics, Ohio State Univ., Columbus, Ohio.
 OPPENHEIMER, J. R., Dir. of Inst. for Advanced Study, Princeton, N. J.
 PRAGER, WILLIAM, Prof., Grd., Div. of Applied Math., Brown Univ., Providence, R. I.
 PURCELL, E. M., Howard Univ., Washington, D. C.
 RABI, I. I., Columbia Univ., New York, N. Y.
 RAGAN, GEORGE, General Electric Co., Schenectady, N. Y.
 RAMO, SIMON, c/o Hughes Aircraft Co., Culver City, Calif.
 RAMSEY, N. F., Harvard Univ., Cambridge, Mass.
 ROSSI, BRUNO, Mass. Inst. of Tech., Cambridge, Mass.
 RUARK, A. E., Univ. of Ala., University, Ala.
 SCHWINGER, JULIAN, Harvard Univ., Cambridge, Mass.
 SEITZ, F., Univ. of Ill., Urbana, Ill.
 SHOCKLEY, WILLIAM, Bell Telephone Labs., Inc., Murray Hill, N. J.
 THOMPSON, L. T. E., Rsch. & Development Bd., Def. Dept., Washington, D. C.
 TUNE, M. A., Carnegie Inst., Washington, D. C.
 VON KARMON, THEODORE, Calif. Lnst. of Tech., Pasadena, Calif.
 WARREN, B. E., Dept. of Physics, Mass. Inst. of Tech., Cambridge, Mass.
 WEISSOPF, V. F., Mass. Inst. of Tech., Cambridge, Mass.
 WIGNER, E. P., Princeton Univ., Princeton, N. J.

PHYSICS, INDUSTRIAL AND APPLIED

BOZORTH, R. M., Bell Telephone Labs., Murray Hill, N. J.
 DARKEN, LAWRENCE S., U. S. Steel Research Lab., Kearny, N. J.
 DUNNING, JOHN R., Dean of Engineering, Columbia Univ., N. Y., N. Y.
 ROBINSON, H. A., Armstrong Cork Co., Lancaster, Pa.
 WATSON, ROBERT J., Carter Oil Co., Tulsa, Okla.

PHYSICS, NUCLEAR

BRADBURY, NORRIS E., Dir., Los Alamos Scientific Lab., Los Alamos, N. M.
 BUSH, VANDIVER, Carnegie, Institution, Washington, D. C.
 FERMI, ENRICO, Univ. of Chicago, Chicago, Ill.
 HERB, R. G., Dept. of Physics, Univ. of Wis., Madison, Wis.
 HOLLOWAY, M. G., Los Alamos Scientific Lab., Los Alamos, N. M.

NIER, A. O. C., Univ. of Minn., Minneapolis 14, Minn.
OPPENHEIMER, J. R., Director of Inst. for Adv. Study, Princeton, N. J.
WIGNER, E. P., Prof., 8 Ober Rd., Princeton, N. J.
Also: H. A. BETHE, ADAIR, WILLIAMS, BAINBRIDGE, RAMSEY, BUCHNER.

PHYSICS OF SOLIDS

SEITZ, FREDERICK, Univ. of Ill., Urbana, Ill.
SHOCKLEY, W., Bell Telephone Labs., Murray Hill, N. J.
SLATER, J. C., Mass. Inst. of Tech., Cambridge, Mass.
ZENER, CLARENCE, Westinghouse Rsch. Labs., E. Pittsburgh, Pa.

PHYSICS, THEORETICAL

BREIT, G., Yale Univ., New Haven, Conn.
EINSTEIN, ALBERT, Inst. for Advanced Study, Princeton, N. J.
OPPENHEIMER, J. R., Inst. for Advanced Study, Princeton, N. J.
WHEELER, J. A., Prof., Princeton Univ., Princeton, N. J.
WIGNER, E. P., Princeton Univ., Princeton, N. J.
Also: BETHE, VON VLECK, SCHVINGER, FEYNMAN, SLATER, SERBER.

PHYSIOLOGY

BARD, PHILIP, Johns Hopkins Univ., Baltimore, Md.
BODINE, J. H., Univ. of Iowa, Iowa City, Iowa.
BOELL, EDGAR J., Yale University, New Haven, Conn.
BRONK, DETLEV, Johns Hopkins Univ., Baltimore, Md.
CARLSON, ANTON J., Univ. of Chicago, 951 E. 58th St., Chicago, Ill.
ERLANGER, JOSEPH, Washington Univ. Med. Schl., St. Louis, Mo.
FENN, WALLACE, Univ. of Rochester, Rochester, N. Y.
GASSER, H. S., Rockefeller Inst., New York, N. Y.
GESELL, ROBERT, Prof. of Physiol., Univ. of Mich., Ann Arbor, Mich.
HARVEY, E. N., Princeton Univ., Princeton, N. J.
IVY, A. C., Schl. of Med., Univ. of Ill., 1853 W. Polk St., Chicago 12, Ill.
LEAKE, C. J.
LIFSON, NATHAN, Univ. of Minn., Minneapolis 7, Minn.
LILLIE, R. S., Univ. of Chicago, Chicago, Ill.
LUCKHARDT, A. B., 958 E. 58th St., Univ. of Chicago, Chicago, Ill.
MANN, FRANK C., Mayo Clinic, Rochester, Minn.
NASSET, E. S., Univ. of Rochester, Rochester, N. Y.
PAPPENHEIMER, JOHN, JR., Harvard Univ., Cambridge, Mass.
SEIFRITZ, WILLIAM, Univ. of Pennsylvania, Philadelphia, Pa.
SMITH, HOMER, N. Y. Univ. Coll. of Med., New York, N. Y.
WIGGERS, CARL, Western Reserve Univ., Cleveland, Ohio.
WILLIAMS, CAROLL M., Harvard Univ., Cambridge, Mass.

PHYTOPATHOLOGY

NELSON, RAY, Mich. State Coll., E. Lansing, Mich.
WALKER, JOHN CHARLES, Univ. of Wis., Madison, Wis.

PLANT PHYSIOLOGY

ARNON, DANIEL I., Div. of Plant Nutrition, Univ. of Calif., Berkeley, Calif.
BONNER, JAMES, Prof. Biol., Kerchoff Biol. Labs., Calif. Inst. of Tech., Pasadena 4, Calif.
BORTHWICK, HARRY, Plant Indus. Sta., Beltsville, Md.
BROWN, ALLAN, Dept. of Botany, Univ. of Minn., Minneapolis, Minn.
BURRIS, ROBERT, Univ. of Wis., Madison, Wis.
GODDARD, DAVID R., Dept. of Botany, Univ. of Pa., Philadelphia, Pa.
HENDRICKS, STERLING, Beltsville, Md.
KNUDSON, LEWIS, Botany Dept., Cornell Univ., Ithaca, N. Y.
THIMMANN, KENNETH, Harvard Univ., Cambridge, Mass.
VAN NEIL, C. B., Hopkins Marine Lab., Stanford Univ., Palo Alto, Calif.
WENT, F. W., Prof. Plant Physiol., Kerchoff Biol. Labs., Calif. Inst. of Tech., Pasadena 4, Calif.

PLANT NEMATOLOGY

CHRISTIE, J. R., Div. of Nematology, U. S. Dept., c/o Central Fla. Expt. Sta., Sanford, Fla.
STEINER, G., Div. of Nematology, Plant Indus. Sta., Beltsville, Md.

PLANT TAXONOMY

BABCOCK, E. B., Univ. of Calif., Berkeley, Calif.
BAILEY, Liberty Hyde, Ithaca, N. Y.
GLEASON, HENRY ALLAN, SR., 77 Strickland Rd., Cos Cob, Conn.
MERRILL, ELMER DREW, Arnold Arboretum, Jamaica Plain, Mass.

PLASTIC & ADHESIVES

ENGEL, HARRY, E. L. Cournand Co., New York, N. Y.

POULTRY BREEDING

HAZEL, L. N., Iowa State Coll., Ames, Iowa.

JULL, MORLEY A., Univ. of Md., College Pk., Md.

LEARNER, I. M., Univ. of Calif., Berkeley, Calif.

LUSH, J. L., Iowa State Coll., Ames, Iowa.

POULTRY HUSBANDRY

JULL, M. A., Univ. of Md., College Park, Md.

POULTRY NUTRITION

BIRD, H. R., Univ. of Wis., Madison, Wis.

NORRIS, LEO C., Cornell Univ., Ithaca, N. Y.

PROTEINS AND AMINO ACIDS

BLOCK, RICHARD J., N. Y. Med. Coll., N. Y. C.

EDSALL, JOHN T., Harvard Univ., Cambridge, Mass.

ROSE, W. C., Dept. of Chem., Univ. of Ill., Urbana, Ill.

SEEGERS, W. H., Dept. of Pharmacol. & Physiol., Wayne Med. Schl., Detroit, Mich.

PROTOZOOLOGY

ANDREWS, E. A., 107 E. Lake Ave., Baltimore 22, Md.

BECKER, ELERY R., Dept. of Zool. and Entomol., Iowa State Coll., Ames, Iowa.

CLEVELAND, L. R., Harvard Univ., Cambridge, Mass.

HALL, R. P., N. Y. Coll., N. Y. C.

JAHN, THEODORE LOUIS, Chmn. Dept. of Zool., Univ. of Calif., Los Angeles 24, Calif.

KING, ROBERT L., Dept. of Zool., State Univ. of Iowa, Iowa City, Iowa.

KUDO, RICHARD R., Dept. of Zool., Univ. of Ill., Urbana, Ill.

NOLAN, L. E., Dept. of Zool., Univ. of Wis., Madison, Wis.

PSYCHIATRY

ALEXANDER, FRANZ, 664 N. Michigan Ave., Chicago, Ill.

BRANDT, RUDOLPH, J., Psychiatric Inst. of Beverly Hills, 450 N. Bedford Dr., Beverly Hills, Calif.

LEVY, DAVID M., Inst. for Advanced Study, Princeton, N. J.

LEWIS, NOLAN D. C., 722 W. 168th St., N. Y. 32, N. Y.

WHITEHORN, JOHN C., Johns Hopkins Med. Schl., Baltimore 5, Md.

PSYCHOLOGY

ADAMS, CLIFFORD R., Dept. of Psychol., Pa. State Coll., State College, Pa.

ADAMS, DONALD, Duke Univ., Durham, N. C.

ALLPORT, GORDON W., Harvard Univ., Cambridge, Mass.

ANDERSON, JOHN E., Univ. of Minn., Minneapolis, Minn.

ASCH, SOLOMON E., Prof., Swarthmore Coll., Swarthmore, Pa.

BEACH, F. A., Dept. of Psychol., Yale Univ., New Haven, Conn.

BENTLEY, MADISON, Stanford Univ., Palo Alto, Calif.

BORING, EDWIN GARRIGUES, Harvard Univ., Cambridge, Mass.

BROWN, JUDSON S., Dept. of Psychol., Univ. of Iowa, Iowa City, Iowa.

CARMICHAEL, L., Smithsonian Inst., Washington, D. C.

CARR, HARVEY E., Univ. of Calif., Berkeley, Calif.

CATTELL, RAYMOND B., Rsch. Prof., Univ. of Ill., Urbana, Ill.

CHAPIN, F. S., Dept. of Sociol., Univ. of Minn., Minneapolis 14, Minn.

CRONBACH, LEE J., Univ. of Ill., Urbana, Ill.

CURRAN, CHARLES A., St. Charles Coll., Columbus, Ohio.

DASHIELL, JOHN, Univ. of N. C., Chapel Hill, N. C.

DOLLARD, JOHN, Yale Univ., New Haven, Conn.

DUNLAP, JACK W., Pres. Dunlap & Associates, Lockwood Rd., Riverside, Conn.

FLANAGAN, JOHN C., Amer. Inst. for Rsch., 410 Amberson Ave., Pittsburgh, Pa.

GARRETT, HENRY E., Columbia Univ., New York, N. Y.

GESELL, ARNOLD, Gessell Inst. Child Dev., New Haven 11, Conn.

GIBSON, JAMES J., Cornell Univ., Ithaca, N. Y.

GOLDSTEIN, KURT, Brandeis Univ., Waltham, Mass.

GRAHAM, CLARENCE H., Dept. of Psychol., Columbia Univ., N. Y., N. Y.

GUTHRIE, E. R., Univ. of Washington, Seattle, Wash.

GUILFORD, JOY P., Univ. of Sou. Calif., Los Angeles, Calif.

HARLOW, HARRY F., Dept. Psy., Univ. Wis., Madison, Wis.

HEIDBREDER, EDNA, Wellesley, Mass.

HELSON, HARRY, Univ. of Tex., Austin, Tex.
 HILGARD, E., Dean Grad. Schl., Stanford Univ., Stanford, Calif.
 HOLLINGSHEAD, A. B., Prof. of Sociol., Yale Univ., New Haven, Conn.
 HUNT, J. MCV., New York City, N. Y.
 HUNTER, WALTER S., Brown Univ., Providence, R. I.
 KOHLER, WOLFGANG, Swarthmore Coll., Swarthmore, Pa.
 LANGFELD, HERBERT, Princeton, Univ., Princeton, N. J.
 LANDIS, CARNEY, Columbia Univ., N. Y., N. Y.
 LASHLEY, K. S., Prof., Yerkes Labs. of Primate Biol., Orange Park, Fla.
 LINDSLEY, DONALD B., Dept. Psychol., Univ. Calif., Los Angeles 24, Calif.
 MCNEMAR, QUINN, Stanford Univ., Stanford, Calif.
 MARQUIS, DONALD G., Univ. of Mich., Ann Arbor, Mich.
 MAURER, O. H., Univ. of Ill., Urbana, Ill.
 MELTON, ARTHUR W., U. S. A. F., Lakeland AFB., San Antonio, Tex.
 MILES, WALTER R., Yale Univ. Schl. of Med., New Haven 11, Conn.
 MILLER, D. R., Univ. of Mich., Ann Arbor, Mich.
 MILLER, NEAL, Dept. of Human Relations, Yale Univ., New Haven, Conn.
 MOORE, THOMAS VERNER, Prof. Emer. Catholic Univ. of Amer., Wash., D. C.
 MORGAN, CLIFFORD T., Johns Hopkins Univ., Baltimore, Md.
 MOWRER, O. H., 445 Gregory Hall, Univ. of Ill., Urbana, Ill.
 MURPHY, GARDNER, Menninger Clinic, Topeka, Kans.
 NEFF, W. D., Univ. of Chicago, Chicago, Ill.
 NISSEN, HENRY W., Yerkes Lab. Primate Biol., Orange Park, Fla.
 POTTENBERGER, A. T., Columbia Univ., N. Y., N. Y.
 PILLSBURY, WALTER B., Haven Hall, Univ. Mich., Ann Arbor, Mich.
 RICHTER, CURT P., John Hopkins Hosp., Baltimore, Md.
 ROGERS, CARL RANSOM, Univ. of Chicago, Chicago, Ill.
 SEARS, ROBERT R., Stanford Univ., Stanford, Calif.
 SHAFFER, LAURENCE F., Tchrs. Coll., Columbia Univ., N. Y., N. Y.
 SKINNER, BURRHUS FREDERICK, Psychological Labs., Memorial Hall, Harvard Univ., Cambridge 38, Mass.
 SPENCE, KENNETH W., Psychol. Dept., State Univ. of Iowa, Iowa City, Iowa.
 STEPHENSON, WILLIAM, Univ. of Chicago, Chicago, Ill.
 STEVENS, S. S., Harvard Univ., Cambridge, Mass.
 STRATTON, G. M., Univ. of Calif., Berkeley, Calif.
 STONE, CALVIN P., Stanford Univ., Stanford Univ., Calif.
 STRONG, E. K., JR., 672 Mirada Ave., Stanford, Calif.
 TERMAN, L. M., Stanford Univ., Stanford, Calif.
 THORNDIKE, ROBERT, Columbia Univ., New York, N. Y.
 THURSTONE, L. L., Univ. N. Carolina, Chapel Hill, N. C.
 TOLMAN, EDWARD, Stanford Univ., Stanford, Calif.
 UHRBROCK, ESTHER GATEWOOD, 355 Springfield Pike, Wyoming 15, Ohio.
 VANDER VELDT, REV. JAMES H., O.F.M., Catholic Univ. of Amer., Washington, D. C.
 WEVER, E. G., Princeton Univ., Princeton, N. J.
 WHEELER, RAYMOND H., Wellesley, Mass.
 WHITE, ROBERT W., 64 Plymouth St., Cambridge 38, Mass.
 WOODROW, HERBERT, Univ. of Ill., Urbana, Ill.
 WOODWORTH, R. S., Columbia Univ., New York 27, N. Y.
 YERKES, ROBERT M., Yale Univ. Schl. of Med., New Haven 11, Conn.
 ZUBIN, JOSEPH, Columbia Univ., N. Y., N. Y.

PSYCHOLOGY OF HEARING

DAVIS, HALLOWELL, Central Inst. for the Deaf, 818 S. Kingshighway, St. Louis 10, Mo.

PUBLIC HEALTH

ANDREWS, JUSTIN M., U. S. Public Health Service, Atlanta, Ga.
 CUMMINGS, GEORGE DONALD, Div. of Labs., Mich. Dept. of Health, Lansing 4, Mich.
 KENDRICK, PEARL, Schl. of Public Health, Univ. of Mich., Ann Arbor, Mich.

PUBLIC HEALTH EDUCATION

DERRYBERRY, MAYHEW, Chef Div. of Public Health Education, U. S. Public Health Service, Washington 25, D. C.
 NYSWANDER, DOROTHY B., Schl. of Public Health, Univ. of Calif., Berkeley 5, Calif.

PUBLIC HEALTH ENGINEERING

WHITTAKER, HAROLD A., Natl. Rsch. Council, 2101 Constitution Ave., Washington, D. C.
 WOLMAN, ABEL, Johns Hopkins Univ., Baltimore, Md.

PUBLIC OPINION & AUDIENCE PSYCHOLOGY

BRIGANCE, W. NORWOOD, Prof. of Speech, Wabash Coll., Crawfordsville, Ind.
KNOWER, FRANKLIN H., Dept. of Speech, Ohio State Univ., Columbus, Ohio.

PULP & PAPER TECHNOLOGY

MAHLER, ERNST, Kimberly-Clark Corp., Neenah, Wis.
SUTERMEISTER, EDWIN, S. D. Warren Co., Cumberland Mills, Maine.

PURE CULTURE FERMENTATION

FONTAINE, F. E., Pearl River, N. Y.

RADIO WAVE PROPAGATION

BOOKER, HENRY G., Cornell Univ., Ithaca, N. Y.
KATZIN, MARTIN, Naval Rsch. Lab., Washington 25, D. C.
RUMSEY, V. H., Prof., Ohio State Univ., Columbus, Ohio.
SMITH, NEWBERN, Natl. Bureau of Standards, Washington, D. C.

RADIOACTIVITY

BOOKER, H., Schl. of Elec. Engrng., Cornell Univ., Ithaca, N. Y.
HESS, VICTOR F., Physics Dept., Fordham Univ., Bronx 58, N. Y.
KAPLAN, JOSEPH, Prof. of Physics, University of Calif., Los Angeles, Calif.
ZIRKLE, RAYMOND, Univ. of Chicago, Chicago, Ill.

RADIOBIOLOGY

BRUES, AUSTIN, Argonne Natl. Lab., Chicago, Ill.
CRONKITE, EUGENE P., Naval Med. Rsch. Inst., Bethesda, Md.
LORENZ, EGON, Argonne Natl. Lab., Chicago, Ill.
WARREN, SHIELDS, 195 Pilgrim Rd., Boston 15, Mass.
ZIRKLE, RAYMOND E., Inst. of Radiobiol. & Bophysics, Univ. of Chicago, 5640 S. Ellis Ave., Chicago 37, Ill.

RADIOMETRY

COBLENTZ, W. W., 2737 Macomb St., N. W., Washington, D. C.

RENAL MORPHOLOGY

RICHARDS, ALFRED NEWTON, Univ. of Pa., Philadelphia, Pa.
WALKER ARTHUR MEEKER, Univ. Club, Washington, D. C.

RENAL PHYSIOLOGY

OLIVER, JEAN, Dept. of Pathol., State Univ. of N. Y. Coll. of Med., 335 Henry St., Brooklyn 2, N. Y.

RENAL SOCIOLOGY

HAYMAN, J., Tufts College Medical School, Boston, Mass.

RESINS

ARVIN, J. A., 18409 Perth Ave., Homewood, Ill.

ROCKETRY

VON KARMAN, THOMAS, Aerojet-General Corp., Azusa, Calif.
ZWICKY, FRITZ, Aerojet-General Corp., Azusa, Calif.
Also: M. J. ZUCROW and T. E. MYERS.

RUBBER TECHNOLOGY

DASHER, PAUL J., Dasher Rubber & Chemical Co., Fairport Harbor, Painsville, Ohio.

SANITARY ENGINEERING

FAIR, GORDON M., Grad. Schl. of Engrng., Harvard Univ., Cambridge, Mass.
PEARSE, LANGDON, Sanitary Engrs., Sanitary District of Chicago, Chicago, Ill.
PHELPS, EARLE B., Prof., Univ. of Fla., Gainesville, Fla.
PIRNIE, MALCOLM, 25 W. 43rd St., New York 18, N. Y.
WOLMAN, ABEL, Prof. Johns Hopkins Univ., Baltimore 18, Md.

SEROLOGY

HARRIS, AD, U.S.P.H.S., Chamblee, Ga.
HINTON, WILLIAM, Harvard Med. Schl., Boston, Mass.
MAZZINI, L. Y., Indianapolis, Ind.

SCIENCE LIBRARIANSHIP

BROWN, CHARLES H., Iowa State Coll. Library, Ames, Iowa.
SHAW, RALPH R., U. S. Dept. of Agri. Library, Washington, D. C.

SCIENTIFIC PHILOSOPHY

BRIDGMAN, P. W., Harvard Univ., Cambridge, Mass.

FRANK, PHILLIP, Harvard Univ., Cambridge, Mass.

MARGENAU, HENRY, Prof., Sloane Physics Lab., Yale Univ., New Haven, Conn.

SOCIAL HYGIENE

CLARKE, WALTER, retired, Amer. Social Hygiene Assoc., 1790 Broadway, N. Y., N. Y.

SOCIAL PSYCHOLOGICAL RESEARCH

GRAHAM, CLARENCE, Columbia Univ., N. Y., N. Y.

BRUNER, JEROME, Harvard Univ., Cambridge, Mass.

SOCIAL AND BIOLOGICAL SCIENCES

KINSEY, ALFRED C., Ind., Univ., Bloomington, Ind.

SOCIOLOGY

BOGARDUS, EMORY S., Prof., Univ. of So. Calif., Los Angeles, Calif.

BURGESS, ERNEST W., retired, Dept. of Sociol., Univ. of Chicago, Chicago, Ill.

CHAPIN, F. STUART, Dept. of Sociol., Univ. of Minn., Minneapolis, Minn.

DODD, STUART C., Dir. Wash. Public Opinion Lab., Univ. of Washington, Seattle 5, Wash.

ELMER, MANUEL CONRAD, Univ. of Pittsburgh, Pittsburgh, Pa.

HUGHES, EVERETT C., Dept. of Sociol., Univ. of Chicago, Chicago, Ill.

LINTON, ROBERT, Dept. of Anthropol., Yale Univ., New Haven, Conn.

LUNDBERG, GEORGE A., Chmn. Dept. of Sociology, Univ. Wash., Seattle 5, Wash.

MACIVER, RUBERT M., Columbia Univ., New York, N. Y.

MERTON, ROBERT K., Prof., Dept. of Sociology, Columbia Univ., New York, N. Y.

ODUM, HOWARD W., Univ. of N. C., Chapel Hill, N. C.

OGBURN, WILLIAM FIELDING, Univ. of Chicago, Chicago, Ill.

PARSONS, TALCOTT, Prof., Dept. of Social Relations, Harvard Univ., Cambridge, Mass.

STOUFFER, SAMUAL A., Dept. of Sociol., Harvard Univ., Cambridge, Mass.

TAYLOR, CARL, U. S. Dept. of Agri., Washington, D. C.

SOCIOLOGY OF THE FAMILY

BURGESS, ERNEST, Univ. of Chicago, Chicago, Ill.

NUESSE, C. J., Dean of Social Sci., Catholic Univ. of Amer., Washington, D. C.

SOIL SCIENCE

BEAR, FIRMAN, Rutgers Univ., New Brunswick, N. J.

BENNETT, H. H., U. S. Dept. of Agri., Washington 25, D. C.

BRADFIELD, RICHARD, Cornell Univ., Ithaca, N. Y.

DOHRENWEND, C. O., Rensselaer Poly. Inst., Troy, N. Y.

JACKSON, M. L., Univ. of Wis., Madison, Wis.

MARSHALL, C. E., Univ. of Mo., Columbia, Mo.

RICHARDS, L. A., U. S. D. A. Salinity Lab., Riverside, Calif.

TRUOG, EMIL, Prof., Univ. of Wis., Madison, Wis.

SOIL PHYSICS

BOUYOUCOS, GEORGE J., 210 Agril. Bldg., E. Lansing, Mich.

GARDNER, WILLARD, 369 N. 7th East St., Logan, Utah.

KIRKHAM, DON, Prof., Dept. of Agron., Iowa State Coll., Ames, Iowa.

RICHARDS, L. A., U. S. Regional Salinity Lab., Riverside, Calif.

TRUOG, EMIL, Prof., Univ. of Wis., Madison, Wis.

SOLAR RADIATION

HAND, IRVING F., U. S. Weather Bureau, Boston 9, Mass.

SOVIET AREA STUDIES

CRESSEY, GEORGE B., Dept. of Geography, Syracuse Univ., Syracuse 10, N. Y.

SCHWARTZ, HARRY, Dept. of Economics, Syracuse Univ., Syracuse 10, N. Y.

SPECTROSCOPY

HUMPHREYS, CURTIS J., Natl. Bureau of Standards, Corona, Calif.

LORD, R. C., Prof., Dept. of Chem., Mass. Inst. of Tech., Cambridge, Mass.

LYMAN, T. L., Prof. Emer., Harvard Univ., 109 Heath St., Brookline, Mass.

MEGGERS, WILLIAM F., Natl. Bureau of Standards, Washington, D. C.

MEISSNER, KARL W., 176 Stadium, Lafayette, Ind.

NIER, A. O. C., Univ. of Minn., Minneapolis, Minn.

PLYLER, E. K., Natl. Bureau of Standards, Washington, D. C.

SCRIBNER, B. F., Natl. Bureau of Standards, Washington, D. C.
SHENSTONE, A. G., Princeton Univ., Princeton, N. J.
WINANS, J. G., Univ. of Wis., Madison, Wis.

SPECTROCHEMICAL ANALYSIS

DIEKE, G. H., Johns Hopkins Univ., Physics Dept., Baltimore, Md.
FASSEL, VELMER A., Iowa State Coll., Ames, Iowa.
SCRIBNER, BOURDON F., Natl. Bureau of Standards, Washington, D. C.

SPEECH SCIENCE

CURTIS, JAMES, Univ. of Iowa, Iowa City, Iowa.
FAIRBANKS, GRANT, Univ. of Ill., Urbana, Ill.
NELSON, SEVERINA E., Univ. of Ill., Urbana, Ill.
ZIMMERMAN, JANE DORSEY, Columbia Univ., Teachers Coll., N. Y., N. Y.

SPONGES

LAUBENFELS, MAX W., Ore. State Coll., Corvallis, Ore.

STATISTICS

COCHRAN, W. G., Biostatistics Dept., Johns Hopkins Univ., Baltimore, Md.
COMSTOCK, R. E., Inst. of Statistics, N. C. State Coll., Raleigh, N. C.
COX, GERTRUDE, N. C. State Coll., Raleigh, N. C.
NEYMAN, J., Univ. of Calif., Berkeley, Calif.
SNEDECOR, G. W., Statistical Lab., Iowa State Coll., Ames, Iowa.
WILKS, S. S., Princeton Univ., Princeton, N. J.

STRATIGRAPHY

IMLAY, RALPH, U. S. Geol. Survey, Washington, D. C.
KAY, MARSHALL, Columbia Univ., New York, N. Y.
SLOSS, L. L., Northwestern Univ., Evanston, Ill.

TEXTILE TECHNOLOGY

HARRIS, MILTON, Harris Rsch. Labs., 1246 Taylor Ave., N. W., Washington, D. C.
SCHIEFER, HERBERT F., Natl. Bureau of Standards, Washington, D. C.

THERMODYNAMICS

GIBSON, GEORGE E., Prof., Univ. of Calif., Berkeley, Calif.
KIRKWOOD, JOHN, Prof., Yale Univ., New Haven, Conn.
ONSAGER, LARS, Yale Univ., New Haven, Conn.

TOPOLOGY

MOISE, E. E., Univ. of Mich., Ann Arbor, Mich.

TOXICOLOGY

GETTLER, ALEXANDER O., 400 E. 29th St., New York 16, N. Y.

TRAFFIC ENGINEERING

MCCLINTOCK, MILLER, c/o Va. Affiliates, 342 Madison Ave., N. Y., N. Y.
MACDONALD, THOMAS H., Commissioner, Bureau of Public Roads, Washington, D. C.

TROPICAL MEDICINE

FAUST, E. C., Tulane Univ. Schl. of Med., New Orleans, La.

VIROLOGY

BLACK, L. M., Univ. of Ill., Urbana, Ill.
COX, H. R., Lederle Labs., Pearl River, N. Y.
DELBRUCK, MAX, Claif. Inst. of Tech., Pasadena, Calif.
FRANCIS, THOMAS, JR., Univ. of Mich., Ann Arbor, Mich.
GOODPASTURE, E., Vanderbilt Univ., Nashville, Tenn.
HARRIS, T. N., Children's Hosp., 18th and Bainbridge St., Philadelphia, Pa.
HENLE, WERNER, Children's Hosp., 18th and Bainbridge Sts., Philadelphia, Pa.
HENLE, WERNER, Prof. of Virol., Univ. of Pa., Philadelphia, Pa.
HIEDEMANN, EGON, Mich. State Coll., E. Lansing, Mich.
KUNKEL, L. O., Rockefeller Inst., N. Y., N. Y.
LURIA, S. E., Univ. of Ill., Urbana, Ill.
MARAMOROSCH, K., Rockefeller Inst., N. Y., N. Y.
MELNICK, JOSEPH L., Dept. of Preventive Med., Yale Med. Schl., New Haven, Conn.
MEYER, KARL F., George Williams Hooper Foundation for Med. Rsch., Univ. of Calif. Med. Schl., San Francisco, Calif.

MULLER, HERMAN J.
RIVERS, THOMAS M., Hosp. of the Rockefeller Inst., N. Y. 21, N. Y.
SABIN, ALBERT, Children's Hosp., Cincinnati, Ohio.
SHAFFER, MORRIS, Tulane Univ., New Orleans, La.
STANLEY, WENDELL M., Univ. of Calif., Berkeley, Calif.

VITAMINS

GUERRANT, N. B., Frear Lab., State College, Pa.

WOOL SCIENCE

NEALE, P. E., Prof., N. M. A. and M. Coll., State College, N. M.
WILSON, J. F., Wool Dept., Univ. of Calif., Davis, Calif.

X-RAY DIFFRACTION

FANKUCHEN, I., Poly. Inst. of Brooklyn, Brooklyn, N. Y.
HENDRICKS, STERLING B., Bureau of Plant Indus., Beltsville, Md.
PEPINSKY, RAY, Pa. State Coll., State College, Pa.

ZOOLOGY

ALLEE, W. C., Univ. of Fla., Dept. of Biol., Gainesville, Fla.
BOYDEN, A. A., Rutgers Univ., New Brunswick, N. J.
CHACE, FENNER A., JR., Div. Marine Invert., U. S. N. M., S. I., Wash. 25, D. C.
CHAPIN, EDWARD A., Div. Insects, U. S. N. M., S. I., Wash. 25, D. C.
CHILD, CHARLES M., Stanford University, Stanford Univ., Calif.
CLEMENS, WILBERT AMIE, Head of Dept. of Zool., Univ. of British Columbia, Vancouver, B. C., Canada.
COCHRAN, DORIS M., Div. Reptiles, U. S. N. M., S. I., Wash. 25, D. C.
DICE, LEE RAYMOND, Prof. of Zool., Univ. of Mich., Ann Arbor, Mich.
ENDERS, HOWARD E., Emer. Dean, Schl. of Sci., Purdue Univ., W. Lafayette, Ind., 612 Armada Rd., S., Venice, Fla.
FERRIS, G. F., Stanford Univ., Stanford, Calif.
FRIEDMANN, HERBERT, Div. Birds, U. S. N. M., S. I., Wash. 25, D. C.
GALTSOFF, PAUL S., U. S. Shellfishery Lab., Woods Hole, Mass.
GOLDSCHMIDT, R. B., Univ. of Calif., Berkeley, Calif.
GUYER, M. F., Univ. of Wis., Madison, Wis.
HYMAN, LIBBIE, Amer. Museum of Nat. Hist., New York, N. Y.
JEPSEN, G. L. Princeton Univ., Princeton, N. J.
JOHNSON, DAVID H., Div. Mammals, U. S. N. M., S. I., Wash. 25, D. C.
NOBLE, GLENN A., Calif. Poly. Inst., San Luis Obispo, Calif.
PAINTER, T. S., Univ. of Texas, Austin, Tex.
PAYNE, FERNANDUS, Zool. Dept., Ind. Univ., Bloomington, Ind.
PETRUNKEVITCH, ALEXANDER, Osborn Zoological Lab., New Haven, Conn.
REHDER, HARALD, Div. Mollusks, U. S. N. M., S. I., Wash. 25, D. C.
SCHMITT, WALDO L., U. S. Natl. Museum, Washington 25, D. C.
SCHULTZ, LEONARD P., Div. Fishes, U. S. N. M., S. I., Wash. 25, D. C.
SHULL, A. FRANKLIN, Univ. of Mich., Ann Arbor, Mich.
SIMPSON, G. G., Amer. Museum of Natural History, N. Y., N. Y.
USINGER, R. L., Univ. of Calif. Dept. of Entomol., Berkeley, Calif.
VAN CLEAVE, HARLEY JONES, Univ. of Ill., Urbana, Ill.
WEISS, PAUL A., Univ. of Chicago, Chicago 37, Ill.

Note: A number of the biographical sketches with photographs are not in strict alphabetical order due to the inability of our printers to fit the engravings on the pages in proper order. It is hoped that this mechanical difficulty will be recognized and that the editorial impossibility of perfect order will be therefore pardoned.

LEADERS IN AMERICAN SCIENCE

A

AAMODT, Olaf S., Rsch. Agron., Plant Indus. Station, Beltsville, Md. **PLANT BREEDING AND AGRONOMY**. b. Aug. 9, 1892, St. Paul, Minn. s. August and Julia (Hausen) A. Edn.: B.S., Univ. of Minn., 1917; M.S., *ibid.*, 1922; Ph.D., *ibid.*, 1927. m. Monica E. Jones, Oct. 27, 1923. c.: Phyllis Monica and John Gura. Exp.: Assoc. Prof. of Genetics and Plant Breeding, Univ. of Alberta, Edmonton, Can., 1928-31; Prof., *ibid.*, 1931-32; Hd. Dept. of Field Crops, *ibid.*, 1932-35; Prof. of Agron. and Chmn. of Dept., Univ. of Wis., Madison, Ws., 1935-37; Chmn., Crops Sect. Prog., Amer. Soc. of Agron., 1937-39; Chmn., Pasture Improvement Comm., *ibid.*, 1939-45; Hd. Rsch. Agron. Div. of Forage Crops and Diseases, Bureau of Plant Indus., Soils, and Agril. Engrng., U.S.D.A., Beltsville, Md., 1939-49; Agron., *ibid.*, 1950—. Mem.: A.A.A.S.; Amer. Phytopathol. Soc.; Amer. Soc. of Agron.; Genetics Soc. of Amer.; Alpha Zeta; Gamma Sigma Delta; Gamma Alpha; Sigma Xi; Amer. Soc. of Naturalists; Wash. Acad. of Sci. Contrb. to: Numerous scientific and tech. journals. Special Int.: Genetics of disease resistance in plants. Breeding of grasses and legumes. Grassland Agri. especially in northern regions.

AARON, Abraham H., Prof. of Clinical Med., Univ. of Buffalo, 24 High St., Buffalo, N. Y. **INTERNAL MEDICINE**.

AASE, Hannah Caroline, Prof. of Botany, Wash. State Coll., State Coll., Wash. **PLANT CYTOLOGY**.

ABBE, Ernst Cleveland, Prof. and Chmn., Dept. of Botany, Univ. of Minn., Minneapolis, Minn. **BOTANY**.

ABBE, Truman, Retired, 7308 Radcliffe Dr., Coll. Park, Md. **MEDICINE**. b. Nov. 1, 1873, Washington, D. C. s. Prof. Cleveland and Frances Martha (Neal) A. Edn.: A.B., Harvard, 1895; M.D., Columbia, 1899. m. Ethel Whipple Brown, Apr. 22, 1905. c.: Truman Waldo; Petrena Abbe Shea; Gilbert; Margaret Abbe Burt; and William Whipple. Exp.: Instr. in Physics, Georgetown Univ., Med. Schl., 1902-06; Asst. in Physiology, *ibid.*, 1902-06; Instr. in Surgery, *ibid.*, 1903-06; Instr. in Physiol., George Washington Med. Schl., 1906-10; Clin. Instr. in Surgery, *ibid.*, 1906-26; Instr. in Roentgenol., 1917-19; In Chg., Surgical dispensary, Garfield Hosp., 1906-10; Anesthetist, Columbia Hosp., 1906-16; Assoc. Surgeon Columbia Hosp. for Women, 1916-26; Assoc. Radiologist, Columbia Hosp., 1916-26; Awarded Silver Medal Jamestown Exposition 1907 for Demonstration of application of Radium to medicine. Retired, 1946. Mem.: Amer. Med. Assn.; Med. Soc. of D. C.; Wash. Obstetrical and Gynecol. Soc. Gen. Int.: First in Medicine in U. S. A. Special Int.: Neoplastic diseases.

ABBITT, William Henry, Asst. Prof. of Physics, State Coll. of Wash., Pullman, Wash. **SPECTROSCOPY**.

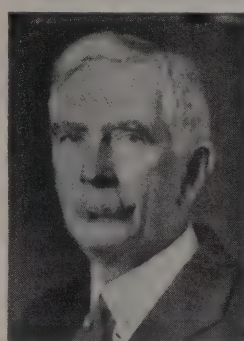
ABBOTT, Charles Harlan, George Robertson Prof. of Zool., Univ. of Redlands, Redlands, Calif. **ANIMAL ECOLOGY**.

ABBOTT, Ernest Victor, Pathologist, U.S.D.A., U. S. Sugar Plant Field Station, Houma, La. **PLANT PATHOLOGY**.

ABBOTT, Henry Herrick, Switching Engr., Bell Telephone Laboratories, 463 West St., N. Y. N. Y. **ELECTRICAL ENGINEERING AND PHYSICS**. b. May 27, 1901, Columbus, Ohio. s. Henry Ives and Louise (Herrick) A. Edn.: B.E.E., Ohio State Univ., 1923; E.E., *ibid.*, 1930. m. Marion Eberhardt, July 19, 1924. c.: Marilyn (Mrs. Frank Gentile); Carolyn (Mrs. Frank Sebbard) and Henry E. Exp.: Engr., Amer. Telephone and Telegraph Co., Dept. and Rsch., 1923-34; Bell

Telephone Lab., 1934—. Mem.: A.I.E.E.; Sigma Xi; Eta Kappa Nu. Contrb. to: Bell Lab. Record. Special Int.: Telephone Switching Systems.

ABBOT, Charles Greeley, Rsch. Assoc., Smithsonian Institution, Washington, D. C. **SOLAR RADIATION AND WEATHER**.

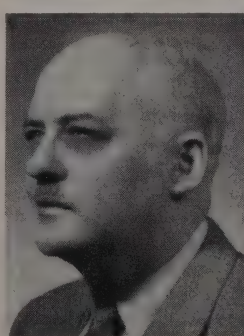


b. Wilton, N. H., May 31, 1872. s. Harris and Caroline Ann (Greeley) A. Edn.: B.S., Mass. Inst. of Tech., 1894; M.S., *ibid.*, 1895. Hon. Deg.: D.Sc., Melbourne, Australia, 1914; Sc.D., Case Inst. of Tech., 1930; Sc.D., Geo. Wash. Univ., 1937; LL.D., Univ. of Toronto, 1933. c.: Lillian E. Moore, Oct. 13, 1897. Exp.: Asst., Smithsonian Astrophys. Observatory, 1896-1907; Dir., *ibid.*, 1907-44; Asst. Secy., Smithsonian Inst., 1918-28; Secy., *ibid.*, 1928-44; Rsch.

Assoc. *ibid.*, 1944—. Mem.: Natl. Acad. Sci.; Amer. Astron. Soc.; Amer. Acad. Arts and Sci.; Amer. Philos. Soc.; Philos. Soc. Wash.; Royal Astron. Soc.; etc. Author: *The Sun*, 1911, 1927; *Everyday Mysteries*, 1925; *The Earth and the Stars*, 1925, 1946; *The Sun and the Welfare of Man*, 1928. Contrb. to: *Astrophys. Jour.*; *Astron. Jour.*; etc. Gen. Int.: Measured Accurately Intensity of Solar Radiation; Discovered Its Variability, and the Effects of Solar Variation on Weather; Invented Solar Power Devices of Great Efficiency. Special Int.: Solar Radiation; Atmospheric Transparency; Stellar Radiation; Solar Variation and Weather; Utilizing Solar Radiation.

ABBOTT, R(obert) Tucker, Assoc. Curator of Mollusks, U. S. Natl. Museum, Wash. 25, D. C. **MALACOLOGICAL**. b. Newton, Mass., Sept. 28, 1919. s. Chas. Matthew and Frances (Tucker) A. Edn.: B.S., Harvard Coll., Cambridge, Mass., 1946; M.S., George Wash. Univ., Wash., D. C., 1949. m. Mary Sisler of Wash., D. C., Feb., 1946. c.: Robert T., Jr.; Carolyn T. War Record Lt., U.S.N.R., Med. Rsch., 1945-46; Naval Pilot (S.B.D.), Lt. (j.g.), U.S.N.R., 1942-45. Travel: Canada; Bermuda; Cuba; Fiji; Samoa; China; Philippines; East Africa; also Zanzibar; Singapore; Guam; Japan; Hawaii; etc. Co-founder and Assoc. Ed. of *Johnsonia* (Harvard Univ.), Monographs of Marine Mollusks of the Western Atlantic. Listed in: A.M.S. (8th ed.); *Who Knows—and What*, 1950.

ABEL, Donald F., Dir., Abel Labs., Inc., 7 W. Madison St., Chicago 2, Ill. **CLINICAL LABORATORY TESTING**.



b. Chicago, Ill., Oct. 3, 1898. s. Theodore C. F. and Florence (McLaggan) A. Edn.: Ph.B. Univ. of Chicago, 1924. m. Sigried Jensen, June 19, 1921. c.: Donald A.; Robert B. Exp.: Pres., Chicago Jr. Assn. of Commerce, 1922-24; First Pres., Ill. Jr. Assn. of Commerce, 1933; Exec. Vice-Pres., U. S. Jr. Assn. of Commerce, 1924-26; Chairman, Ill. Com., Chicago Assn. of Commerce, 1949; Regional Dir., Natl. Assn. of Clinical Labs., 1951-52; First Pres., Ill. Assn. of Clinical Labs., 1952; First Pres., Council of Amer. Bioanalysts, 1953; Dir., Abel Labs., Inc., Chicago, Ill., 1947—. Mem.: A.A.A.S.; Ill. State

Acad. of Sci. Contbr. to: Scanning Com., Abstract of Bioanalytical Technology. War Record: Air Service, 1917; Tank Corps, 1918. Special Int.: Allergy Testing.

ABBOTT, William George, Jr., Treas., Hillsborough Mills and Private Consultant Rsch., Box 154, Wilton, N. H. TEXTILE MACHINERY, PRODUCTS.

ABEL, Theodora M., Rsch. Worker, Navy Rsch. Project Culture, Columbia Univ., N. Y. 27, N. Y. PSYCHOLOGY.

ABELL, Max Flavel, Assoc. Prof. of Agri. Econ., Ext. Econ. in Farm Mgmt., Morrill Hall, Univ. of N. H., Durham, N. H. FARM ORGANIZATION AND MANAGEMENT. b. Oct. 13, 1888, Solvay, N. Y. s. Flavel Lavius and Annie Rose (Palmer) A. Edn.: B.Sc., Cornell Univ., 1914; Ph.D., ibid., 1924. m. Helen Virginia Bennett, June 16, 1921. c.: Richard Palmer; Paul Irving; Robert Lionel, and Jane Shirley. Exp.: Grad. Asst. in Field Crops, Ohio State Univ., Columbus, Ohio, 1914-15; Grad. Asst., Farm Crops, Cornell Univ., Ithaca, N. Y., 1915-17; Instr. Farm Mgmt. and Field Crops, Conn. Agril. Coll., 1917-18; Asst. Prof. of Agron., ibid., 1919; Asst. Prof. of Farm Mgmt., Mass. Agril. Coll., 1920-26; Asst. Prof. of Agril. Econ., Asst. Econ., Agril. Econ., Asst. Ext. Econ., Univ. of N. H., Durham, N. H., 1926-49; Assoc. Prof. of Agril. Econ., Ext. Econ. in Farm Mgmt., ibid., 1949—. Mem.: Natl. Geographic Soc.; Amer. Farm Econ. Assn. Special Int.: Pasture Improvement and Mgmt. Farm Bldg. and Remodeling; Farm Organization and Mgmt. Finances, Records and Income Tax for Farmers.

ABELSON, P. H., Carnegie Inst., Washington, D. C. BIOCHEMISTRY.

ABERE, Joseph Francis, Rsch. Chem., Minn. Mining and Mfg. Co., St. Paul, Minn. HIGH AND FLUORINATED POLYMERS. b. Brooklyn, N. Y., Mar. 30, 1920. s. Louis C. and Amelia (Baccigalupo) A. Edn.: B.S., Queens Coll., N. Y. C., 1941; M.S., Poly Inst. of Brooklyn, 1943; Ph.D., ibid., 1948. m. Grace M. Lawlor on Dec. 26, 1943. c.: Linda; Dennis; Cynthia. Exp.: Fellow, Tutor and Instr. Chem., Queens Coll., 1941-44 and 1946-48; Rsch. Chemist, Minn. Mining and Mfg. Co., St. Paul, Minn., 1948—. Hon. Pos.: Winner, Medal of the Amer. Inst. of Chemist June 1941 for Queens Coll. Mem.: Amer. Chem. Soc.; Amer. Inst. of Chemists; Sigma Xi; Phi Lambda Upsilon. Author: Gen. Chem., 1st Semester, 1948; Gen. Chem., 2nd Semester, 1950. Contbr. to: Annals of the N. Y. Acad. of Sci.; Jour. of Phys. Chem.; Jour. of Chem. Phys.; Jour. of Applied Chem. War Record: U. S. N. R., 1944-46. Gen. Int.: Rate studies of the Polymerization of Styrene in various Solvents; Effect of Oxygen upon Polymerization. Special Int.: Fluorinated Polymers, low temperature properties of high Polymers, and Micro Techniques in Polymerization.

ABERLE, Sophia Bledsoe D., (Mrs. Wm. A. Brophy), Special Rsch. Dir., Univ. of N. Mex., Albuquerque, N. Mex. NUTRITION. b. Schenectady, N. Y. d. Albert Bledsoe and Clara (White) Herrick. Edn.: A.B., Stanford Univ., 1923; M.A., ibid., 1925; Ph.D., ibid., 1927; M.D., Yale Univ. Schl. of Med., 1930. m. William A. Brophy on Sept. 28, 1940. Exp.: Instr. Anthro, Inst. Human Relations, Yale, 1927-30; Instr., Yale Univ. Schl. of Med., 1930-34; Asst., Carnegie Institution of Wash., 1934-35; Supt. of Pueblo Indians, Dept. of the Interior, 1935-44; Div. of Med. Sci., Natl. Rsch. Council, Wash., D. C., 1944-49; Special Rsch. Dir., Univ. of N. Mex., 1949—. Hon. Pos.; Chf., Emergency Med. Service, State Council Natl. Defense, 1942-44; Mem., Upper Rio Grande Drainage Basin Com., Natl. Resources Planning Bd.; Chmn., Bd. of Dir., Southwest Field Trng. Program for Federal Service, 1937-41; Mem., White House Conf. Children in a Democracy, 1940; Mem., Natl. Sci. Bd. of Natl. Sci. Foundation, 1950. Mem.: Assn. of Univ. Women; League of Women Voters; Sigma Xi; Alpha Omega Alpha; Iota Sigma Pi; A.A.A.S.; A.M.A.; Assn. Anatomists; Fellow, Anthropologist Assn.; Soc. Rsch. Child Development, Fellow. Author: Primate Malaria, 1945. Contbr. to: Proc. Soc. Experimental Biol. and Med.; Amer. Jour. Obstetrics and Gynecology; Amer. Jour. Physiol.

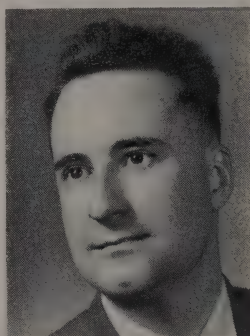
ogy; Amer. Jour. Phys. Anthropology; Jour. Nutrition; etc. Special Int.: Med.; Nutrition; Anthropology.

ABERNATHY, Edward Robert, Supt., State Schl. for the Deaf, Columbus, Ohio. SPECIAL EDUCATION.

ABERNATHY, Lewis G., Prof. of Physics, Central Coll., Fayette, Mo. PHYSICS.

ABERNETHY, Ethel Mary, Prof. of Psychol. and Chmn. Div. of Human Relations, Queens Coll., Charlotte, N. C. CHILD DEVELOPMENT. b. Rutherford Coll., N. C., Aug. 25, 1893. d. Logan Berge and Mattie (Walker) A. Edn.: A.B., Trinity Coll., 1913; A.M., Univ. of Chicago, 1924; Ph.D., ibid., 1933. Exp.: Staff Psychol., Univ. of Chicago, Chicago, Ill., 1931-33; Prof. of Psychol., Queens Coll., Queens Coll., N. C., 1917—. Mem.: Phi Beta Kappa; Southern Soc. of Phil. and Psychol.; N. C. Acad. of Sci.; N. C. Psychol. Assn.; Fellow, Amer. Psychol. Assn. Author: MONOGRAPH: Relationships Between Mental and Phys. Growth, 1937. Contbr. to: Numerous Psychol. Jours. Special Int.: Personality Organization; Learning and Retention; Propaganda; Growth of Schl. Children.

ABETTI, Pier Antonio, Development Engr., General Electric Co., 100 Woodlawn Ave., Pittsfield, Mass.



ELECTRICAL AND INDUSTRIAL ENGINEERING. b. Florence, Italy, Feb. 7, 1921. s. Giorgio and Anna (Garino) A. Edn.: Dr. of Ind. and Elec. Engrng., Univ. of Pisa, 1945; M.S., Ill. Inst. of Tech., 1948; Ph.D., ibid., 1953. m. Elizabeth Burr Nelson on June 11, 1948. c. George Ernest; Frank Anthony. Exp.: Chf. of Navigation Rsch. Group, Italian Military Geographical Inst., 1942-43; Instr. Amer. G. I. Univ. and Univ. of Florence, 1945-46; Locomotive Design Engr., Italian

State Railways, 1945-46; Devel. Engr., Gen. Elec. Co., 1948—. Mem.: Amer. Inst. of Elec. Engrs.; Tau Beta Pi; Sigma Xi; Eta Kappa Nu; Gen. Elec. Athletic Assn. Author: Istruzione Sulle Curve di Altezza, 1942; Carte del Cielo, 1943. Contbr. to: Sapere (Italy); Tecnica Italiana (Italy); Electrical Engrng. War Record: 2nd Lt., Italian Army, 1940-43. Gen. Int.: Introduced Amer. Systems of Astronomical Navigation in Italy from captured equipment, 1941-43. Special Int.: Astronomical Navigation; Power System Engrng.; Transformer Engrng.; Power System Stability; Elec. Transients.

ABRAHAM, George, Electronic Scientist, Naval Rsch. Lab., 3107 Westover Drive, S. E., Wash. 20,



D. C. PHYSICS; ELECTRICAL ENGINEERING. b. N. Y., N. Y., July 15, 1918. s. Herbert and Dorothy (Jacoby) A. Edn.: Sc.B., Brown Univ., 1940; S.M., Harvard, 1942; Ph.D., Univ. of Md., m. Hilda Wenz of Perryburg, Ohio, Aug. 26, 1944. d. Mr. and Mrs. E. L. Wenz. c.: Edward Herbert. Exp.: Chmn., Intercollegiate Broadcasting System, 1940—; Dir., Harvard Univ. Series, World Wide Broadcasting Foundation, Boston, Mass., 1940-41; Radio Engr.,

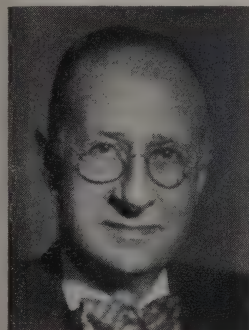
Radio Corp. of Amer., Camden, N. J., Summer, 1941; Electronic Scientist, Naval Rsch. Lab., 1942-45; Consultant, War Dept., 1942-43; Commissioned, U. S. Navy, 1944-45; Hd., Sci. Edn. Sect., Naval Rsch. Lab., 1945-52; Electronic Scientist, ibid.,

1952—; Lectr., Elec. Engrng., Univ. of Md., 1947; Lectr., Physics, Univ. of Md., 1948—; Elec. Engrng. Lectr., George Washington Univ., 1952—; Executive Officer, Naval Rsch. Reserve Unit W-2, 1952—. Mem.: Sigma Xi; Sigma Pi Sigma; Scientific Rsch. Soc. of Amer. (Sec., N.R.L. Br.); Amer. Physical Soc.; Inst. of Radio Engrs.; Amer. Inst. of Elec. Engrs.; A.A.A.S.; Amer. Soc. for Engrng. Edn.; Amer. Soc. of Physics Tchrs.; Amer. Inst. Physics; Philosophical Soc. of Washington; A.A.U.P.; Phi Delta Theta; Appalachian Mtn. Club. Contrb. to: Amer. Jour. Physics; Electronics Mag.; Inst. for Edn. by Radio Jour.; I.B.S. Bull.; and others. Ph.D. Dissertation: Study of Nonlinear Forced Oscillations in Germanium Semiconductors. Travel: France; England; Mexico; Canada; Caribbean; Panama; Venezuela. Hobbies: Scouting; Electronics; Mountaineering; Photography; Music. Listed in A.M.S. Special Int.; Semi Conductors, Solid State Physics, Electronics.

ABLEITER, James Kenneth, Chf. Instr. and Prin. Soil Scientist, Div. Soil. Survey, Bureau Plant Indus., Soils and Agri. Engrng., Plant Indus. Station, Beltsville, Md. **SOIL CLASSIFICATION, GEOGRAPHY.**

ABORN, Robert H., U. S. Steel Rsch. Lab., Kearny, N. J. **METALLURGY.**

ABRAHAM, Herbert, Pres. and Chmn. of Exec. Comm., The Ruberoid Co., 500 Fifth Ave., N. Y.



36, N. Y. **CHEMISTRY.** b. N. Y., N. Y., July 9, 1883. s. Samuel and Rosalie (Strauss) A. Edn.: B.S., Columbia Univ., 1903. m. Dorothy Jacoby (Dec.) on Dec. 15, 1915. c.: George; Amy; Robin; Jane. Exp.: Chemist and Consultant on Testing Materials in Rsch. Lab., The Ruberoid Co., 1903-13; Asst. Mgr. of Company in Chg. of Sales, *ibid.*, 1914-16; Gen. Sales Mgr., *ibid.*, 1917-19; Vice-Pres., *ibid.*, 1920-23; Prof. and Chmn. of Exec. Comm., *ibid.*, 1924—. Mem.: Amer. Chem. Soc.; Amer. Soc. for Testing Materials; Soc. of the Chem. Industry, (England); Engrs. Club and Chemists Club of N. Y. City. Author: Asphalts and Allied Substances, 1945. Special Int.: Industrial Rsch. Directed at the Improvement of Asphalt and Asbestos Bldg. Materials and the Development of Improved Testing Devices and Procedures.

ABRAHAMSON, Emanuel M., Adjunct Attending Physician, Jewish Hosp., 1 St. Paul's Ct., Brooklyn, N. Y. **INTERNAL MEDICINE.**

ABRAMS, Allen, Vice-Pres. in Chg. of Rsch. and Chem. Div., Marathon Corp., Rothschild, Wis. **PAPER MANUFACTURING.** b. Butler, Pa., Jan. 27, 1889. s. Edward E. and Mary Genevieve (Allen) A. Edn.: B.A., Wash. and Jefferson Coll., 1910; B.S., Mass. Inst. of Tech., 1915. Hon. Deg.: M.S., Wash. and Jefferson Coll., 1915; Sc.D., *ibid.*, 1937. m. Juanita Spyker, Nov. 15, 1919. c. Jean Chilton Smith and Mary Catherine McKey. Exp.: Instr. of Chem., Mass. Inst. of Tech., Cambridge, Mass., 1915-16; Chemist, Bemis Brothers Bag Co., 1916-17; Instr. of Chem., Mass. Inst. of Tech., 1920-21; Rsch. Chemist, Cornell Wood Products, Wis., 1925-26; Tech. Dir., Marathon Corp., Rothschild, Wis., 1926-40; Vice-Pres. and Dir. of Rsch., *ibid.*, 1940—. Mem.: Phi Gamma Delta; Amer. Forestry Assn.; Soc. of Chem. Indus.; Tech. Assn. of Pulp and Paper Industry; A.A.A.S.; Amer. Chem. Soc.; Amer. Oil Chem. Assn.; Amer. Soc. for Testing Materials; Indus. Rsch. Inst.; Amer. Pulp and Paper Mill Supt. Assn.; Wis. Acad. of Arts; Sci. and Letters; Natl. Council for Stream Improvement; YMCA; Rotary; C. of C.; Wis. State Historical Soc. Contrb. to: Indus. and Engrng. Chem.; TAPPI. Special Int.: Pulp; Paper; Lignin.

ABRAMS, Duff Andrew, Consulting Engr., 801 Second Ave., N. Y., N. Y. **CIVIL ENGINEERING.**

ABRAMS, LeRoy, Prof. Emer. of Botany, Stanford Univ., 653 Cabrillo Ave., Stanford Univ., Calif. **BOTANY.**

ABRAMS, Talbert, Pres., Abrams Aerial Survey Corp., Abrams Instrument Corp., 1310 Cambridge



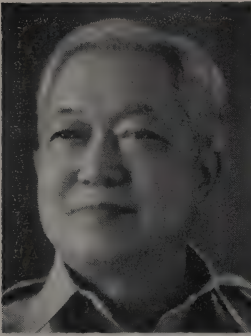
Road, Lansing, Mich. **AERIAL PHOTOGRAPHIC SURVEYING AND MAPPING; AVIATION; MANUFACTURER OF PHOTOGRAMMETRIC INSTRUMENTS, AERIAL CAMERAS, AUTOMATIC TIMING EQUIPMENT.** b. Tekonsha, Mich., Aug. 17, 1895. s. William Blodget and Sarah Elizabeth (Bruner) A. Edn.: U. S. Naval Aeronautical Schl., Pensacola, Fla. Hon. Deg.: Sc.D., Mich. Coll. of Mining and Tech., 1952. m. Leota Fry of Eaton

Rapids, Mich., Jan. 15, 1923. d. Charles M. and Minnie Fry. Exp.: Aviation Section U. S. Marine Corps, 1917-19; U. S. Air Mail Service, 1919-20; Reserve Officer, U. S. Air Corps, 1923-35; Vice-Pres. Mich. Air Ways, 1921; Pres. Abrams Aerial Survey Corp., 1923—; Pres. Abrams Air Craft Corp., 1937-42; Pres. Abrams Instru. Corp., 1937—; Pres. Schl. of Surveying and Mapping, U. S. Marine Corps, 1942-43; Lecturer, First Schl. on Aerial Photographic Surveying, Mich. State Coll. Hon. Pos.: Pres. Amer. Soc. of Photogrammetry; Eugene Field Soc. of Authors. Mem.: Mich. Soc. of Engrs.; Amer. Soc. of Military Engrs.; Amer. Ordnance Assn.; Quiet Birdmen; Rotary Club International; Lansing Country Club; Wings Club, N. Y.; Explorers Club, N. Y. C.; Rsch. Comm. Natl. Assn. Manufacturers. Author: Essentials of Aerial Surveys and Photo Interpretation, 1943. Travel: Central and South Amer.; West Indies; Europe; Asia and the Orient; 64 Countries. Hobbies: Exploration; Archery; Flying. Listed in: Who's Who in Aviation; Who's Who; Who's Who in Commerce and Industry; Who's Who in Transportation and Communications; Who's Who in the Mid-West; Amer. Men of Sci.

ABRAMSON, Harold Alexander, Asst. Prof. of Physiol., Columbia Univ., N. Y. 27, N. Y. **ALLERGY.**

ABREU, Benedict Ernest, Assoc. Rsch. Dir., Rsch. Dept., Pitman-Moore Co., Indianapolis, Ind. **PHARMACOLOGY.** b. Oakland, Calif., July 31, 1913. s. Joseph Ernest and Mary (Marcelino) A. Edn.: B.S., Univ. of Calif., 1935; M.S., *ibid.*, 1937; Ph.D., *ibid.*, 1939; M.D., Univ. of Calif. Med. Schl., 1949. m. Ada Baughn on Aug. 13, 1941. c.: John; James; Mary. Exp.: Asst. Pharmacology, Univ. of Calif. Med. Schl., 1935-37; Instr. in Pharmacology, W.Va. Univ. Schl. of Med., 1937-39; Instr. in Pharmacology, Univ. of Okla. Schl. of Med., 1939-41; Asst. Prof. of Pharmacology, Univ. of Ga. Schl. of Med., 1941-43; Assoc. Prof., *ibid.*, 1943-44; Asst. Prof. of Pharmacology, Univ. of Calif. Med. Schl., 1944-49; Chf. Pharmacologist, Rsch. Dept., Pitman-Moore Co., Indianapolis, Ind., 1949-51; Assoc. Rsch. Dir., *ibid.*, 1951—. Hon. Pos.: Chmn., Conf. on Halogenated Hydrocarbons, Gibson Island Conf., 1944; Chmn., Conf. on Pharmacology Tchng., Amer. Soc. for Pharmacology and Exptl. Therapeutics, 1946. Mem.: Soc. for Exptl. Biol. and Med.; Fellow, A.M.A.; Fellow, A.A.A.S.; N. Y. Acad. of Sci.; A.A.U.P.; Amer. Pharmaceutical Assn.; Fellow, Internatl. Coll. of Anesthetists; Sigma Xi; Phi Sigma; Scientific Council of the Amer. Heart Assn.; Swiss Soc. for Physiol. and Pharmacology; Rho Chi. Contrb. to: Jour. of Pharmacol. and Exptl. Therapeutics; Jour. A.M.A.; Southern Med. Jour.; W.Va. Med. Jour.; Proc. W. Va. Acad. of Sci.; Federation Proc.; Am. Jour. of Physiol.; Am. Jour. of Obstetrics and Gynecology; Jour. Amer. Pharmaceutical Assn. Special Int.: Anesthesiology; Pharmacology of Cardiovascular System; Pharmacology of Autonomic and Central Nervous Systems; Pharmacology of the Uterus; Biochemistry.

ABRIOL, Rufino, Dir., Bureau of Quarantine, Manila, Philippines. INTERNATIONAL EPIDEMIOLOGY AND QUARANTINE b. Arayat, Pangasinan, Philippines. s. Leon and Tomasa (Vicencio) A. Edn.: M.D., Univ. of Ill., 1913; Dr.T.M., Univ. of the Philippines, 1916; C.P.H., Johns Hopkins Univ., 1921; Dr.P.H., ibid., 1922; M.P.H., ibid., 1926. m. Rosa Reyes in 1920. c.: Rita. Exp.: Inst. in Surgery, Coll. of Med., Univ. of the Philippines, 1914-17; U. S. Quarantine Officer, Manila, Philippines, 1917-46; Dir., Bureau of Quarantine, Philippines, 1946—.



Hon. Pos.: Pres., Hopkins Club of the Philippines, 1952; Pres., Philippine Pub. Health Assn., 1950-52. Mem.: Manila Med. Soc.; Philippine Med. Assn.; Philippine Pub. Health Assn.; Philippine Coll. of Surgeons; Philippine Mental Health Assn.; Natl. Advisory Health Council of the Philippines; Natl. Rsch. Council of the Philippines; Amer. Pub. Health Assn.; Rotary Club of Manila. Contrb. to: Philippine Jour. of Sci. War Record; Major, Med. Corps, First Philippine Div., U. S. Army, 1918. Gen. Int.: Medal of Freedom, U. S. Dept. of State, 1947; Delegate, Fourth World Health Assembly, Geneva, 1951; Delegate, Western Pacific Regional Assembly, Manila, Philippines, 1951. Special Int.: Quarantine Matters, Philippines.

ACHILLES, Edith Mulhall, Retired, 417 Park Ave., N. Y. 22, N. Y. PSYCHOLOGY. b. Boston, Mass., Aug. 6. d. Henry Pope and Ida F. (Munro) Mulhall. Exp.: Ph.D., Columbia Univ., 1918. c.: Frances. Exp.: Asst., Dept. of Psychol., Barnard Coll., 1913-15; ibid., Vassar Coll., 1916-17; Supervisor Home Study Courses, Psychol., Columbia Univ., 1921-34. Mem.: N. Y. Acad. of Sci.; A.A.A.S.; Amer. Psychol. Assn. Special Int.: Memory.

ACHILLES, Paul Strong, Vice-Chmn., Psychological Corp., Rt. 1, Box 858 Woodside, Redwood City, Calif. PSYCHOLOGY.

ACKERLIND, Erik, Tech. Dir., The Walland-Pierce Corp., Lomita, Calif., Box 621, Los Angeles 53, Calif. ELECTRONIC ENGINEERING. b. July 9, 1910, N. Y. C. s. Carl U. and Esther (Wastfelt) A. Edn.: B.E.E., Poly. Inst. of Brooklyn, 1928-32; M.S. in E.E., Columbia Univ., 1932-34; Dr. E. E., Poly. Inst. of Brooklyn, 1934-37; m. Florence R. Ackerlind of Los Angeles, Calif., June 11, 1944. d. John Jason and Esther Jason. Exp.: Rsch. Fellow, Poly. Inst. of Brooklyn, 1934-37; Elec. Engr., Hazletine Service Corp., Little Neck, N. Y., 1939-41; Sub-Sect. Hd., Naval Rsch. Lab., Wash., D. C., 1941-46; Sect. Hd., Northrop Aircraft Inc., Hawthorne, Calif., 1946-49; Instr., Dept. of Math., Univ. of Calif., Los Angeles, Calif., 1948-49; Hd., Computer Development Group, Calif. Inst. of Tech., Pasadena, Calif., 1949-51; Tech. Dir., The Walland-Pierce Corporation, Lomita, Calif., 1951—. Mem.: A.I.E.E.; I.R.E.; Assn. for Computing Machinery; Calif. Tchrs. Assn.; Eta Kappa Nu; Sigma Xi. Contrb. to: Trans. of Electrochem. Soc. Ph.D. Dissertation: Dielectric Investigations of Films of Shellac Varnish. Travel: Europe; N. Amer. Gen. Int.: Granted Four U. S. Patents. Hobbies: Carpentry; Reading; Swimming. Listed in: A.M.S.; Who's Who on Pacific Coast. Special Int.: Electronic Computers.



ACKERMAN, Aaron Leon, 963 Park Ave., Elizabeth, N. J. b. Dec. 6, 1902, Millville, N. J. ORTHODONTICS AND PUBLIC HEALTH. s. S. Bernhardt T. and Bertha A. Edn.: D.D.S., Univ. of Pa., 1920-24; Dewey Schl. Orthodontia, 1932; M.P.H., Columbia Univ., 1946; Columbia Univ. Schl. of Pub. Health Edn., 1947. m. Elizabeth Ossre of Morristown, N. J., June 11, 1935. c.: Albert Bernard, James Low II. Susan. Exp.: Spec. Lectr. Dentistry, Coll. Dental and Oral Surg., Columbia Univ., Post-Grad. Schl. Orthodontia; Clin. Asst., Coll. Dental and Oral Surg., Columbia Univ. Com. Co-Chairman Unmet Needs Com. Edn., Pub. Schl., Elizabeth, N. J.; Edn. Com. C. of C., Legislative Com.; Chmn. Pub. Health Com. C. of C.; Chmn. Pub. Health Com. Social Agencies; Pub. Health Authority, Union Coun. Boy Scouts of Amer.; Liaison Officer, Health and Safety Com., Amer. Red Cross; Health Com., N. J. Welfare Coun.; Agri. Adv. Bd., Union Co. Dental Soc., Auditing Com., N. J. State Dental Soc.; Fin. Com., 1943-44; Ednl. Com., A.P.H.A.; Ambassador for Fund Raising, Columbia Univ.; Chmn. Program Com., Child Study Group, Victor Mravalag Schl., 1943; The Pingry Schl. Fund Dr., 1949; Co-Chmn., Dental Div. Community Chest, 1942-43; Chmn., Seventh Annual Music Festival, Elizabeth Pub. Schls.; Chmn., Plaque Award Com., Amer. Bus. Club for Elizabeth's Outstanding Citizen; Chmn. Harvest Show Com., Victor Mravalag Schl., 1942-43; Elizabeth Defense Co., Disaster Serv., 1942-45; U. S. Victory Bond Drive Com., 1942; Chmn. Publicity Com., Elizabeth Victory Garden Campaign Com.; Chmn. Food for Fitness Program, World War II; Mem.: Union Co. Dental Soc.; N. J. Soc. for Promotion of Dentist for Children; N. J. State Dental Soc.; Amer. Dental Assn.; Northeastern Soc. of Orthodontists; Amer. Pub. Health Assn.; Amer. Soc. Promotion of Dentists for Children; Alpha Omega; 32° Mason and Shriner; Elmora Assn.; Elizabeth Garden Club C. of C.; Amer. Red Cross; Boy Scouts of Amer. Union Council; Univ. Pa. Gen. Alumni Soc.; Suburban Pa. Club of N. J.; Federated Columbia Univ. Alumni Assn.; Columbia Alumni Assn. of Union Co.; U. Co. Dental Study Club, 1941-44; Pub. Health Assn. of N. Y. C.; N. J. Health and Sanitary Assn.; A.A.A.S.; Men's Faculty Club of Columbia Univ.; Sewaren Motor Boat and Yacht Club; Amer. Acad. of Polit. and Social Sci.; Fellow, N. J. Acad. of Med. Contrb. to: Paper Read Before Alpha Omega on Orthodontics, 1933; Provisional Group of Jr. League on Com. Health Problems, 1946; Clinic Before N. J. State Dental Soc. on Orthodontics, 1934; Second Dist. Dental Soc. N. Y. C.



ACKERMAN, Lauren V., Asst. Prof. of Pathol., Schl. of Med., Wash. Univ., St. Louis, Mo. PATHOLOGY.

ACKERT, James Edward, Prof. of Zool. and Dean Emer., Grad. Schl., Kans. State Coll., Manhattan, Kans. ZOOLOGY, PARASITOLOGY.

ACQUARONE, Paul, Assoc. Prof. of Botany, Univ. of Akron, Akron, Ohio. PLANT PHYSIOLOGY.

ADAIR, Charles Roy, Assoc. Agronomist, Div. Cereal and Forage Crops and Diseases, U. S. D. A., 717 S. Grand Ave., Stuttgart, Ark. PLANT BREEDING.

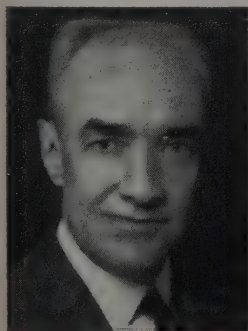
ADAIR, Frank Earl, Attending Surgeon and Exec. Officer, Memorial Hosp., 444 E. 68th St., N. Y., N. Y. CANCER SURGERY.

ADAIR, Fred Lyman, Mary Campau Ryerson Emeritus Prof. of Obstetrics and Gynecology, Univ. of Chicago. Address: P. O. Box 158, Maitland, Fla. MEDICINE, OBSTETRICS AND GYNECOLOGY. b. Anamosa, Iowa, July 28, 1877. s. Lyman Joseph

and Sarah Jennings (Porter) A. Edn.: B.S., Univ. of Minn., 1898; M.A., *ibid.*, 1918; M.D., Univ. of Chicago, 1901. m. Myrtle May Ingalls on Nov. 18, 1911. c.: Agnes Jennings; Robert Chamberlain; Richard Porter. Exp.: Prof. of Dept. of Obs. and Gyn.: Univ. of Chicago, 1929-42; Mary Campau Ryerson Emeritus Prof. of Obs. and Gyn. *ibid.*, 1942—. Hon. Pos.: Univ. of Minn. Award for Outstanding Achievement, 1951; Certificate of Distinction, 50 years in the practice of med., Ind. State Med. Assn.; Consultant, Children's Bureau, U. S. Dept. of Labor, Chmn., Com. on Prenatal Care, Pres. Hoover's White House Conf. on Child Health and Protection; etc. Mem.: Sigma Xi; Amer. Gynecological Soc.; Central Assn. of Obs. and Gyn.; Minn. Acad. of Med.; Amer. Acad. of Obs. and Gyn.; Amer. Com. on Maternal Welfare. Author: Textbook, Obstetrics & Gynecology, 1940; Maternal Care and Some Complications, 1939; Obstetric Med., co-author; Fetal and Neonatal co-author, 1948. Contrb. to: The Mother; Amer. Death, co-author, 1948. Contrb. to: The Mother; Amer. Jour. Obs. and Gyn.; Jour. A.M.A.; etc. War Belgium, Croix Civique du Belge. Gen. Int.: Promotion of Maternal and Neonatal Health and Welfare; Promotion of Obs. and Gyn. Edn.: Promotion of Amer. and Intrnatl. Congresses of Obs. and Gyn. Special Int.: Various Aspects of Obst. and Gyn. including Fetal and Neonatal Pathology.

ADAMS, A. Elizabeth, Prof. of Zoology, Mount Holyoke Coll., South Hadley, Mass. ZOOLOGY. b. March 28, 1892, Delaware, N. J. d. George Crockett Adams and Elizabeth (Brown) A. Edn.: B.A., Mount Holyoke Coll., 1914; M.A., Columbia Univ., 1918; Ph.D., Yale Univ., 1923. Exp.: Assistant in Zoology, Mount Holyoke Coll., 1914-15; Instructor in Zoology, *ibid.*, 1915-17, 1918-19; Assoc. Prof., *ibid.*, 1919-28; Prof., *ibid.*, 1928—; Act. Dean, *ibid.*, 1926-27. Mem.: Phi Beta Kappa; Sigma Xi; Fellow of A.A.A.S.; Amer. Assn. Anat., Amer. Soc. Zool., Amer. Soc. Natl. Soc. for Exp. Biol. and Med.; Assoc. Study of Int. Secret., N. Y. Acad. Sci. Author: Studies in Exp. Zool., 1936; 2nd ed., 1941, 3rd ed., 1949. Contrb. to: Scientific Periodicals on Problems in Exp. Embryol. and Endocrinol. Title of Ph.D. Dissertation: An Expm. Study of the Mouth of the Amphibian Embryo. Travel: England, Scotland, Wales, Ireland, Scandinavia, France, Germany, Italy, Holland, Belgium, South America, Canada. Starred in 6th Edit. of Amer. Men. of Sci. Special Int.: Embryology; Endocrinology.

ADAMS, Arthur Stanton, Pres., Amer. Coun. on Edn., Wash., D. C. PHYSICS-METALLURGY. b. July



1, 1896, Winchester, Mass. s. Chas. Stanton and Grace Estelle (Newhall) A. Edn.: U. S. Naval Acad., Grad., 1918; Univ. of Calif., M.A., 1926; Sc.D., Colo. Schl. of Mines, 1927. Hon. Degrees: LL.D., Muhlenberg Coll., 1944; Sc.D., Union Coll., 1944; Univ. of the South, D.C.L., 1945; D. Engr., Stevens Inst., 1945; D.H.L., Hobart and Wm. Smith Coll., 1946; D. Engr., Rensselaer Polytech. Inst., 1947; D. Engr., Norwich Univ., 1948; D. Engr., Worcester Polytech. Inst., 1949; LL.D., R. I. St. Coll., 1950; LL.D., Boston Univ., 1951. m. Dorothy Anderson of Philadelphia, Pa., 1918. d. Frank and Mary Anderson. c.: John Stanton. Exp.: Exec. Officer, U.S.N.R., 1918-20; Commanding Officer, USS-F-2, 1920; Div. Officer, USS Ark., 1920-21; Retired, 1921, Lt. (j.g.), U. S. N.; Tchr., Math. and Sci., Denver Pub. Schs., 1922-23; Assoc. Prin., Pitts Schl., Denver, 1923-25; Grad. Student, Univ. of Calif., 1925-26; Fellow Metallurgy, Colo. Schl. of Mines, 1926-27; Instr., Metallurgy, Asst. Prof., Metallurgy and Math., Assoc. Prof. of Mech. and Prof., 1927-40; Freshman Adviser, Colo. Schl. of Mines, 1928-40; Asst. to Pres., 1938-40; Alderman, Golden, Colo., 1937-39; Pres., Bd. of Control, State Indust. Schl. for Boys, Golden, Colo., 1937-38; Asst. Dean, Engrng., Cornell Univ., 1940-

42; Dir., Engrng., Sci. and Mgt., W. T. P., Cornell Univ., 1940-42; Officer in Chg., N.T.S., Cornell, 1941-42; Lt., U.S.N. (Ret.), 1942; Lt. Comdr., U.S.N. (Ret.), 1942; Bur. of Naval Personnel, 1942-45; Admin. Sect., Gen. Admin., V-12 Program, 1942-44; Comdr., U.S.N. (Ret.), 1943; Capt., U.S. N. (Ret.), 1944; Dir. of Admin., 1944-45; Spec. Asst. to Dir. of Trng., 1945; Inactive Duty, 1945; Provost, Cornell Univ., 1946-48; Pres., Univ. of N. H., 1948-50; Pres., Assn. of Land-Grant Colls. and Univs., 1949-50. Mem.: A.S.M.E.; A.S.E.E.; A.A.A.S.; A.A.U.P.; Tau Beta Pi; Sigma Xi; Phi Kappa Phi; Sigma Nu; Cosmos Club; Univ. Club. Author: The Development of Phys. Thought, 1933; Fundamentals of Thermodynamics, 1945. Ph.D. Dissertation: Gas Sorption in Mineral Flotation. Listed in: Who's Who in Amer.; A.M.S.; Natl. Cyclopaedia of Amer. Biog.; Who's Who in the East. Special Int.: Physics, Thermodynamics, Metallurgy.

ADAMS, Charles Christopher, retired, 149 Manning Blvd., Albany, N. Y. ECOLOGY.

ADAMS, Charles Frederick, Dir., Bureau of Labs., State Div. Health, Mo. Div., Jefferson City, Mo. PATHOLOGY, ENTOMOLOGY.

ADAMS, Chester Elgin, Section Leader, Standard Oil Co., Highland, Ind. ORGANIC CHEMISTRY. b. Myrtle Point, Ore., June 7, 1898. s. Charles and Rebecca (Thomas) A. Edn.: B.A., Univ. of Ore., 1920; Ph.D., Iowa State Coll., 1925. m. Anne Hopkins in 1926. c.: Elizabeth Anne; Charles Collver. Exp.: Rsch. Chem., E. I. du Pont de Nemours & Co., 1925-27; Rsch. Chem., Standard Oil Co. (Ind.), 1927-42; Group Leader, *ibid.*, 1942-47; Section Leader, *ibid.*, 1947—. Mem.: Sigma Xi; Amer. Chem. Soc.; Lions. Contrb. to: Jour. Amer. Chem. Soc.; Jour. of Indus. and Engrng. Chem. Special Int.: Petroleum and Its Products.

ADAMS, Clarence Raymond, Prof. and Chmn., Dept. of Math., Brown Univ., Providence, R. I. MATHEMATICS.

ADAMS, Clifford R., Assoc. Prof. of Psychol., Pa. State Coll., State Coll., Pa. MARRIAGE, FAMILY.

ADAMS, Donald, Duke Univ., Durham, N. C. PSYCHOLOGY.

ADAMS, Frederic Henry, Rsch. Assoc., Amer. Cyanamid Co., Calco Chem. Div., Bound Brook, N. J. ORGANIC CHEMISTRY. b. Sept. 23, 1902, Beirut, Lebanon. s. Walter Booth and Anna (Carter) A. Edn.: B.A., Wesleyan Univ., Middletown, Conn., 1924; M.A., *ibid.*, 1928; M.A., Princeton, 1931, Ph.D., *ibid.*, 1933. m. Doris Sanborn, Sept. 12, 1931. c.: Esther Anna; Doris Keats; and Frederic Henry, Jr. Exp.: Instr. Chem., Amer. Univ. of Beirut, Lebanon, 1925-27; Asst. Chem., Wesleyan Univ., 1927-28; Instr. Chem., Amherst Coll., Amherst, Mass., 1928-30; Asst. Chem., Princeton, Princeton, N. J., 1931; Rsch. Chem., Amer. Cyanamid Co., Calco Chem. Div., Bound Brook, N. J.; Asst. Chf. Chem., *ibid.*, 1939-51; Rsch. Assoc., *ibid.*, 1951—. Mem.: Phi Beta Kappa; Sigma Xi; Amer. Chem. Soc.; Amer. Assn. of Textile Chem. and Colorists; A.A.A.S.; Phi Sigma Kappa; Mason. Contrb. to: Jour. of the Amer. Chem. Soc. Travel: Near East; Europe; Arabia. Special Int.: Rsch. in optical activity; Industrial rsch. in field of dyes, intermediates, diazo compounds, pigments. Numerous patents in these fields.

ADAMS, Frederick Joseph, Prof. of Ednl. Psychol. and Asst. Dean, Coll. of Edn., Univ. of Tex., Austin, Tex. PSYCHOLOGY. b. Manchester, N. H., Aug. 18, 1898. s. William Stone and Mary G. (Worthen) A. Edn.: B.A., Univ. of Calif., 1921; M.A., *ibid.*, 1922; Ed.D., *ibid.*, 1927. m. Marie T. Martin in 1921. c. Robert M. Exp.: Instr. to Prof., Univ. of Tex., 1922—. Mem.: Fellow, A.A.A.S.; Fellow, Amer. Psychol. Assn.; Fellow, Tex. Acad. of Sci.; Dept. of Adult Edn., Natl. Edn. Assn.; Tex. Psychol. Assn. War Record: U. S. Army Ambulance Service, 1917-19; Psychologist, Army Specialist Corps, 1942; Adjutant Generals Dept., A.U.S., 1942-46. Special Int.: Vocational Guidance; Aptitude Measurement; Coll. Personnel.

ADAMS, Georgian, Prin. Expt. Station Admin., Office Expt. Stations, U. S. D. A., 2713 Chelsea Terrace, Windsor Hills, Baltimore, Md., NUTRITION.

ADAMS, Henry F., Prof. of Psychol., Univ. of Mich., Ann Arbor, Mich. PSYCHOLOGY.

ADAMS, James Fowler, Mgr., Agri. Chem. Rsch. and Development, General Chemical Co., 40 Rector St., N. Y., N. Y. PLANT PATHOLOGY.

ADAMS, James William, Sr. Rsch. Chem., 103 Robbs St., Schofield, Wis. INDUSTRIAL CHEMISTRY. b.



Oct. 29, 1921, Conover, Wis. s. Alfred Henry and Pauline (Everston) A. Edn.: Univ. of Wis., B.S. in Chem., 1943. m. Joyce Braatz of Schofield, Wis., Oct. 27, 1944. d. Mr. and Mrs. A. C. Braatz. c.: Judy Regina; Neal James. Exp.: Control Chem., U. S. Rubber Co., Institute, W. Va., 1943-44; Analytical Rsch. Group Leader, U. S. Rubber Co., Inst., W. Va., 1944-47; Chief Chem., U. S. Rubber Co., Inst., W. Va., 1947-48; Sr. Rsch. Chem., U. S. Rubber Co., Nautaguck, Conn., 1948-51; Sr. Rsch. Chem., Marathon Corp., Rothschild, Wis., 1951—. Mem.: A.C.S., Colloidal Div., *ibid.* Contbr. to: Chem. Engrng. Progress; Indus. and Engrng. Chem.; Rubber Chem. and Technology. Hobbies: Fishing; Hunting; Gardening. Listed in: A.M.S.; Who's Who in Sci. Special Int.: Synthetic Polymers Reinforcing Agents (i.e. Carbon Blacks) and Lignin Chem.

ADAMS, John Milton, Prof. and Chmn., Dept. of Pediatrics, Univ. of Calif., Los Angeles 24, Calif. PEDIATRICS. b. June 7, 1905, Minneapolis, Minn. s. Paul and Olive (Marshall) A. Edn.: B.S., Princeton, 1929; M.D., Columbia Univ., 1933; Ph.D., Univ. of Minn., 1943. m. Carolyn Gaston, Mar. 24, 1934. c.: John M., Jr.; Herbert G. and William M. Exp.: Intern. New Haven Hosp., Yale Univ., 1933-34; Dept. of Surgery, Univ. of Minn., 1934-35; Resident, Janney Children's Hosp., Abbott Hosp., Minneapolis, Minn., 1935-36; Dept. of Pediatrics, Univ. of Minn., 1936-37; Private Practice, Nicollet Clinic, 1937-42; Clin. Asst. Prof., Univ. of Minn., 1940-43; Assoc. Prof., *ibid.*, 1944-50; Prof. and Chmn., Dept. of Pediatrics, U.C.L.A., Schl. of Med., 1950—. Mem.: Soc. Expt. Biol. and Med.; Amer. Soc. Clin. Investigations; Cent Soc. for Clinical Invest.; Pediatric Rsch. Soc.; Amer. Soc. Exptl. Pathol.; Amer. Pediatric Soc.; Amer. Bd. of Pediatrics. Contbr. to: Jour. of Pediatrics; Jour. of Assn. of Amer. Med. Colls.; Jour.-Lancet; Amer. Jour. of Cancer Amer. Jour. of Pathol. Special Int.: Pediatrics, Inf. Diseases.

ADAMS, Kenneth Tress, Rear Admiral, retired, 4103 N. Chesterbrook Rd., Falls Church, Va. HYDROGRAPHIC, TOPOGRAPHIC SURVEYING. b. Oct. 6, 1891, Gambier, Ohio. s. William Allen and Jennie (Tress) A. Edn.: B.S., Kenyon Coll., 1912; D.Sc., *ibid.*, 1949. m. Loma Pearl Arndt, June, 1918. Exp.: Comms. Officer, U. S. Coast and Geodetic Survey, 1912-51; Asst. Dir. and Rear Admiral, *ibid.*, 1949-51; Retired, 1951—. Mem.: Amer. Congress on Surveying and mapping; Amer. Soc. of Photogrammetry; Amer. Name Soc. Author: Hydrographic Manual, 1942. Contbr. to: Jour. of Amer. Congress on Surveying and Mapping.

ADAMS, Leason Heberling, Dir., Geophys. Lab., Carnegie Inst. of Wash., Washington 5, D. C. PROPERTIES OF MATERIAL UNDER HIGH PRESSURE. b. Cherryvale, Kans., Jan. 16, 1887. s. William Barton and Katherine (Heberling) A. Edn.: B.S., Univ. of Ill., 1906. Hon. Deg.: Sc.D., Tufts Coll., 1941. m. Jeannette Blaisdell Adams of St. Louis, Mo., Jan. 25, 1908. Exp.: Morris and Co., 1906; Mo. Pacific R. R., 1906-08; Tech. Branch, U. S. Geol. Survey, 1908-10; Geophysical Lab.,

Carnegie Inst. of Wash., 1910—; Acting Dir., *ibid.*, 1936-37; Dir., *ibid.*, 1937-52. Mem.: Natl. Acad. Sci.; Amer. Geophys. Union (Pres., 1944-47); Philos. Soc., Wash. (Pres., 1929); Geol. Soc., Wash. (Pres., 1950); Wash. Acad. of Sci. (Pres., 1932); etc. Listed in: Internatl. Who's Who; Who's Who in Amer.; A.M.S.; Who's Who in Engrng.; Who's Who in the East; Who's Who in the Nation's Capital.

ADAMS, Leverett Allen, Emeritus Prof. of Zool., Univ. of Ill., 401 Vermont St., Urbana, Ill. ZOOLOGY. b. Lawrence, Kans., Sept. 23, 1877. s. James William and Mary Jane (Pierson) A. Edn.: A.B., Univ. of Kans., 1903; A.M., *ibid.*, 1906; Ph.D., Columbia Univ., 1914. m. Mary Louise Moss on Nov. 25, 1917. c.: Leverett Allen; Virginia; Mary. Exp.: Prof. of Biol., Colo. State Tchrs. Coll., 1906; Hd. of Dept., *ibid.*, 1910-21; Asst. Prof. of Zool., Univ. of Ill., 1921; Assoc. Prof., *ibid.*, 1935; Prof. of Zool., Curator Museum of Natural Hist., *ibid.*, 1939-49; Emeritus Prof. of Zool., *ibid.*, 1949—. Mem.: Fellow, A.A.A.S., Soc. of Zoologists; Soc. of Anatomists; Assn. of Museums; Soc. Herpetologists and Ichthyologists; Acacia; Beta Theta Pi; Exchange Club. Author: Necturus, 1926; An Introduction to the Study of Vertebrates, 1933; Comparative Anatomy, with Samuel Eddy, 1949. Contbr. to: Ill. Acad. of Sci.; Jour. Morphology and Physiology; etc. Special Int.: Vertebrate Anatomy; Phylogeny of Muscles; Fish Otoliths; Age of Fishes; Osteology of Vertebrates.

ADAMS, Mildred, Bureau of Human Nutrition, U. S. Dept. of Agri., Washington, D. C. BIOCHEMISTRY AND ENZYMES.

ADAMS, R. L., Giannini Hall, Univ. of Calif., Berkeley, Calif. AGRICULTURE.

ADAMS, Roger, Hd. Chem. Dept., Univ. of Ill., Urbana, Ill. ORGANIC CHEMISTRY. b. January 2, 1889, Boston, Mass. s. Austin Winslow and Lydia (Curtis) A. Edn.: A.B., Harvard Univ., 1909; A.M., *ibid.*, 1910; Ph.D., *ibid.*, 1912; Univ. of Berlin, Germany and Kaiser-Wilhelm Institute, 1912-13; Honorary Sc.D., Brooklyn Poly. Institute, 1935; Northwestern Univ., 1942; Univ. of Rochester, 1943; Harvard, 1945; Univ. of Pa., 1947; Yale, 1948. m. Lucile Wheeler of White River Jct., Va., Aug. 29, 1918. d. Leonard D. Wheeler. c.: Lucile. Past Pres., A.C.S.; Foreign Sec., N.A.S. Mem.: A.A.A.S., (Pres., 1950); Amer. Philos. Soc.; N.A.S.; Hon. Member, Chemical Soc. of London; Polish Chemical Soc.; Societe Chimique de France; Swiss Chemical Soc.; Spanish Chemical Soc.; Phi Beta Kappa; Sigma Xi; etc. Ph.D. Dissertation: Alkali-insoluble Phenols. War Record: Maj. Chem. Warfare Service, 1918; Natl. Defense Rsch. Comm., 1941-46. Medals as follows: W. H. Nichols, 1927; Willard Gibbs, 1936; Elliott Cresson, 1944; Davy, 1945; T. W. Richards, 1946; Joseph Priestley, 1946; Medal for Merit, 1948; Commander, Civilian Div., Most Excellent Order of the British Empire, 1948. Testimonial of Appreciation, Univ. of Ill., 1950; Northwestern Univ. Centennial Award, 1951; A. W. Hofmann medal (German Chemical Soc.), 1953. Listed in: A.M.S.; Who's Who in Amer., etc. Special Int.: Stereochemistry; Structure and Synthesis of Natural Products; Synthetic Methods.

ADAMS, Sidney, Project Leader, U. S. Civil Service Comm., Eighth and F Sts., N. W., Washington, D. C. PSYCHOLOGY.

ADAMS, Thomas Caldwell, 242 S. 12th East St., Salt Lake City, Utah. ENGINEERING.

ADAMS, Walter Sydney, Mount Wilson Observatory, Pasadena, Calif.

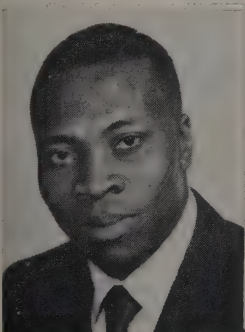
ADAMS, William Elias, Prof. of Surgery, Univ. of Chicago Clinics, Chicago 37, Ill. THORACIC SURGERY. b. Nichols, Iowa, May 1, 1902. s. Frank A. and Allie Wilma (Mills) A. Edn.: M.D., State Univ. of Iowa, 1926; B.S., *ibid.*, 1927. m. Huberta M. Livingstone, M.D., June 9, 1928. c.: Diana Isabella. Exp.: Residency and Instr., Univ. of Chicago Clinics, 1928-35; Asst. and Assoc. Prof. of Surgery, Billings Hosp., 1936-47; Prof. of Surgery, Univ. of Chicago Clinics, 1947—. Hon. Pos.: Pres., Chicago Tuberculosis Soc., 1938; Pres., Chi-

ago Pathol. Soc., 1950; Pres., Chicago Surgical Soc., 1952; Treas., Amer. Assn. for Thoracic Surgery, 1944—; Treas., Chicago Surgical Soc., 1948-52. Mem.: Hon. Mem., Soc. of Cancerology, Guadalajara, Mex., 1948; A.M.A.; Amer. Surgical Assn.; Amer. Coll. of Surgeons; Amer. Assn. for Thoracic Surgery; Soc. for Clinical Surgery; Amer. Trudeau Soc. and International Soc. of Surgery. Special Int.: Rsch. in Physiological and Pathological Conditions of Intrathoracic Organs.

ADDICOTT, Frederick Taylor, Asst. Prof. of Botany, Univ. of Calif., Los Angeles, Calif. PLANT PHYSIOLOGY.

ADDOMS, James Neal, Asst. Prof. of Chem. Engrng., Mass. Inst. of Tech., Cambridge, Mass. CHEM. ENGRNG.; UNIT OPERATIONS; HEAT TRANSFER. b. Brooklyn, N. Y., July 1, 1920. s. Lewis Paddock and Martha W. (Suffren) A. Edn.: B.S., Haverford Coll., 1942; Sc.D., Mass. Inst. of Tech., 1948. m. Marjorie Patterson, June 7, 1947. c.: Dale Wentworth; David Lewis. Exp.: Rsch. Asst., Explosives Rsch. Lab., N. D. R. C., 1942-43; Process Engr., Monsanto Chem. Co., 1943-45; Natl. Rsch. Council Fellow, 1945-46; Rsch. Assoc., Mass. Inst. of Tech., Cambridge, Mass., 1946-48; Asst. Prof. of Chem. Engrng., *ibid.*, 1948—. Mem.: Amer. Chem. Soc.; Amer. Inst. Chem. Engrs.; Soc. Chem. Industry (London); Amer. Soc. Mech. Engrs.; Sigma Xi; Alpha Chi Sigma; Phi Beta Kappa. Contrb. to: Chem. Engrng. Progress; Trans. Amer. Soc. Mech. Engrs.

ADEGBITE, Joseph Adejumo, Hd. Dept. of Sci. Instr., Baptist Acad., P. O. Box 563, Lagos Nigeria, W. Africa. PHYSICS AND MATHEMATICS.



b. Awe, Nigeria, W. Africa, Aug. 2, 1918. s. Josiah and Mary Ijoduade (Adequate) A. Edn.: Yaba Higher Coll. (Nigeria) Director's Certificate, 1941; B.S., Va. Union Univ., 1950; M.A., Tehrs. Coll., Columbia Univ., 1951; Ed.D., Tehrs. Coll., Columbia Univ., 1953. m. Folashade Adejumo b. Awe, Nigeria, Dec. 22, 1943. d. Rev. and Mrs. Isaac Adejumo. c.: Adedapo; Adetayo. Exp.: Tehr. of Physics and Math., 1941-43; Hd. of the Dept. of Sci., 1948-48, Baptist Acad., Lagos, Nigeria; Taught for one semester, Armstrong H. S., Richmond, Va., 1950; Asst., Dept. of Nat. Sci., Tehrs. Coll., Columbia Univ., 1951-52; Hd. Dept. of Sci. Instr., Baptist Acad., Lagos Nigeria, W. Africa, 1952—. Hon. Pos.: Chairman, Dept. of Affairs Board, Tehrs. Coll., Columbia, 1951-52. Mem.: A.A.A.S.; Kappa Delta Pi; Alpha Kappa Mu; Nat. Sci. Tehrs. Assn.; Phi Delta Kappa; Y.M.C.A. Contrb. to: The Baptist Student. Travel: U. S.; W. Africa; Canada; Great Britain. Hobbies: Photography; Carpentry; Music; Athletic Sports; Poetry.

ADLER, Fred Peter, Mem. of Tech. Staff and Group Hd., Hughes Aircraft Co., 11909 Woodbine St., Los Angeles 34, Calif. COMMUNICATION ENGINEERING.



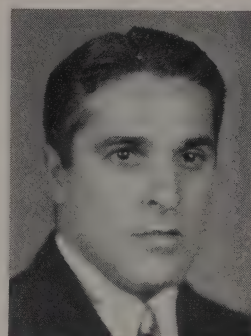
b. Vienna, Austria, Mar. 29, 1925. s. Michael and Ellida Helen (Bronner) A. Edn.: B.S., Univ. of Calif., 1945; M.S., Calif. Inst. of Tech., 1948; Ph.D., *ibid.*, 1950. m. Alicia Sue Gulkis, June 23, 1950. c.: Michael Steven. Exp.: Tchnlg. Asst., Univ. of Calif., Berkeley, Calif., 1944-45; Engr., Gen. Elec. Rsch. and Consulting Labs., Schenectady, N. Y., 1945-47; Tchnlg. Asst., Calif. Inst. of Tech., Pasadena,

Calif., 1949-50; Project Engr., Jet Propulsion Lab., *ibid.*, 1950; Rsch. Physicist, Theory and Analysis Dept., Hughes Aircraft Co., Los Angeles, Calif., 1950—. Mem.: Sigma Xi; R.E.S.A.; Tau Beta Pi. Contrb. to: Jour. of Applied Physics; Phys. Rev.; Phys. Today. Special Int.: Gas Discharges and Their Properties at Microwave Frequencies; Guided Missiles Systems and Trajectory Analysis.

ADKINS, Homer, Prof. of Chem., Univ. of Wis., Madison, Wis. ORGANIC CHEMISTRY.

ADLER, Francis Heed, 313 S. 17th St., Philadelphia, Pa. OPHTHALMOLOGY.

ADLER, Harry Frank, 274 W. Ware Blvd., San Antonio, Tex. b. July 26, 1914, Chicago, Ill. PHYSIOLOGY; AVIATION



MEDICINE. s. Frank and Celia (Johnson) A. Edn.: A.A., Univ. of Chicago, 1935; B.S., 1937; M.S., 1938, Northwestern Univ.; Ph.D., 1941; M.B., 1944; M.D., 1945; *ibid.* m. Laura A. Steinbach of Converse, Tex., 1947. d. Joe and Clara Steinbach. c.: Phyllis Anne; Max Frank. Exp.: Lab. Asst. and Grad. Service Scholar, Univ. of Chicago, 1938; Fellow and Inst. in Physiol., Northwestern Univ., Med. Schl., 1941; Chief Dept. Physiol., U.S.A.F. Schl. of

Aviation Med., 1946; Director, Med. Sci. Division, *ibid.*, 1950-51; Private Practice, 1951—. Mem.: Sigma Xi; A.A.A.S.; Amer. Physiol. Soc.; Soc. Exp. Biol. and Med.; Aero-Med. Assn.; A.M.A.; Illinois State Acad. of Science. Contrb. to: Med. Jours. Ph.D. Dissertation: Effect of Drugs on Colon Motility. War Record: Aviation Med. Examiner, Aviation Physiol., Flight Surgeon, U.S.A.F. Listed in: A. M. S.

ADOLPH, Edward Frederick, Prof. of Physiology, Univ. of Rochester, Rochester, N. Y. PHYSIOLOGY. b. Philadelphia, Pa., July 5, 1895. s. William and Wilhelmina J. (Fleischmann) A. Edn.: A.B., Harvard Coll., 1916; Yale Univ., 1916-18; Ph.D., Harvard Univ., 1920; Oxford, 1920-21. m. Mary Grace Bagg, 1921. c.: Mrs. John H. MacPherson, Jr.; Mrs. Charles C. Hutton; Carl E. Adolph. Exp.: Instr. Zoology, Univ. of Pittsburgh, 1921-24; Instr. Zool., Marine Biological Lab., Woods Hole, 1921-24; Fellow Natl. Rsch. Council, Johns Hopkins Univ., 1924-25; Asst. Prof., Assoc. Prof., Prof. of Physiology, Univ. of Rochester, 1925—. Hon. Pos.: Pres. Elect. Amer. Physiological Soc., 1953. Mem.: Amer. Physiol. Soc.; Amer. Soc. Zool.; Amer. Soc. Naturalists; Soc. for Experimental Biology and Med.; Soc. for Study of Growth; Soc. General Physiol.; Sigma Xi. Author: Regulation of Size in Unicellular Organisms, 1931; Physiol. Regulations, 1943; Physiol. of Man in the Desert, 1947. Contrb. to: Amer. Jour. of Physiology; Jour. of Experimental Zool.; Physiological Reviews; Annual Review of Physiology; Jour. of Biological Chem. War Record: U. S. Army, Med. Dept., 1918-19; Investigator, Office Sci. Rsch. and Development, 1942-45. Gen. Int.: Presidential Certificate of Merit, 1948. Special Int.: Regulatory Physiology; Environmental Physiology; Water Exchanges of Animals.

ADRIANCE, Guy Webb, Prof. and Hd., Dept. of Horticulture, Tex. A. and M. Coll., Coll. Station, Tex. HORTICULTURE.

AFFEL, Herman A., Dir. of Transmission Development, Bell Telephone Labs., 463 West St., N. Y., N. Y. ENGINEERING, COMMUNICATION.

AGARD, Harry Leslie, Prof. of Math., Williams Coll., Williamstown, Mass. MATHEMATICS.

AGERSBORG, Helmer Pareli Kjerschow, Prof. of Histology, Embryology and Dir. of Rsch., Des Moines Still Coll. of Osteopathy and Surgery, 722

Sixth Ave., Des Moines, Iowa. HISTOLOGY, EMBRYOLOGY.

AGNEW, Paul Gough, Vice-Pres. and Secy., Amer. Standards Assn., 70 E. 45th St., N. Y., N. Y.

AGRELIUS, Frank U. G., Assoc. Prof. of Biol., Kans. State Tehrs. Coll., Emporia, Kans. BOTANY.

AHEARN, John Arthur, Mem., Technical Staff, Bell Telephone Lab., Murray Hills, N. J. ELECTRONICS.

AHLBERG, J. Elston, Rsch. Supvr., Davison Chem. Corp., Baltimore, Md., 3709 Kimble Rd., Baltimore 18, Md. b. Philadelphia, Pa., May 18, 1905. s. Carl M. and Hilma C. (Johnson) A. Edn.: B.S., Univ. of Calif., Berkeley, Calif., 1928; Ph.D., *ibid.*, 1931; m. Geraldine Lutz of Berkeley, Calif., May 24, 1931. d. Ira D. Lutz. Exp.: Rsch. Asst. Univ. of Calif., Berkeley, Calif., 1930-32; Rsch. Asst., Johns Hopkins Univ., Baltimore, Md., 1932-35; Rsch. Chemist, U. S. Naval Rsch. Lab., Washington, D. C., 1935-36; Rsch. Chem., Universal Oil Prod. Co., Chicago, Ill., 1936-42; Rsch. Mgr., Columbia Univ., N. Y., N. Y., 1942-44; Rsch. Supvr., Universal Oil Prod. Co., Chicago, Ill., 1944-47; Rsch. Supvr., Davison Chem. Corp., Baltimore, Md., 1947—. Mem.: Amer. Chem. Soc.; Philadelphia Catalysis Club; Alpha Chi Sigma; Sigma Xi; Phi Lambda Upsilon. Contrb. to: Zeitschrift fur Phys. Chemie.; Jour. of Sci. Instruments; Physic. Rev.; Jour. of Chem. Physics; Jour. of Ind. and Engrng. Chem.; Jour. of Amer. Chem. Soc. Ph.D. Dissertation: Entropies of Aqueous Ions. Heat Capacities of Salts at Low Temp. War Record: U. S. Office of Scientific Rsch. and Development; U. S. Army Manhattan Proj. Gen. Int.: Holder of basic patents now employed in the manufacture of catalysts for the cracking of oils into high octane gasoline and into gases for the manufacture of synthetic rubber. Hobbies: Golf and Gardening. Listed in: A. M. S.; Who's Who in the Middle West.

AIKEN, Charles Bayne, Vice-Pres. and Dir. of Rsch., Electro-Mechanical Rsch., Inc., Ridgefield, Conn. ELECTRONICS.

AIKMAN, John M., Prof. of Botany, Iowa State Coll., Ames, Iowa. PLANT ECOLOGY.

AINSWORTH, Stanley H. SPEECH AND HEARING.

AITKEN, Robert Grant, Astronomer and Dir. Emer., Lick Observatory, Univ. of Calif., 1109 Spruce St., Berkeley, Calif. ASTRONOMY.

AKAMINE, Ernest Kisei, Asst. Plant Physiol., Univ. of Hawaii, Honolulu 14, Hawaii. PLANT PHYSIOLOGY. b. May 10, 1912, Hilo, Territory of Hawaii. s. Ryoki and Maka (Akamine) A. Edn.: B.S., Univ. of Hawaii, 1935; M.S., *ibid.*, 1941. m. Toki Nakasone of Lahaina, Maui, T. H., June 11, 1938. d. Mr. and Mrs. K. Nakasone. c.: Carol Linden; Faye Ruth; Harry Ernest. Exp.: Asst. in Agri., Univ. of Hawaii Agri. Expt. Sta., 1935-36; Asst. in Agron., 1936-38; Asst. in Plant Physiol., 1938-42; Assoc. in Plant Physiol., 1942-44; Junior Plant Physiologist, 1944-52; Asst. Plant Physiologist, 1952—. Mem.: A.S.P.P.; A.A.A.S.; Sigma Xi; Hawaiian Acad. of Sci.; Hawaiian Bot. Soc. Contrb. to: Sci. Jours. Listed in: A. M. S.; Who Knows and What; Who's Who on the Pacific Coast. Special Int.: Seed germination; Herbicides, Commodity Shipment.

AKELEY, Lewis E., Lectr., Philos. of Sci., Univ. of S. Dak., Vermillion, S. Dak. HISTORY AND PHILOSOPHY OF SCIENCE.

ALBER, H. K., 6 Windsor Circle, Springfield, Pa. ANALYTICAL CHEMISTRY.

ALBERS, Carl Clarence, Assoc. Prof. of Pharmacognosy, Univ. of Tex., Austin, Tex. PHARMACOGNOSY.

ALBERS, Henry Herman, Asst. Prof., Industrial Econ. Dept., Iowa State Coll., Ames, Iowa. ECONOMICS. b. Germany, Nov. 24, 1919. s. Hartwig and Bertha (Lilie) A. Edn.: B.A., Univ. of Iowa, 1941; M.A., *ibid.*, 1946; Ph.D., Yale Univ., 1951.

m. Marjorie Gail, July 11, 1948. c.: Patricia Lynn; Henry Elliott. Exp.: Instr., Univ. of Iowa, 1946-47; Instr., Yale Univ., 1948-49; Asst. Prof., Iowa State Coll., 1949—. Mem.: Amer. Econ. Assn.; A.A.U.P.; Order of Artus. Author: Scientific Job Seeking, 1953. Contrb. to: Labor Law Jour.; Current Econ. Comment; Iowa State Scientist. War Record: W. W. II. Gen. Int.: Wrote Television Series with Harold W. Davey on Partners in Production for Twentieth Century Fund. Special Int.: Theory of Organization and Mgt.

ALBERS, Vernon M., Prof. of Engrng. Rsch. and Asst. Dir. Ord. Rsch. Lab., Pa. State Coll., State Coll., Pa. PHYSICS.



b. Dundas, Minn., May 6, 1902. s. Fred A. and Viola (Partch) A. Edn.: B.A., Carleton Coll., 1923; M.A., Univ. of Ill., 1925; Ph.D., *ibid.*, 1928. m. Elizabeth Newman of Morganfield, Ky., Sept. 18, 1929. d. C. T. Newman. c.: Martha E.; Mary L.; Vernon M., Jr. Exp.: Asst. in Physics Dept., Univ. of Ill., 1923-28; Hd. of Physics Dept., E. Ky. State Tehrs. Coll., 1928-29; Natl. Rsch. Coun. Fellow at Princeton, 1929-30; Research Physicist, C. F. Kettering Found., Prof. of Physics at Antioch Coll., 1930-43; Rsch. Assoc., Harvard Underwater Sound Lab., 1943-45; Assoc. Prof. Engr. Rsch., Penn. State Coll. (Ordinance Rsch. Lab.), 1945-47; Asst. Dir. and Prof. of Engr. Rsch., Penn. State Coll. (Ordinance Rsch. Lab.), 1947—. Mem.: Amer. Phys. Acoustical Soc. of Amer.; Gamma Alpha. Author: Portion of NDRC Summary Tech. Report. (Title Classified); A book on torpedoes (Actual Title Classified); A Lab. Manual of Optics and Chem. Microscopy. Contrb. to: Phys. Rev.; Jour. of Chem. Physics; Rev. Sci. Inst.; Jour. Opt. Soc. of Amer. Ph.D. Dissertation: The Spectrum of Beryllium in the Visible and Near Infrared Region. Travel: England. Hobbies: Wood Working, Machine Shop Work; and Microscopy. Listed in: Amer. Men of Sci.; Who Knows and What. Special Int.: Electronics, Biophysics and Spectroscopy.

ALBERT, A(braham) Adrian, Prof. of Math. Eckhart Hall, Univ. of Chicago, Chicago 37, Ill. MATHEMATICS. b. Chicago, Ill., Nov. 9, 1905. s. Elias and Fanny (Frarkin) A. Edn.: S.B., Univ. of Chicago, 1926; S.M., *ibid.*, 1927; Ph.D., *ibid.*, 1928. m. Frieda Davis of Chicago, Dec. 18, 1927. d. Sam and Rebecca Davis. c.: Alan Davis; Roy Davis; Nancy Elizabeth. Exp.: Natl. Rsch. Coun. Fellow, Princeton and Chicago, 1928-29; Instr., Columbia Univ., N. Y. C., 1929-31; Asst. Prof., Univ. of Chicago, Chicago, Ill., 1931-37; Assoc. Prof., *ibid.*, 1937-41; Prof., *ibid.*, 1941—. Mem.: Amer. Math. Soc.; Natl. Assn. of Amer.; Natl. Acad. of Sci.; Sao Paulo Math. Soc.; Phi Beta Kappa; Sigma Xi. Chmn., Div. of Math., Natl. Rsch. Council. Contrb. to: Trans. and Proc. of Amer. Math. Soc.; Annals of Math.; Prof. of Natl. Acad. of Sci.; Portugali Math.; Amer. Jour. of Math. Special Int.: Algebra. Author: Mod. Higher Algebra, 1936; Introduction to Algebraic Theories, 1940; Structure of Algebras, 1939; Coll. Algebra, 1941; Solid Analytic Geom., 1949. Ph.D. Dissertation: Algebras and Their Radicals and Division Algebras. War Record: Assoc. Dir. Applied Math. Group at Northwestern Univ. (War Rsch.), 1944-45. Cole Prize for Rsch. in Algebra, 1940; Phi Beta Kappa; Sigma Xi. Hobbies: Billiards; Bridge; Fishing. Listed in: Who's Who in Amer.; Who's Who in Ill.; Who Knows; Internatl. Blue Book; A.M.S. Special Int.: Algebra.

ALBERT, Arthur Robert, Assoc. Prof. of Soils, Univ. of Wis., Madison, Wis. SOILS.

ALBERT, Calvin Dodge, Prof. of Mach. Design, Emeritus, 205 Eddy St., Ithaca, N. Y. b. Nov. 17, 1876, White Haven, Pa. s. Frank Henry and Ella (Wood) A. Edn.: M.E., Cornell Univ., 1902. m. Claudia Louise Agnew of Hillsdale, Mich., July 5, 1905. d. Allen and Rhoda A. Agnew. Exp.: Charge

of Design of Mach., Columbia Iron Works, Shipbuilders, St. Clair, Mich., 1902-03; Designer, Great Lakes Engrng. Works, Ship and Mach. Builders, Detroit, Mich., 1903-04; Instr. in Exp. Engrng., Cornell Univ., 1904-06; Instr. in Mach. Design, *ibid.*, 1906-08; Asst. Prof., *ibid.*, 1908-16; Prof. of Mach. Design., *ibid.*, 1916-17; Exec. Asst. in Charge of Tech. Dept. in Middle Atlantic Dist., U. S. Shipping Bd., Emergency Fleet Corporation, Baltimore, Md., 1917-19; Prof. in Charge of Dept. of Mach. Design, Schl. of Mech. Engrng., Cornell Univ., 1919-44. Mem.: Amer. Soc. of Mech. Engrs.; Amer. Gear Mfrs. Assn.; Sigma Xi; Phi Kappa Phi. Author: Mach. Design Drawing Room Probs., 1923, 1927, 1940, 1948. Coauthor: Kinematics of Machinery, 1931, 1943. Contrb. to: Mach. and Mech. Engrng. Travel: Europe. Gen. Int.: Architecture, Furniture, and Working in Wood and Metals. Listed in: Who's Who in Amer.; Who's Who in the East; Who's Who in the Western Hemisphere; A.M.S.

ALBERT, Orrin Wilson, Prof. of Math., Univ. of Redland, 629 Buena Vista Street, Redlands, Calif. MATHEMATICS. b. March 24, 1889, Mount Pleasant, Pa. s. James M. and Lydia (Miller) A. Edn.: A.B., Otterbein Coll., 1909; A.M., Columbia Univ., 1911; Graduate Study, Univ. of Chicago, 1916-17; Ph.D., Univ. of Washington, Seattle, 1931. m. Ora Shaw of Mt. Pleasant, Pa., Aug. 22, 1914. d. Thomas S. and Mary (Adair) S. c.: Donald Eugene; Orrin Wilson, Jr. Exp.: Instr. Math., H. S., Mt. Pleasant, Pa., 1909-10; Instr. Math., Univ. of Pittsburgh, 1911-14; Instr. Math., Purdue Univ., 1914-16; Instr. Asst. Prof. Math., Grinnell Coll., 1917-23; Prof. Math., Univ. of Redlands, 1923—. Hon. Pos.: Chmn. Sou. Calif. Sec. Math. Assn. of Amer., 1933-34, 1940-41. Fellow, A.A.A.S. Mem.: Amer. Math. Soc.; Math. Assn. of Amer.; Sigma Xi; A.A.U.P. Title of Ph.D. Dissertation: Relations Between Projective and Metric Differential Geometries of Surfaces. Listed in: A.M.S.; Who's Who on Pacific Coast. Special Int.: Geometry; Statistics.

ALBERTSON, Fred William, Prof. and Hd., Dept. of Botany, Fort Hays, Kans. State Coll., Hays, Kans. PLANT ECOLOGY.

ALBERY, D. F., 1433 23rd St., N. W., Canton 9, Ohio. CERAMICS.

ALBRECHT, Sebastian, Astronomer, Carnegie Institution of Washington Dept., Dudley Observatory, Albany, N. Y. ASTROPHYSICS. b. Aug. 22, 1876. s. John and Anna M. (Schiessel) A. Edn.: B.S., Univ. of Wis., 1900; Ph.D., Univ. of Calif., 1906. m. Violet E. Standen, June 29, 1910. c.: Ruth Naomi and Sebastian Alfred. Exp.: Teacher, Sci., High Schl., West Bend, Wis., 1900-02; Lick Observatory Fellow, 1903-06, Asst., 1906-08, Asst. Astronomer, 1908-10; First Astronomer, Cordoba Observatory, Argentina, 1910-12; Acting Jr. Prof. of Astron., Univ. of Mich., 1912-13; Astronomer, Dudley Observatory, 1913-37; Taught Celestial Navigation and Math. to U. S. Navy Men at Rensselaer Polytech. Inst., 1944-47. Mem.: Amer. Astron. Soc., Fellow, A.A.A.S.; Soc. Astron. de Mex.; Phi Beta Kappa; Sigma Xi. Member L. O. Crocker Eclipse Exped. to Flint Island, 1908; Exped. to Mt. Whitney for Study of Probability of Life on Mars, 1909. Contrb. to: Lick Observatory Bulletins; Astrophysical Jour.; Astron. Jour. on Comets, Satellites, Mars, Variable Stars of the Third and Fourth Class, the Relation Between Stellar Spectral Types and the Intensities of Lines in the Spectra, Distortion of Photographic Films, Personal Scale, Anomalous Dispersion in the Sun.

ALBRIGHT, Fuller, Physician, Mass. General Hosp., Boston, Mass. INTERNAL MEDICINE. b. Buffalo, N. Y., Jan. 12, 1900. s. John Joseph and Susan (Fuller) A. Edn.: A.B., Harvard Univ., 1921; M.D., Harvard Med. Schl., 1924. m. Claire Birge, 1933. c.: Birge; Read Ellsworth. Exp.: Intern in Med., Mass General Hosp., Boston, Mass., 1924-26; Rsch. Fellow in Med., *ibid.*, 1926-27; Asst. Resident in Med., Johns Hopkins Hosp., 1927-28; Moseley Traveling Fellow, Harvard Med. Schl., 1928-29; Henry P. Walcott Fellow in Clinical Med., *ibid.*, 1929-30; Instr. in Med., *ibid.*, 1930-35; Assoc. Instr. in Med., *ibid.*, 1935-38; Asst. Prof. in Med., *ibid.*, 1938-42; Assoc. Prof. in Med.,

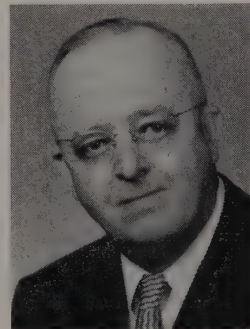
ibid., 1942—; Physician, Mass. General Hosp., Boston, Mass., 1939—. Hon. Pos.: Pres., Amer. Soc. of Clinical Investigation, 1943-44; Pres., Assn. for the Study of Internal Secretions, 1945-46. Mem.: Alpha Omega Alpha; Phi Beta Kappa; Amer. Acad. Arts and Sci.; A.M.A.; Amer. Soc. of Clinical Investigations; Assn. Amer. Physicians; Assn. for Study of Internal Secretions; Interurban Club; Mass. Med. Soc.; Peripatetic Club; Natl. Acad. Sci.; Delphic Club; Harvard Club. Author: Parathyroid Glands and Metabolic Bone Disease, 1948. War Record: 2nd Lt., Infantry, World War I. Special Int.: Glands of Internal Secretion; Disease of the Skeleton; Kidney Stones; Body Chem. in General.

ALBRECHT, William A (Ibert), Prof. of Soils, Univ. of Mo., Columbia, Mo. SOILS AND NUTRITION.



b. Sept. 12, 1888, Flanagan, Ill. s. John and Barbara (Nafziger) A. Edn.: A.B., 1911; B.S., 1914; M.S., 1915; Ph.D., 1919, Univ. of Ill. m. Gertrude Lehmann of Berne, Ind., June 8, 1920. d. J. F. and Elizabeth Lehmann. c.: Barbara Ann (Albrecht) Peret. Exp.: Instr. in Soils, Univ. of Mo., 1916-19; Asst. Prof., 1919-20; Assoc. Prof., 1920-30; Prof., 1930—; Chmn., Dept. Soils, 1938—; Instr. in Soil, Biarritz, France, Amer. Univ., 1945-46. Consultant, Phillips Chem. Co. Fellow, A.A.A.S.; Amer. Soc. Agron.; A.A.A.N. Mem.: Soc. of Amer. Bacteriol.; Soil Sci. Soc. of Amer.; Amer. Naturalists; Sigma Xi; Phi Kappa Phi; Gamma Sigma Delta; Omicron Delta Kappa; Gamma Alpha; Kiwanis. Contrb. to: Consulting Ed., Soil Sci.; Sci. Monthly; Plant and Soil, Holland. Ph.D. Dissertation: Nitrogen Fixation in Relation to the Nitrogen in the Soil. Travel: Europe; Australia; Canada. Gen. Int.: Nitrogen Fixation by Legumes; Soil Fertility and Plant Nutrition; Climatic Soil Pattern and Nutrition. Listed in: W.W.A.; A.M.S.; Who Knows—and What; Index Biologarum.

ALBRIGHT, Penrose Strong, Hd., Phys. Dept., Univ. of Wichita, Wichita 14, Kans. PHYSICS AND PHYSICAL CHEMISTRY.



b. Winfield, Kans., Dec. 14, 1896. s. Penrose Hills and Emma (Strong) A. Edn.: B.S., Rensselaer Poly. Inst., 1922; M.S., Univ. of Wis., 1929; Ph.D., *ibid.*, 1936. m. Mary Lucas, Apr. 27, 1924. c.: Penrose Lucas; James Curtice; John Grover. Exp.: Advanced from Instr. in Phys. and Chem. to Chmn. of Div. of Natural Sci., Southwestern Coll., Winfield, Kans., 1925-43; Hd. of Phys. Dept., Univ. of Wichita, Wichita, Kans., 1943—. Hon. Pos.: Chmn., Wichita Section, Amer. Chem. Soc., 1950; Pres., Kans. Acad. Sci., 1950. Mem.: Amer. Chem. Soc.; Amer. Phys. Soc.; Inst. of Aeronautical Sci.; Kans. Acad. Sci.; Amer. Inst. of Chemists; A.A.P.T.; Amer. Inst. Phys.; Amer. Soc. for Engrng. Edn.; Rotary. Contrb. to: Jour. Amer. Chem. Soc.; Trans. Faraday Soc.; Trans. Kans. Acad. Sci. War Record: U.S.N.R., World War I. Special Int.: Dielectric Constants of Weakly Conducting Solutions.

ALBRITTON, Claude Carroll, Jr., Assoc. Prof. of Geol., Southern Methodist Univ., Dallas, Tex. GEOLOGY.

ALBRO, Helen Tucker, Hd., Dept. of Biol., Spelman Coll., Atlanta, Ga. BIOCHEMISTRY.

ALCORN, Douglas Earle, Staff, Veterans Hosp., 745 Yates St., Victoria, B. C., Can. **PSYCHIATRY**. b. Victoria, B. C., Can., Nov. 1, 1906. s. Duncan R. and Addie (Olmstead) A. Edn.: M.D., C.M., McGill Univ., 1931. m. Doreen Evelyn Loughhead, Jan. 30, 1942. Exp.: Interne, Royal Victoria Hosp., 1931-32; Staff, Boston Psychopathic Hosp., 1932-33; Staff, Provincial Mental Hosp., Essondale, B. C., Can., 1933; Staff, Iowa Psychopathic Hosp., 1934; Staff, Lennox Hill Hosp., N. Y., N. Y., 1935; Staff, Harvard Neurol. Inst., 1935-36; Staff, Macdulesley Hosp., London, England, 1937-38; Staff, Royal Jubilee Hosp., 1938; Staff, Veterans Hosp., Victoria, B. C., Can., 1947—. Mem.: Fellow, Amer. Psychiatric Assn.; North Pacific Soc. of Neurol. and Psychiatry; Victoria Med. Assn.; Canadian Med. Assn.; Vancouver Neurol. Soc.; Canadian Psychiatric Assn.; A.A.A.S. Contbr. to: British Jour. Med. Psychol. War Record: Major, R.C.A.M.C., 1941-46. Special Int.: Architecture from Psychological Side, Medico-legal, Sexual Deviations.

ALDERFER, Russell Brunner, Prof. of Soil Technology, Dept. of Agron., Pa. State Coll., State Coll., Pa. b. Sept. 27, 1913, Lansdale, Pa. s. Ulysses F. and Sallie C. (Brunner) A. Edn.: B.S. (cum laude) 1936; M.S., 1940; Ph.D., 1947, all from Pa. State Coll. m. Dorothy Mease of State Coll., Pa., Aug. 16, 1941. d. Russell C. and Catharine M. Pearce. c.: Catharine Pearce; Margaret Vivian. Exp.: Jr. Soil Technol., Soil Cons. Service, U.S.D.A., 1937-43; Asst. Soil Sci., *ibid.*, and Instr. of Soil Technol., Agron. Dept., Pa. State Coll., 1943-47; Asst. Prof. Soil Technol., 1947-48; Assoc. Prof. Soil Technol., *ibid.*, and Collab. with Soil Conservation Service and Bur. of Plant Ind., Soils and Agri. Engr., U. S. D. A., 1948-52; Prof. Soil Technology, *ibid.*, 1952—. Mem.: Sigma Xi; A.S.A.; Soil Sci. Soc. of Amer.; Soil Cons. Soc. of Amer.; Phi Kappa Phi; Gamma Sigma Delta; Alpha Gamma Rho. Author: Pa. Agri. Expt. Sta. Bulletin. Contrb. to: Sci. Journs. Ph.D. Dissertation: A Study of the Factors Affecting the Structure, Premeability and Erodibility of Soils. Travel: U. S. Hobbies: Family; Construction and Household Repairs; Athletics. Listed in: A. M. S.; Who's Who in the East.

ALDERMAN, William Horace, Chf., Div. of Horticulture and Supt., Fruit Breeding Station, Univ. Farm, Univ. of Minn., St. Paul, Minn. **HORTICULTURE**.

ALDRED, Jacob W. H., Asst. Works Mgr., Dept. Chem. Engrng., Tenn. Valley Authority, Wilson Dam, Ala. **CHEMISTRY**.

ALDRICH, Henry Ray, Secy. and Editor, The Geol. Soc. Amer., 419 W. 117th St., N. Y., N. Y. **GEOLOGY**.

ALDRICH, Loyal Blaine, Dir., Astrophys. Observatory, Smithsonian Institution, Washington 25, D. C. **ASTROPHYSICS**. b. Milwaukee, Wis., Nov. 20, 1884. s. Lafayette and Isabella (Hay) A. Edn.: B.A., Univ. of Wis., 1907; M.A., *ibid.*, 1909. m. Elizabeth Stanley, 1919 (dec.). 2nd m. Sara Smith, 1943. c.: Stanley Loyal; Lafayette. Exp.: Bolometric Asst., Smithsonian Institution, Washington, D. C., 1909-30; Asst. Dir., Astrophys. Observatory, *ibid.*, 1930-45; Dir., *ibid.*, 1945—. Mem.: Wash. Acad. of Sci.; Philosophical Soc. of Wash.; Optical Soc. of Amer.; Amer. Geophys. Union; Amer. Guild of Organists; Phi Beta Kappa. Contrb. to: Smithsonian Miscellaneous Collections. Special Int.: Solar Constant; Instruments for Measurement of Solar Radiation; Sky Brightness; Nocturnal Radiation; Cloud Reflection.

ALDRICH, Willard Walker, Horticulturist, Amer. Fruit Growers, Professional Arts Bldg., Hagerstown, Md. **HORTICULTURE**.

ALEXANDER, Brother Major, Prof. of Biol. and Asst. Prin., Mount Saint Louis Coll., Montreal, Que., Can. **BIOLOGY**.

ALEXANDER, Charles K., 459 W. Loma Alta Dr., Altadena, Calif. **MATHEMATICS**.

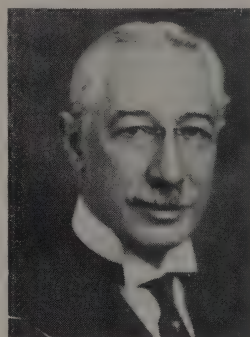
ALEXANDER, Charles Paul, Hd., Dept. of Entomol. and Zool. and Dean, Schl. of Sci., Mass. State Coll., Amherst, Mass. **ENTOMOLOGY**.

ALEXANDER, Edward Gordon, Prof. of Biol. and Hd. Dept., Univ. of Colo., Boulder, Colo. **ECOLOGICAL**.

ALEXANDER, Hugh Stuart, Prof. of Geol., Macalester Coll., St. Paul, Minn. **DYNAMIC GEOLOGY**.

ALEXANDER, James Waddell, 29 Cleveland Lane, Princeton, N. J.

ALEXANDER, Jerome, Consulting Chemist and Chem. Engr., 390 Riverside Dr., N. Y. 25, N. Y.



PHYSICAL AND COLLOID CHEMISTRY AND APPLICATIONS TO SCIENTIFIC AND INDUSTRIAL PROBLEMS. b. N. Y., N. Y., Dec. 21, 1876. s. Isaac Alexander and Annie J. (Jackson) A. Edn.: B.S., City Coll., 1896; M.Sc., *ibid.*, 1899. m. Gertrude Eleanor Hammerslough, Apr. 9, 1903. c.: Eleanor Gertrude; Dorothy Sylvia (dec.). Exp.: Chf. Chemist of Various Associated Companies, 1896-1920; Consulting Chemist and Chem. Engr., N. Y., N. Y., 1922—. Hon. Pos.:

Chmn. of Sub-Com. on Glue and Other Colloids, Natl. Rsch. Council, 1917-19. Mem.: Amer. Chem. Soc.; Amer. Inst. Chem. Engrs.; Amer. Inst. Mining and Metallurgical Engrs.; Amer. Inst. Chemists; Soc. de Chim. Ind.; N. Y. Acad. Sci.; A.A.A.S.; Amer. Soc. European Chemists and Pharm.; Phi Beta Kappa; Tau Beta Pi; Pi Gamma Mu; Pi Lambda Phi. Author: Colloid Chem., 1919; Glue and Gelatin, 1923; Essences from Life's Alembic, 1940; Retorts from a Chemist's Lab., 1940; Tribute to Gertrude, 1946. Contrb. to: Jour. Amer. Chem. Soc.; Indus. and Engrng. Chem.; Kolloid Zeitschrift; Sci.; Scientific Monthly; Scripta Mathematica; etc. Gen. Int.: Several Patents; Application of Colloid Chem., etc.; Coordination of Knowledge in Many Fields, Modification of Cows' Milk for Infant Feeding; Catalytic Aspects in Biology and Med.; Double Colloidal Protection. Special Int.: Interrelation of Scattered Scientific Disciplines; Physical Chem.; Chem. Engrng.

ALEXANDER, Joseph Thomas, Capt., MSC, U. S. Army, P. O. Box 65, West, Miss. **MEDICAL ENTOMOLOGY, GENERAL**



SANITATION, PRIMARILY INTERESTED IN FIELD APPLICATION. b. West Miss., Nov. 24, 1917. s. Ulric L. and Zulma (Cross) A. Edn.: B.S., Miss. State Coll., 1938. Exp.: Enlisted, U. S. Army, 1941-45, Highest Rank Sgt., Planned Insect Control Dale Mabry Field, Fla., 1941-44; Served as Aid Man and Planned Malaria Control, Panama, 1942; Received Direct Comm. 2nd Lt., Reserve, 1945; Asst. Med. Inspector, Thayer Gen., Nashville, Tenn., 1945;

Miss. State Bd. of Health, Humphries Co. Sanitation Supvr., 1945-47; Re-entered Service, 1947; Med. Inspector, Ft. Jackson, 1948; Second Army Med. Entomol., 1949-50; 207th Malaria Survey Det., Korea, 1950-51; 320th Prev. Med. Control Det., Commanding Officer, 1952. Mem.: Amer. Soc. of Prof. Biol.; Loyal Order of the Boar. War Record: W. W. II, Korean Conflict. Gen. Int.: Organized and Conducted Typhus Control Operations Among Prisoners of War in Camps in the Pusan Korea Area. Special Int.: Typhus Control; Malaria Control.

ALEXANDER, Lowell Melville, Prof. of Physics, Univ. of Cincinnati, Cincinnati 21, Ohio. **ELECTRICITY AND SOUND**.

ALEXANDER, Lucy Maclay, Food Specialist, Bureau of Human Nutrition and Home Econ., U. S. D. A., 2801 Adams Mill Rd., Washington, D. C. HOME ECONOMICS.

ALEXANDER, Walter Boyd, Vice-Pres. and Dean of Admin., Antioch Coll., Yellow Springs, Ohio. ADMINISTRATION HIGHER EDUCATION.

ALEXANDERSON, Ernst Frederick Werner, Consulting Engr., General Electric Co., Schenectady, N. Y.

ALEXIS, Lucien Victor, Sr., Prin., McDonough 35 H. S., 655 S. Rampart St., New Orleans, La. NUCLEAR PHYSICS.

ALFEND, Samuel, Chf. Chemist, St. Louis Station, U. S. Food and Drug Admin., 1007 Federal Bldg., St. Louis, Mo. FOOD AND DRUG CHEMISTRY.

ALFONZO, Rafael Gregorio, 9957 E. Forest Ave., Detroit, Mich. MICOLOGY.

ALFREY, Turner, Dow Chem. Co., Midland, Mich. MECHANICAL PROPERTIES OF HIGH POLYMERS.

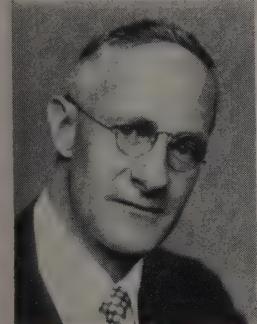
ALGER, Philip Langdon, Staff Asst. Mgr., Engrng., Apparatus Dept., General Electric Co., 1 River Rd., Schenectady, N. Y. ENGINEERING, ELECTRICAL.

ALICATA, Joseph Everett, Parasitologist, Univ. of Hawaii, Coll. of Agri., Honolulu 14, Hawaii. PARASITOLOGY. b. Car-



lentin, Italy, Nov. 5, 1904. s. Antonio and Concetta (Vaccaro) A. Edn.: A.B., Grand Island Coll., 1927; M.A., Northwestern Univ., 1928; Ph.D., Geo. Wash. Univ., 1934. m. Hannah Lois Davis, Jan. 28, 1929. c.: Betty Mae; William Davis. Exp.: Jr. Zoologist, Zool. Div., U. S. Dept. of Agri., Wash., D. C., 1928-35; Parasitologist and Prof. of Parasitology, Univ. of Hawaii, Honolulu, Hawaii, 1935—. Mem.: Wash. Acad. of Sci.; Sigma Xi; Phi Kappa Phi; Hawaiian Acad. of Sci.; Amer. Soc. of Tropical Med.; A.A.A.S.; Amer. Soc. of Parasitologists. Special Int.: Taxonomy, Morphology and Life Hist. of Nematodes, Cestodes and Trematodes; Fasciola Chemotherapy and Control; Effects of Radiation on Trichinae; Immunity in Parasitic Diseases; Protozool.; Epidemiology of Typhus; Human, Canine and Murine Leptospirosis.

ALLARD, Harry Ardell, Retired, U. S. Dept. of Agri., 3000 7th St., N., Arlington 1, Va. PLANT PHYSIOLOGY. b. Ox-




ford, Mass., Jan. 28, 1880. s. Edmund Burke and Susan (Throp) A. Edn.: B.S., State Univ. of N. C., 1905. Hon. Deg.: D.Sc., Univ. of N. C., 1948. m. Eva Adeline Howard on May 13, 1906. c.: Doris; Eunice Adeline (dec.); William Coker (dec.). Exp.: Plant Physiologist, Bureau Plant Industry, U. S. Dept. of Agri., 1906-46; Retired, 1946. Mem.: Wash. Acad. Sci.; Ecological Soc. of Amer.; etc.

ALLAN, Frank Nathaniel, Exec. Dir., Med. Dept., Lahey Clinic, 605 Commonwealth Ave., Boston 15, Mass. INTERNAL MEDICINE. b. Proton, Ont. Can., Dec. 26, 1899. s. George and Margaret (Ewing) A. Edn.: M.B., Univ. of Toronto, 1922;

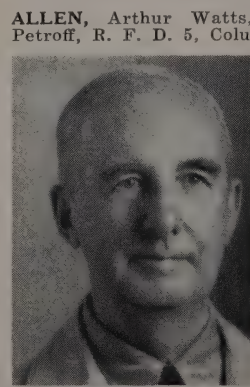
B.Sc., *ibid.*, 1924; M.D. cum laude, *ibid.*, 1928. m. Lillian (Christie) A. Edn.: Jr. Mem., Dept. of Physiol., Univ. of Toronto, Can., 1922-25; Intern, Toronto Gen. Hosp., *ibid.*, 1924-25; Fellow in Med., Mayo Clinic, Rochester, Minn., 1925-26; Staff, *ibid.*, 1927-32; Instr. in Med., Univ. of Minn., Mayo Foundation, 1928-32; Co-Dir., 1932-47; Exec. Dir., Med. Dept., Lahey Clinic, Boston, Mass., 1948—. Mem.: Fellow, Amer. Med. Assn.; Amer. Coll. of Physicians; A.A.A.S.; Central Soc. for Clin. Rsch.; Endocrine Soc.; Amer. Diabetes Assn., Pres., 1952-53; New Eng. Diabetes Assn., Pres., 1951-52; Sigma Xi; Alpha Omega Alpha. Author: Med. and Sci. Papers Dealing with Diabetes, Metabolism, Endocrinol. and Psychosomatic Med.

ALLARDYCE, John, Prof. of Biol., Univ. of B. C., Vancouver. B. C., Can. PHYSIOLOGY, BIO-CHEMISTRY.

ALLEE, Warder Clyde, Hd. Prof., Dept. of Biol., Univ. of Fla., Gainesville, Fla. Prof. Emeritus, Dept. of Zool., Univ. of Chicago, Chicago, Ill. BIOLOGY AND ZOOLOGY. b. Bloomington, Ind., June 5, 1885. s. John Wesley and Mary Emily (Newlin) A. Edn.: B.S., Earlham Coll., 1908; M.S., Univ. of Chicago, 1910; Ph.D., *ibid.*, 1912. m. Marjorie Hill, Sept. 4, 1912. c.: Allee Angell; Barbara Warder (dec.); Molly Allee Barth. Exp.: Tchr., One-Room Country Schl., Rockville, Ind., 1902-03; Tchr., Bloomington, Ind., 1903-05; Tchr., H. S., Hammond, Ind., 1907-10; Asst. in Zool., Univ. of Chicago, Chicago, Ill., 1910-12; Instr. in Botany, Univ. of Ill., Urbana, Ill., 1912-13; Instr. in Zool., Williams Coll., 1913-14; Asst. Prof. of Zool., Univ. of Okla., Norman, Okla., 1914-15; Prof. of Biol., Lake Forest Coll., 1915-21; Asst. Prof. of Zool., Univ. of Chicago, Chicago, Ill., 1921-23; Assoc. Prof., *ibid.*, 1923-28; Prof. of Zool., *ibid.*, 1928-50; Prof. Emeritus, *ibid.*, 1950—. Hd. Prof. of Biol., Univ. of Fla., Gainesville, Fla., 1950—. Mem.: Natl. Acad. of Sci.; Amer. Acad. of Arts and Sci.; A.A.A.S.; Entomol. Soc. of Amer.; Philadelphia Acad. of Sci.; Ill. Acad. of Sci.; Amer. Soc. of Zool.; Ecol. Soc. of Amer.; Amer. Soc. of Naturalists; British Ecol. Soc.; Amer. Ornithol. Union; Fla. Acad. of Sci.; Fla. Psychol. Assn.; Phi Beta Kappa; Sigma Xi; Gamma Alpha. Author: Jungle Island, with M. H. Allee, 1925; Animal Aggregation, 1931; Animal Life and Soc. Growth, 1932; The Social Life of Animals, 1938; Cooperation Among Animals, with Human Implications, 1951. Joint Author: Ecol. Animal Geog., 1937; A Lab. Introduction to Animal Ecol. and Taxonomy, 1939; Prin. of Animal Ecol. Contbr. of more than 150 Jour. articles.



ALLEN, Arthur Watts, Consultnt, c/o Gilmer Petroff, R. F. D. 5, Columbia, S. C. CHEMISTRY AND METALLURGY. b. Devon, England, Feb. 22, 1879. s. Joseph and Eliza Reeves (Stevens) A. Edn.: B.A., St. John's Coll., Cambridge Univ., England, 1902; M.A., *ibid.*, 1910. m. Margaret Benyon Brown, Nov. 5, 1907. c.: Clement Harold; Margarita Frances; Vivien Mary. Exp.: Marine Biological Rsch. in Melanesia with H. A. Wickham, 1902-04; Chem. and Metallurgical Rsch., Design, Construction and Management of Ore-dressing and Hydrometallurgical Plants in Australia, Africa, Mex., Uruguay, Argentina and the U. S., 1904-18; Engr., Penyon Syndicate, Chile;



Consulting Engr., du Pont Nitrate Co., Chile; Assoc. Editor, Mining and Scientific Press., San Francisco; Asst. Editor, Engr. and Mining Jour. and Chem. and Metallurgical Engrng., N. Y., 1918-27; Editor-in-Chf., Engrng. and Mining Jour. and Metal and Mineral Markets, N. Y.; Founder and Exec. Editor, Food Industries (now Food Engrng.), N. Y.; Dir., McGraw-Hill Publishing Co., Ltd., London, 1927-33; Technical Reorganization and Consulting work in Western U. S., and with United Electric Coal Co., Chicago; S. Amer. Development Co. and Cia. Minera Nasca, Peru, in Chg. of Metallurgical Rsch. and Production Operations; Expert Witness during action against Golden Queen Mining Co., Calif.; Consulting work in Central Amer. and the Philippine Islands; General Mgr., Cuyuni Goldfields, Lte., British Guiana, 1933-43; Prin. Economist, Foreign Minerals Div., Bureau of Mines, Wash., D. C., 1943-45; Archivist and Editor, Inter-Amer. Inst., Turrialba, Costa Rica, 1947-50; Technical Adviser, Inst. of Inter-Amer. Affairs, San Jose, Costa Rica, 1950-51; Consultant, 1951—. Mem.: Inst. of Mining and Metallurgy. Author: Mill and Cyanide Handbook; Handbook of Ore Dressing; Recovery of Nitrate from Chilean Caliche. Contrb. to: Mining Mag.; Engr. and Mining Jour.; Chem. and Metallurgical Engrng.; Trans. Institution of Mining and Metallurgy; Trans. Inst. of Mining and Metallurgical Engrs.; Trans. Electrochem. Soc.; Trans. Amer. Inst. Chem. Engrs. Gen. Int.: Inventor, originator and pioneer in numerous technical and engrng. developments, including (a) the simultaneous-displacement method of silver-ore pulp treatment, designed to meet special conditions in northern Mex. when vacuum filtration was introduced there, and patented in that country; (b) investigations and trials leading to the use of country rock for the manufacture of pebbles in lieu of imported flints as grinding media in tube mills, and a survey of suitable material in the U. S., whereby substantial economies were effected; (c) chemical rsch. and the outlining of reliable testing techniques for the control of working cyanide solutions; (d) plant and laboratory investigations that resulted in important finds on the influence of colloidal clays in mining and cyaniding operations; (e) rsch. on the physical and physico-chemical reactions involved during the so-called precipitation of gold from auriferous cyanide solutions by means of charcoal, with evidence that the reaction was an example of adsorption and not caused by occluded carbon monoxide gas, as had been generally believed, a discovery that suggested more efficient and more economical methods of application; (f) development of the Allen process in the treatment of Chilean caliches for the recovery of nitrate, with iodine and potash by-products, by the introduction of a modified hydrometallurgical technique and involving the provision for the deposition in the leaching charge of a water-soluble filter aid, in this instance sodium chloride, thus permitting the successful beneficiation of a highly refractory raw material; this process was sponsored and adopted by the du Pont Co. and used for the treatment of ores in the Taltal pampa until the exhaustion of reserves (U. S. patent); (g) exploratory work on a petroliferous mineral in Neuquen Providence, Argentina, leading to underground development, with extensive, physical, chemical and electrical testing and analysis, the naming of the mother mineral as Neuquenite and its classification, commercial exploitation and utilization as a new type of glance pitch; and the application of the oxidized capping and vein-wall material as a boiler fuel. Special Int.: Chem. and Metallurgy.

ALLEN, Alexander John, Westinghouse Grad. Prof. of Engrng., Univ. of Pittsburgh, Pittsburgh, Pa. **ELECTRONICS.**

ALLEN, Bennet M., Prof. of Zool., Univ. of Calif., 405 Hilgard Ave., Los Angeles, Calif. **ENDOCRINOLOGY.**

ALLEN, Charles Elmer, Prof. Emer. of Botany, Univ. of Wis., 2014 Chamberlin Ave., Madison, Wis. **BOTANY.**

ALLEN, Emma Gates, Staff, Basic Rsch. Dept., Veteran's Admin. Hosp., Brooklyn, N. Y. **VIROLOGY—ESPECIALLY VIRUS PROPAGATION.** b.

Bridgeton, N. J., Dec. 12, 1920. d. Harry W. and Elizabeth (Gates) A. Edn.: B.Sc., Philadelphia Coll. of Pharm. and Sci., 1942; M.Sc., Univ. of Pa., 1950; Ph.D., *ibid.*, 1952. Exp.: Bacteriologist, Control Div., Chas. E. Hires Co., Philadelphia, Pa., 1942-45; Staff, Virus Diagnostic Lab., Children's Hosp., Philadelphia, Pa., 1947-52; Staff, V. A. Hosp., Brooklyn, N. Y., 1953—. Mem.: N. Y. Acad. Sci.; Sigma Xi; Lambda Kappa Sigma. Contrb. to: Jour. Bacteriol.; Jour. Exptl. Med.; Proc. Soc. Exptl. Biol. and Med. Special Int.: Interested in Problems Related to Virus Growth.

ALLEN, Eugene Thomas, 135 Pleasant St., Arlington, Mass.

ALLEN, Ezra, Visiting Prof. of Biol. and Curator of Univ. Museum, Stetson Univ., DeLand, Fla. **BIOLOGY AND CYTOLOGY.** b. Coudersport, Pa., May 8, 1870. s. Judson Wade and Mary (Bowen) A. Edn.: A. B., Bucknell Univ., 1895; Ph.D., Univ. of Pa., 1914. Hon. Deg.: D.Sc., Bucknell, 1922. m. May M. Putnam, Mar. 31, 1898. Exp.: Prep. Schls., 1896-1903; Prof. of Biol., Mont. State Normal Coll., Dillon, Mont., 1903-05; Prof. of Biol. Schl. of Pedagogy, Philadelphia, Pa., 1907-19; Lectr. in Biol., A. E. F. Univ., Beaune, France, 1919; Prof. of Biol., Ursinus Coll., 1919-26; Zool. Editor, Biol. Abstracts, 1927-28; Assoc. Prof. of Histol. and Embryol., N. Y. Med. Coll., N. Y. C., 1928-38; Visiting Prof. of Biol., J. B. Stetson Univ., DeLand, Fla., 1940-52. Mem.: Amer. Assn. of Anatomists; Amer. Soc. of Zool.; Fla. Acad. of Sci.; Natl. Assn. of Biol. Tchrs.; A.A.A.S.; Sigma Xi. Co-author: Microscopical Tech., 1951. Contrb. to: Anatomical Record; Jour. of Morphol. Special Int.: Studies in Mammalian Chromosomes, Fixation of Mammalian Chromosomes, Prenatal Growth of Mouse; Degeneration in Germ Cells of the Postnatal Male Albino Rat.

ALLEN, Frank, Prof. Emeritus of Physics, Univ. of Manitoba, Winnipeg, Can. **BIOPHYSICS.** b. Meductic, N. B., Can., Feb. 6, 1874. s. John Salter and Charlotte (Newcomb) A. Edn.: B.A., Univ. of New Brunswick, 1895; M.A., *ibid.*, 1897; M.A., Cornell Univ., 1900; Ph.D., *ibid.*, 1902. Hon. Deg.: LL.D., Univ. of Manitoba, 1924; LL.D., Univ. of New Brunswick, 1945. m. Sadie E. Harper, Sept., 1903. c.: Lillian Beatrice; John Frank; William Alexander. Exp.: Instr. in Physics, Cornell Univ., Ithaca, N. Y., 1902-04; Prof. of Physics and Hd., Dept., Univ. of Manitoba, Winnipeg, Can., 1904-44; Emeritus, *ibid.*, 1944—. Mem.: Royal Soc. of Can.; Optical Soc. of Amer. Contrb. to: Quarterly Jour. of Exptl. Physiol.; British Jour. of Psychol.; Phys. Rev.; Jour. of Optical Soc. of Amer.; Can. Jour. of Rsch.; Jour. of Gen. Physiol.; Acta Ophthalmologica. Special Int.: The Responses of the Senses to Stimulation; The Post-Contraction of Muscles; Glandular Responses.

ALLEN, Frederick John, Asst. Prof. of Chem., Purdue Univ., West Lafayette, Ind. **CHEMISTRY.**

ALLEN, H. Julian, Aeronautical Rsch. Scientist, NACA, Moffet Field, Calif. **AERONAUTICAL RESEARCH.**

ALLEN, John Edward, County Supt. of Schls., Warren County Schl. System, Warrenton, N. C. **STATISTICS, SOCIOLOGY.**

ALLEN, Leah Brown, Prof. of Astron., Hood Coll., Frederick, Md. **ASTRONOMY.**

ALLEN, Mildred, Assoc. Prof. of Physics, Mount Holyoke Coll., South Hadley, Mass. **PHYSICS.**

ALLEN, Oscar Nelson, Prof. of Bacteriol., Univ. of Wis., Madison 6, Wis. **BACTERIOLOGY.**

ALLEN, Ray, Univ. of Western Ontario, London, Ont., Can. **PHYSICS.**

ALLEN, Robert Malven, Asst. Prof. of Bacteriol., Univ. of Rochester Schl. of Med. and Dentistry, 260 Crittenden Blvd., Rochester 20, New York. **BACTERIOLOGY.** b. March 20, 1910, Independence, Ia. s. Robert Nelson and Emma Alice (Malven) A. Edn.: B.A., Iowa State Tchrs. Coll., 1932; M.S., Univ. of Mich., 1941; Ph.D., Univ. of

Minn., 1947. m. Ruth Louise Miller of Garden Prairie, Ill., 1940. d. Rev. and Mrs. M. F. Miller. c.: John Robert; Richard Miller. Exp.: H. S. Tchr., Ia., 1938-40; Tchng. Asst., Zool., Univ. of Minn., 1940-42; Instr., Bacteriol., Univ. of Nebr., Coll. of Med., 1942-47; Asst. Prof., *ibid.*, 1947-48; Asst. Prof., Univ. of Rochester, Schl. of Med. and Dentistry, 1948—. Mem.: A.A.A.S.; Soc. Amer. Bacteriol.; Amer. Soc. Parasitol.; Sigma Xi; Nu Sigma Nu; Gamma Alpha Contrb. to: Amer. Jour. Tropical Med.; Nebr. Med. Jour. Ph.D. Dissertation: Experimental Histoplasmosis. Litsed in: A.M.S. Special Int.: Med. Bacteriology; Med. Mycology.

ALLEN, Rolland Craten, 349 Aurora St., Hudson, Ohio. GEOLOGY.

ALLEN, Ross Lorraine, Prof. and Chmn., Dept. of Health Edn., State Univ. Tchrs. Coll., Cortland, N. Y. HEALTH EDUCATION. b. Newark, N. J., Feb. 28, 1905. s. James and Dora M. (Pollock) A. Edn.: B.S., Univ. of Mich., 1927; M.S., *ibid.*, 1934; Dr. Public Health, *ibid.*, 1936. m. Madeline Hitchcock, July 29, 1927. c.: Ross L., Jr. and Carolyn V. Exp.: Phys. Edn. Rep., Schl. Health Study, Amer. Child Health Assn., N. Y., N. Y., 1927-28; Health Edn. Tchr., Washington Jr.-Sr. H. S., Rochester, N. Y., 1928-35; Asst. Editor, Jour. of Health and Phys. Edn., Amer. Assn. for Health, Phys. Edn. and Recreation, Ann Arbor, Mich., 1935-36; Asst. Exec. Dir. and Bus. Mgr., The Camping Mag., Amer. Camping Assn., Ann Arbor, Mich., 1936-39; Exec. Dir., *ibid.*, 1939-41; Asst. Supvr., Dept. of Phys. Edn. and Athletics, Univ. of Mich., Ann Arbor, Mich., 1941-45; Prof. and Chmn., Dept. of Health Edn., State Tchrs. Coll., Cortland, N. Y., 1945—. Mem.: Soc. of Pub. Health Educators; Amer. Soc. Hygiene Assn.; A.A.A.S.; Amer. Ednl. Rsch. Assn.; Amer. Camping Assn.; N.E.A.; Delta Omega; Phi Epsilon Kappa; Natl. Soc. for the Study of Edn.; The Amer. Acad. of Polit. and Soc. Sci.; A.A.U.P.; Fellow, Amer. Schl. Health Assn.; Rotary. Contrb. to: The Nation's Schls.; Amer. Schl. Bd. Jour.; Hygeia; Americana Annual; Jour. of Health and Phys. Edn.; Jour. of Schl. Health; Rsch. Quarterly; The Camping Mag.; Schl. Mgmt. Special Int.: Schl. and Pub. Health Edn.

ALLEN, Ruth F., retired, 2709 Dwight Way, Berkeley, Calif. PLANT PATHOLOGY.

ALLEN, Samuel, Univ. of Cincinnati, Cincinnati, Ohio. PHYSICS.

ALLEN, Shirley Walter, Prof. of Forestry, Schl. of Forestry and Conservation, Univ. of Mich., Ann Arbor, Mich. FOREST ADMINISTRATION.

ALLEN, Simeon Carlyle, Dir. of Rsch., Health Rsch. Foundation, 615 Commonwealth Ave., Newton Center, Mass. MEDICINE.

ALLEN, Victor Thomas, Dir., Dept. of Geol. and Geol. Engrng., St. Louis Univ., St. Louis 3, Mo. GEOLOGY: CLAY MINERALOGY AND SEDIMENTARY PETROLOGY.

ALLEN, Willard Myron, Prof. and Hd., Dept. of Obstetrics and Gynecology, Wash. Univ. Schl. of Med., St. Louis, Mo. OBSTETRICS AND GYNECOLOGY.

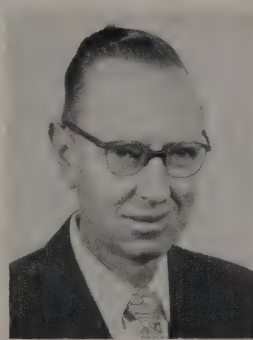
ALLEN, William Fitch, Emer. Prof. of Anatomy, Med. Schl., Univ. of Ore., 3947 S. E. Salmon St., Portland, Ore. NEUROLOGY.

ALLEN, William Ray, Prof. of Zool., Univ. of Ky., Lexington, Ky. ICHTHYOLOGY.

ALLERTOWN, Joseph, Chem. Engr., General Foods Corp., Central Laboratories, Hoboken, N. J. CHEMICAL ENGINEERING. b. March 17, 1919. N. Y. C. s. Moses and Rebecca (Stephens) A. Edn.: B.Ch.E., N. Y. Univ., 1937-41; M. Ch.E., *ibid.*, 1944; Ph.D., Univ. of Mich., 1948. m. Muriel Jobst of Guttenberg, N. J., July 16, 1944. d. Mr. and Mrs. John H. Jobst. c.: Peter; Steven. Exp.: Chem. Engr., E. I. DuPont de Nemours & Co., 1941; Asst., Office of Sci. Rsch. and Development, Columbia Univ., 1941-42; Instr., Cooper Union, 1942-44; Chem. Engr., Manhattan Project, Kellogg Corp., 1944-45; Dept. of Engr. Rsch., Univ. of

Mich., 1945-48; Chem. Engr., Natl. Dairy Rsch. Lab., Oakdale, L. I., N. Y., 1948-51; General Foods Corp., Central Laboratories, Hoboken, N. J., 1952—. Mem.: Phi Lambda Upsilon; Tau Beta Pi; Sigma Xi; Phi Kappa Phi. Contrb. to: Chem. Engr. Progress. Ph.D. Dissertation: The Through-Drying of Porous Media. War Record: Manhattan Project and Tchng. in Engr. Coll. Travel: England; Ireland. Hobbies: Fishing; Music. Listed in: A.M.S. Special Int.: Engrng. in Food Industry, Dehydration of Foods.

ALLER, Alvin Ray, Chmn., Div. of Natural Sci. and Math., Northwest Nazarene Coll., Nampa, Idaho.



BOTANY — SYSTEMATIC BOTANY AND PLANT ECOLOGY. b. Johnson, Kans., Sept. 5, 1906. s. Will Walter and Loma C. (Pearce) A. Edn.: B.S., Bethany Coll., 1931; M.S., Kans. State Coll., 1932; Ph.D., Ore. State Coll., 1949. m. Florence D. Snowbarger, June, 1930. c.: Wayne K. Exp.: Tchr. in Public (rural) Schl. in Kans., 1925-27; Tchr., H. S. Hutchinson, Kans., 1933-34; Tchng. and Admin. Work, Breese Coll., Kans., 1934-36; Asst. Prof. and Assoc. Prof. of Biol., Northwest Nazarene Coll., 1936-42; Prof. of Biol. at Northwest Nazarene Coll., 1949—. Chmn., Div. of Natural Sci., *ibid.*, 1950—. Mem.: Ecol. Soc. Amer.; A.A.A.S.; The Herpetologists League; Amer. Soc. of Plant Taxonomists; Northwest Scientific Assn.; Boise Valley Natural History Soc.; Amer. Nature Study Soc.; Gamma Sigma Delta; Phi Sigma; Sigma Xi; Phi Kappa Phi; Lions. Contrb. to: Trans. Kans. Acad. Sci.; Herpetologica. War Record: Commissioned Lt., U. S. N. R., 1942; Taught Aerial Navigation for Navy, Designated Technical Observer, Holds a LCDR Commission Now. Gen. Int.: Amateur Singer. Special Int.: Plant Taxonomy and Plant Ecology.

ALLES, Gordon A., Chem. Rsch., Calif. Inst. of Tech., 770 S. Arroyo Parkway, Pasadena 2, Calif. ORGANIC CHEMISTRY, PHARMACOLOGY.

ALLING, Harold Lattimore, Prof. of Geol., Univ. of Rochester, Rochester, N. Y. PETROLOGY OF SEDIMENTARY ROCKS.

ALLINSON, Morris Jonathan Carl, Chf. Resident in Radiol., Bridgeport Hosp., 133 West Park Ave., New Haven, Conn. BIOCHEMISTRY. b. New Haven, Conn., Feb. 20, 1912. s. Jacob Samuel and Sophie (Garber) A. Edn.: B.S., Sheffield Scientific Schl., 1932; Ph.D., Boston Univ., 1938; M.D., Univ. of Ark., Med. Schl., 1945. m. Gertrude Rosen (dec.). 2nd m. Elizabeth Lawrence, 1948. c.: Arthur Errol; Robert Elliott and Nancy Gail. Exp.: Fellow in Med., Univ. of Chicago, Chicago, Ill., 1938-39; Instr. in Biochem., La. State Univ., Med. Center, New Orleans, La., 1939-40; Instr. in Physiol. and Pharmacol.; Univ. of Ark., Med. Schl., 1940-45; Chf. Resident in Radiol., Bridgeport Hosp., New Haven, Conn., 1945—. Mem.: Conn. State Med. Soc.; New Haven Co. Med. Soc. Contrb. to: Jour. Biochem. Proc., Soc. of Exptl. Biol. and Med.; Amer. Jour. of Med. Sci. Special Int.: Physiol.; Pharmacol. and Biochem.; Radiology.

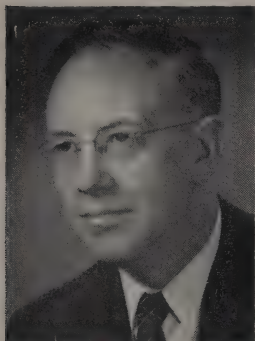
ALLIS, William Phelps, Assoc. Prof. of Physics, Mass. Inst. of Tech., Cambridge, Mass. PHYSICS.

ALLISON, Clarence Clyde, Prof. of Botany, Ohio. State Univ., Columbus, Ohio. PLANT PATHOLOGY.

ALLISON, Franklin Elmer, Sr. Chemist, U. S. D. A., Plant Indus. Station, Beltsville, Md. SOIL BIOCHEMISTRY AND MICROBIOLOGY.

ALLISON, Ira S., Prof. of Geol., Ore. State Coll., Corvallis, Ore. GEOLOGY.

ALLISON, James Boyd, Jr., Prof. of Physiol. and Biochem. and Dir., Bur. of Biological Rsch., Rutgers Univ., New Brunswick, N. J. **BIOCHEMISTRY.**



b. Jan. 28, 1901, Punxsutawney, Pa. s. James Boyd and Elizabeth (Robinson) A. Edn. B.S., Pa. St., 1923; Ph.D., Iowa St., 1927. m. Dorothy Helen Lewis of Punxsutawney, Pa., Dec. 31, 1926. d. Mr. and Mrs. Linus M. Lewis. c.: Marjory Ann, Dorothy Jean. Exp.: Asst. in Chem., Iowa St. Coll., 1923-26; Industrial Fellow, 1926-27; Instr., Biochem., Rutgers Univ., 1927-29; Asst. Prof., 1929-41, *ibid.*; Assoc. Prof., 1941-45; Prof. of Physiol. and Biochem., 1945—; Dir. of Bur. of Biological Rsch., Rutgers Univ., 1944; Lectr. in Physiol., Coll. Physicians and Surgeons, Columbia Univ., 1943-45. Hon. Pos.: Liason and Scientific Adv. Bd., War Dept., Quartermaster Food and Container Inst. for Armed Forces, 1948. Mem.: Amer. Chem. Soc.; A.A.A.S.; Soc. Exptl. Biol. and Med.; N. Y. Acad. of Sci.; Amer. Inst. of Chem.; Amer. Soc. Biol. Chem.; Amer. Inst. Nutr.; Alpha Zeta; Phi Lambda Upsilon; Sigma Xi; Phi Kappa Phi; Gamma Sigma Delta; Phi Beta Kappa; Univ. Outing Club; Rotary. Contrb. to: Jour. Amer. Chem. Soc.; Amer. Jour. Physiol.; Jour. Gen. Physiol.; Jour. Biochem.; Jour. Nutr.; Proc. Soc. Exp. Biol. Med. Ph.D. Dissertation: The Toxicity of Hydrogen Cyanide Listed in: A.M.S.; Who's Who in N. J.; Who's Who in the East.

ALLISON, James Boyd, Prof. of Physiol. and Biochem., Rutgers Univ., New Brunswick, N. J. **BIOCHEMISTRY.**

ALLISON, John Howard, Prof. of Forestry, Emer., Univ. Farm, 1509 Hythe St., St. Paul, Minn. **FORESTRY; MANAGEMENT AND TAXATION.**



b. Sept. 25, 1883, E. Granby, Conn. s. John Alexander and Mary Elizabeth (McMahon) A. Edn.: Ph.B., Sheffield Scientific Schl., Yale Univ., 1905; M.F., Schl. of Forestry, *ibid.*, 1906. m. first, Mabel A. Shepard (deceased) of Hamden, Conn., Sept. 6, 1911; second, Ethel L. Reuber of Preston, Minn., Aug. 12, 1927; c.: John Howard, Jr., Mary Leigh. Exp.: Jr. Forester to Forest Exam., U. S. Forest Service, 1906-12; Prof.

of Forestry, 1913—; Dept. of Agri., Forestry and Home Econ., Univ. of Minn.; Amer.-Scandinavian Foundation Fellowship (in Forestry to Sweden), 1923-24. Mem.: Soc. of Amer. Foresters; S.S.P.; T.P.D. Contrb. to: Jour. of Forestry. Travel: Scandinavian Countries; Switzerland. Hobbies: Reading, Movies, Travel. Listed in: Who's Who in Amer. Special Int.: Forest Mgmt. and Taxation.

ALLISON, Loy W., Prof. of Psychol. and Chmn. Div. Edn., State Tchrs. Coll., Jacksonville, Ala. **PSYCHOLOGY.**

ALLISON, Robert V., Vice-Dir., Everglades Expt. Station, Belle Glade, Fla. **SOILS.**

ALLISON, Samuel King, Univ. of Chicago, Chicago 37, Ill.

ALLISON, William Henry, Chmn., Civil Engrng. Dept., Clarkson Coll. of Tech., Potsdam, N. Y. **CIVIL ENGINEERING.** b. Beacon, N. Y., June 27, 1892. s. Henry Edward and Anna (DePuy) A. Edn.: B.S., Dartmouth, 1917; C.E., *ibid.*, 1918. m. Ella Babcock of Auburn, N. Y., June 30, 1941. d. Geo. R. and

Jennie W. Babcock. Exp.: Bridge Dept., Southern Railway, Insp., Jr. Engr., Asst. Engr., 1919-26; Bridge Dept., B. & O. R. R., Asst. Engr., 1924-25; Engrng. Schl., Yale Univ. Instr., 1926-29; Clarkson Coll. of Tech., Assistant Professor to Professor and Chmn. of Civil Engrng. Dept., 1929 to date. Hon. Pos.: Chmn., Northern N. Y. Section, Amer. Soc. for Engrng. Edn., 1950-51. Mem.: Am. Soc. of Civil Engrs.; Amer. Soc. for Engrng. Edn.; Gamma Alpha; Tau Beta Pi; Kappa Sigma. War Record: U. S. Army, 1918. Travel: Europe; Canada. Gen. Int.: Licensed Professional Engr. Hobbies: Ornithology, Pilately. Listed in: A.M.S., To be included in Who's Who in Engrng.

ALLPORT, Floyd Henry, Prof. of Social and Political Psychol., 409 Maxwell Bldg., Syracuse Univ., Syracuse, N. Y. **PSYCHOLOGY.**

ALLPORT, Gordon W., Harvard Univ., Cambridge, Mass. **PSYCHOLOGY.**

ALLYN, Harriett May, Prof. of Anthropol. and Academic Dean Emer., Mt. Holyoke Coll., South Hadley, Mass. **ZOOLOGY AND ANTHROPOLOGY.** b. May 4, 1883, New London, Conn. d. Charles Allyn and Helen Louisa Starr Allyn. Edn.: A.B., Mt. Holyoke Coll., 1905; M.Sc., Univ. of Chicago, 1910; Ph.D., *ibid.*, 1912; Attended 1910-12 on a Fellowship from the Univ. Exp.: 1905-07, Gen. Sec., Y.W.C.A., Mt. Holyoke Coll.; 1908-09, Instr. of Zool., Lake Erie Coll.; 1912-13, Instr. of Zool., Vassar Coll.; 1913-19, Instr. of Zool. and Dean, Hackett Med. Coll., China; 1920-21, Instr. of Zool., Mt. Holyoke Coll.; 1921-23, Dean and Instr. of Zool., Hackett Med. Coll., China; 1923-24, Prof. of Zool., Monticello Seminary; 1924-29, Instr. of Zool.; Asst. Prof., 1925-28; Assoc. Prof., 1928-29, on leave, Vassar Coll.; 1929-48, Acad. Dean and Prof. of Anthropol., Mt. Holyoke Coll. Hon. Pos.: Pres., Natl. Assn. of Deans of Women; Natl. Sec., Permanent Coun.; Internatl. Congress of Prehistoric and Protohistoric Sci., 1936. Mem.: Phi Beta Kappa; Sigma Xi; Fellow, A.A.A.S., Assns. and Learned Soc.; A.A.U.W.; Amer. Anthropol. Assn.; Amer. Schl. of Oriental Rsch.; Comm. on Women in World Affairs; For. Pol. Assn.; Mass. Archaeol. Soc. (Charter Mem.); N.E.A.; New Eng. Assn. of Coll. and Seed. Schls.; New Eng. Conf. on Grad. Edn.; Soc. for Amer. Archaeology; Soc. of Woman Geogs.; U. N. Assn., Mass. Br.; and many more. Contrb. to: Biological Bull.; Woman's Work; Amer. Anthropologist; Jr. Coll. Jour.; Ednl. Yearbook, 1943. Ph.D. Dissertation: Initiation of Development in Chaetopterus, Biol. Bull. Travel: Europe; Palestine; U. S.; China; Egypt; Russia; Siberia; Jamaica; Japan; and some others. Special Int.: Embryology and Palestinian Prehistory.

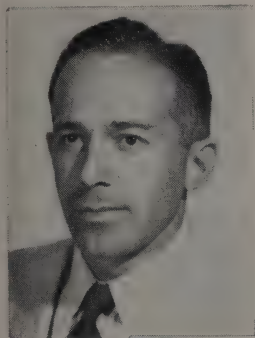
ALMON, Lois, Asst. Prof. Bacteriology, N. Dak. Agri. Coll., Fargo, N. D. **BOTANY.**



b. Milwaukee, Wis., April 28, 1904. d. Mather Byles and Minna (Ruehausen) A. Edn.: Ph.D., Univ. of Wis., 1932. Exp.: Extension Div., Milwaukee Public Museum, 1923-25; Tchrr. of Biol., Oconto, Wis., H. S., 1927-28; Rsch. Asst. in Botany, Univ. of Wis., 1928-29; Rsch. Asst. in Agri. Bacteriol., 1929-32; Bacteriologist and Instr., Wis. State Lab. of Hygiene, 1932-39; Supvr. of Branch Lab. of Hygiene, 1940-47; Tchrr. of Biol., Wis. State Coll. at Eau Claire, 1947-53. Mem.:

Soc. Amer. Bacteriologists; A.A.A.S.; Amer. Ornithologists' Union; A.A.U.P.; N.E.A.; Wis. Edn. Assn.; Wis. Soc. for Ornithol.; Wis. Acad. Sci., Arts, and Letters; Phi Beta Kappa; Sigma Xi; Sigma Delta Epsilon. Contrb. to: Jour. Bacteriol.; Bacteriol. Rev.; Amer. Jour. Public Health; etc. Special Int.: Antigenic Structure within the Salmonella Group; Bacterial Dissociation; Ornithological and Botanical Ecology; Fungi Pathogenic for Man.

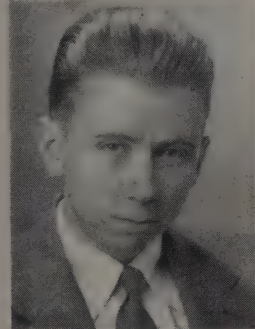
ALPERT, Daniel, Mgr., Phys. Dept., Westinghouse Rsch. Labs., E. Pittsburgh, Pa. GASEOUS ELECTRONICS; PHYSICAL ELECTRONICS. b. Hartford, Conn., Apr. 10, 1917. s. Elias and Dora (Prechepa) A. Edn.: B.S., Trinity Univ., 1937; Ph.D., Stanford Univ., 1942. m. Natalie Boyle, Jan., 1942. c.: Amy Vincell; Laura Jane. Exp.: Rsch. Fellow, Westinghouse Rsch. Labs., 1941-42; Rsch. Engr., *ibid.*, 1942-49; Section Mgr., *ibid.*, 1949-50; Mgr., Phys. Dept., *ibid.*, 1950—. Hon. Pos.: Vice-Chmn., Div. of Electron Phys., Amer. Phys. Soc. Mem.: Amer. Phys. Soc.; Phys.



Soc. of Pittsburgh; Sigma Xi; Phi Beta Kappa. Contrb. to: Phys. Rev.; Rev. of Scientific Instruments. Special Int.: Electrical Discharges in Gases; Phys. Electronics; Production and Measurement of Ultra-High Vacua; Microwaves.

ALSENTZER, Harry August, Jr., Assoc. Prof. of Chem., Univ. of Pa., Philadelphia, Pa. CHEMISTRY.

ALSTADT, Don Martin, Rsch. Engr. and Consulting Chemist, 721 Rosedale Ave., Erie, Pa. CHEMISTRY AND PHYSICS. b. Erie, Pa., July 29, 1921. s. Reinhold L. and Jean (Martin) A. Edn.: B.S., Univ. of Pittsburgh, 1947. Exp.: Development Engr., Lord Corp., 1944-46; Sr. Physicist, *ibid.*, 1947-52; Hd., Basic Rsch., *ibid.*, 1952—; Consult., Carborundum Co., 1947-48; Consult., Scientific Specialties Corp., Boston, Mass., 1952; Consult., Transistor Products Corp., Boston, Mass., 1953—. Mem.: Amer. Inst. of Physics; Amer. Physical Soc.; Amer. Chem. Soc.; Fellow, Amer. Inst. of Chemists; Electrochem. Soc.; A.A.A.S. Gen. Int.: Rifleman and Big Game Hunter. Special Int.: Fundamental Technology of Surfaces Related to Adhesion and Electrical Rectification, etc.; Chem.-Mechanical Properties of Polymeric Materials.



ALSTON, Casco, Asst. in Med., Coll. of Phys. and Surg., Columbia Univ., and Clinical Physician to New York City Dept. of Health, New York 31, N. Y. INTERNAL MEDICINE. b. Philadelphia, Pa., Sept. 23, 1913. s. Casco and Alberta (Wyche) A. Edn.: A.B., Univ. of Pa., 1936; M.D., Howard Med. Schl., 1942. m. Elizabeth Jordan, 1942. Exp.: Rsch. Fellow, Howard Univ., Wash., D. C., 1940-42; Chief Med. Resident, Cleveland City Hosp., Cleveland, Ohio, 1942-45; Asst. Supt., Cleveland City Hosp., *ibid.*, 1945-46; Special Lectr., Western Reserve Univ., Cleveland, Ohio, 1945-47; Asst. in Med. Columbia Univ., New York, N. Y., 1951—. Mem.: N. Y. Acad. of Sci.; A.A.A.S.; N. Y. Med. Soc.; Amer. Heart Assn.; World Med. Assn.; Alpha Phi Alpha; Kappa Pi. Special Int.: Clinical Nutrition; Psychosomatic Med.; Social Med.

ALSTON, Casco, Asst. in Med., Coll. of Phys. and Surg., Columbia Univ., and Clinical Physician to New York City Dept. of Health, New York 31, N. Y. INTERNAL MEDICINE. b. Philadelphia, Pa., Sept. 23, 1913. s. Casco and Alberta (Wyche) A. Edn.: A.B., Univ. of Pa., 1936; M.D., Howard Med. Schl., 1942. m. Elizabeth Jordan, 1942. Exp.: Rsch. Fellow, Howard Univ., Wash., D. C., 1940-42; Chief Med. Resident, Cleveland City Hosp., Cleveland, Ohio, 1942-45; Asst. Supt., Cleveland City Hosp., *ibid.*, 1945-46; Special Lectr., Western Reserve Univ., Cleveland, Ohio, 1945-47; Asst. in Med. Columbia Univ., New York, N. Y., 1951—. Mem.: N. Y. Acad. of Sci.; A.A.A.S.; N. Y. Med. Soc.; Amer. Heart Assn.; World Med. Assn.; Alpha Phi Alpha; Kappa Pi. Special Int.: Clinical Nutrition; Psychosomatic Med.; Social Med.

ALTENBURG, Edgar, Asst. Prof. of Biol., Rice Inst., Houston, Tex. GENETICS.

ALTER, Dinsmore, P. O. Box 9787, Los Feliz Station, Los Angeles, Calif.

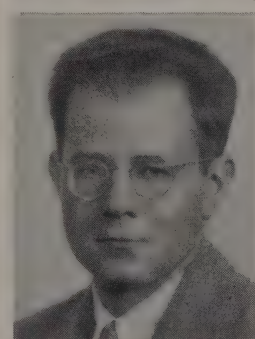
ALTER, Nicholas M., Dir. of Lab., Margaret Hague Hosp., Jersey City, N. J. PATHOLOGY.

ALTMAN, David, Chf. Chemist, Jet Propulsion Lab. Calif. Inst. of Tech., Pasadena, Calif. CHEMISTRY. b. Paterson, N. J., Feb. 13, 1920. s. Herman and Frieda (Dombroff) A. Edn.: A.B.,

Cornell Univ., 1940; Ph.D., Univ. of Calif., 1943. m. Beverly Adlis of L.A., Calif., Nov. 27, 1947. d. Mr. and Mrs. Herman L. Adlis. Exp.: Tchn. Asst. in Chem., Univ. of Calif., 1940-43; Rsch. Assoc., Radiation Lab., Univ. of Calif., 1943-45; Chf. Chemist, Jet Propulsion Lab., C.I.T., 1945—; Lectr. Jet Propulsion in Grad. Schl. of Aeronautics, Calif. Inst. of Tech., 1946-49. Mem.: Amer. Chem. Soc.; Phi Beta Kappa; Phi Kappa Phi; Sigma Xi. Contributing author to the Princeton Univ. Aeronautics Publication Program. Contrb. to: A.C.S.; Jour of Franklin Inst. Ph.D. Dissertation: Diffusion of Monomolecular Oil Films on Water. Travel: Mex.; Can. Hobbies: Tennis; Music; Bridge. Listed in: Who's Who in Southern Calif.; A.M.S.

ALTMANN, Margaret, Prof. of Animal Husbandry and Genetics, Chmn., Dept. of Animal Husbandry and Acting Dir., Poultry Plant, Hampton Inst., Hampton, Va. ANIMAL BREEDING.

ALTSCHUL, Rolf, Chmn. Chem. Dept., Sarah Lawrence Coll., Bronxville 8, N. Y. PHYSICAL ORGANIC CHEMISTRY. b. Germany, Jan. 24, 1918. s. Hugo J. and Margaret (Hirsch) A. Edn.: A.M., Harvard Univ., 1939; Ph.D., *ibid.*, 1941. m. Lucy Holljes, April 3, 1948. Exp.: Tchn. Fellow, Harvard Univ., Cambridge, Mass., 1939-41; Pittsburgh Plate Glass Fellow, *ibid.*, 1941-44; Lectr., Bryn Mawr Coll., Bryn Mawr, Pa., 1944-45; Chmn. Chem. Dept., Sarah Lawrence Coll., Bronxville, N. Y., 1945—. Mem.: Amer. Chem. Soc.; Sigma Xi. Contrb. to: Jour. of Organic Chem.; Jour. of



the Amer. Chem. Soc. Special Int.: Chemical Kinetics and Reaction Mechanisms.

ALVAREZ, Luis Walter, Univ. of Calif., Berkeley 4, Calif.

ALVAREZ, Walter Clement, Prof. of Med., Mayo Foundation, Univ. of Minn., Minneapolis, Minn. GASTROENTEROLOGY.

ALVING, Alf Sven, Prof. of Med., Univ. of Chicago, 950 E. 59th St., Chicago, Ill. INTERNAL MEDICINE.

ALWAY, Frederick James, Prof. Emer. Soil Chem., Univ. of Minn., 1386 Grantham St., St. Paul, Minn. CHEMISTRY.

AMBERG, Charles Rhodimer, Dir., Alfred Univ. Rsch. Lab., Rt. No. 1, Box 212 B, Kingston, N. Y. CERAMIC ENGINEERING AND TECHNOLOGY. b. Elmira, N. Y., Feb. 8, 1905. s. Charles Godfrey and Jenny Belle (Rhodimer) A. Edn.: B.S., Alfred Univ., 1927; M.S., Univ. of Ill., 1929; Ph.D., Penn. State Coll., 1948. m. Elizabeth Whiting Selkirk of Albany, N. Y., Aug. 17, 1929. d. F. E. Selkirk. c. Elizabeth Jane and Charles Selkirk. Exp.: Prof., N. Y. State Coll. of Ceramics at Alfred Univ., 1929-35; Hd. Dept. Ceramic Engrng. and Tech., *ibid.*, 1935-43; Hd. Dept. Ceramic Rsch., *ibid.*, 1943-49; Dir., Alfred Univ. Rsch. Lab., Alfred Univ., 1949—. Soc.: A.A.A.S.; Mem. of Inst. of Ceramic Engrs.; Coll. of Ceramics, 1947. Mem.: Amer. Ceramic Hon. Pos.: Chmn. of Admin. Comm., N. Y. State A.S.T.M. and Comm.; C-12 and C-15; Amer. Assn. for Engrng. Edn.; Am. Assn. of Univ. Prof.; Sigma Xi; Klan Alpine; Rotary; Twaalfshill Golf Club. Contrb. to: Jour. Am. Ceramic Soc.; Ceramic Ind.; Amer. Mineralogist; Jour. Soc. Glass Tech. Ph.D. Dissertation: Surface Tension of Glasses: Effect of Minor Additions. Gen. Int.: Co-author of three U. S. Patents, Dir. of numerous rsch. projects for industry, the Armed Forces, and Ednl. Instn. Hobbies: Hunting, Fishing, Gardening. Listed in: A.M.S.; W. W. in Engrng.; W. W. in the East; Who Knows—and What.

AMBERG, Samuel, Emer., Mayo Clinic, Rochester, Minn. PEDIATRICS.

AMBERSON, James Burns, Prof. of Med., Coll. Physicians and Surgeons, Columbia Univ., 651 W. 238th St., N. Y., N. Y. CHEST DISEASES.

AMEEL, Donald Jules, Prof. of Zool. and Hd. of Dept. of Kans. State Coll., Manhattan, Kans. b. Apr. 24, 1907, Detroit, Mich. ZOOLOGY. s. Jules T. and Selma (Beer) A. Edn.: A.B., Wayne Univ., 1928; M.A., Univ. of Mich., 1930; Sc.D., Univ. of Mich., 1933. m. Henrietta Ruth, Cedar Rapids, Ia., Aug. 30, 1937. d. John and Emma Zezula. c.: John Jules; Donna Ruth; George Robert. Exp.: Assoc. Prof. of Biol., Augustana Coll., 1933-35; Temp. Instr. in Zool., Univ. of Mich., 1936; Instr. in Zool., Kans. State Coll., 1937-43; Asst. Prof., *ibid.*, 1943-44; Prof., 1945. Mem.: Sigma Xi; Phi Kappa Phi; Am. Soc. of Parasitologists; Amer. Microscopical Soc.; Kans. Acad. of Sci. Contrb. to: Jour. Parasitology; Trans. Am. Microscopical Soc.; Amer. Midland Naturalist; Trans. Kans. Acad. of Sci. Ph.D. Dissertation: *Paragonimus: Its Life History and Distribution in No. Amer. and Its Taxonomy (Trematoda: Troglotrematidae)*. Hobby: Woodworking. Listed in: W.W.A.; Who's Who in Kans.; A.M.S. Special Int.: Parasitology—Life histories and embryology of trematodes.

AMEN, Elisabeth Wheeler, Prof. and Hd., Dept. of Psychol. and Edn., Wheaton Coll., Norton, Mass.

AMERINE, Maynard A., Asst. Prof. of Entology and Assoc. Entologist, Expt. Station, Univ. of Calif. Coll. of Agri., Davis, Calif. ENOLOGY. PSYCHOLOGY.

AMES, Adelbert, Jr., Prof. Rsch. Physiol. Optics, Dartmouth Eye Inst., Dartmouth Coll., Hanover, N. H. NATURE AND ORIGIN VISUAL SENSATIONS.

AMES, Edward S., Univ. of Chicago, Chicago, Ill. PSYCHOLOGY.

AMES, Oakes, Assoc. Dir., Botanical Museum and Rsch. Prof. Emer. Botany, Harvard Univ., Cambridge, Mass. ECONOMIC BOTANY AND ORCHIDOLOGY.

AMES, Stanley Richard, Sr. Rsch. Chemist, Distillation Products Industries, Div. of Eastman Kodak Co., Rochester 3, N. Y. BIOCHEMISTRY AND NUTRITION. b. Madison, Wis., Dec. 18,



ibid., 1918. s. Walter Ray and Marie (Fruit) A. Edn.: B.A., Mont. State Univ., 1940; A.M., Columbia Univ., 1942; Ph.D., *ibid.*, 1944. m. Edwina Gray Powers, Aug. 19, 1943. c.: Edwina Marie; Stanley Richard, Jr.; Suzanne Claire. Exp.: Asst. in Chem., Mont. State Univ., 1937-40; Scholarships, Mont. State Univ., 1937-40; Residence Scholar, Columbia Univ., 1940-41; Asst. in Chem., *ibid.*, 1940-43; Fellow, *ibid.*, 1942-43; War Rsch. for Quartermaster Corps, Univ. of Wis., 1943-46; Rockefeller Post-doctorate Fellow in Biochem., *ibid.*, 1943-46; Sr. Rsch. Chemist, Distillation Products Industries, Div. of Eastman Kodak Co., 1946—. Mem.: N. Y. Acad. Sci.; Amer. Soc. Biol. Chemists; Amer. Ornithologists Union; A.A.A.S.; Amer. Chem. Soc.; Soc. for Exptl. Biol. and Med.; Amer. Oil Chemists' Soc.; Phi Lambda Upsilon; Pi Mu Epsilon; Phi Sigma; Sigma Xi; Sigma Nu; Jr. C. of C. Author: Determination of Copper in Copper Proteins, 1944. Contrb. to: Jour. Biol. Chem.; Jour. Amer. Chem. Soc.; Arch. Biochem.; Proc. Soc. Exptl. Biol. and Med.; Anal. Chem.; Jour. Amer. Dietetic Assn.; Federation Proc.; etc. Special Int.: Enzymes; Electrophoresis; Polarography; Organic Oxidations; Biol. Oxidations; Tissue Respiration; Vitamin E; Vitamin A; Monoglycerides.

AMICK, H. C., Univ. of Tenn., Knoxville, Tenn. GEOLOGY AND GEOGRAPHY.

AMIS, Edward Stephen, Prof. of Chem., Univ. of Ark., Fayetteville, Ark. PHYSICAL CHEMISTRY. b. Himyar, Ky., Nov. 9, 1905. s. Jack and Artie Mae (Southard) A. Edn.: B.S., Univ. of Ky., 1930; M.S., *ibid.*, 1933; Ph.D., Columbia Univ., 1939. m. Annie Velma Birdwhistell, Sept. 2, 1934. c.: Edward Stephen, Jr.; Velma Dianne. Exp.: Tchr. and Prin. of Rural and Co. Cons. Elem. and H. S., Knox and Harlan Co., Ky., 1925-31; Inst. of Gen. Chem., Univ. of Ky., Lexington, Ky., 1934-36; Tchng. Asst., Rsch. Asst. to Prof., Victor K. LaMer and Instr., Columbia Univ., N. Y. C., 1936-39; Instr. and Assoc. Prof., La. State Univ., Baton Rouge, La., 1939-45; Rsch. Chemist and Sr. Rsch. Chemist, Carbide and Caron Chems. Corp., Oak Ridge, Tenn., 1945-47; Prof. of Chem., Univ. of Ark., Fayetteville, Ark., 1947—. Mem.: Amer. Chem. Soc.; Sigma Xi; Alpha Chi Sigma; Sigma Pi Sigma; Pi Mu Epsilon; Phi Lambda Upsilon. Author: Kinetics of Chem. Change in Solution, 1949. Contrb. to: Jour. of Amer. Chem. Soc.; Jour. of Phys. Chem.; Jour. of Chem. Phys.; Sci.; Analytical Chem.; Can. Jour. of Process Indus. Special Int.: Chem. Kinetics; Thermodynamics; Phy. Properties of Liquid and Liquid Mixtures; Metallic Organic Complexes; Conductivity of Electrolytes and Mixed Solvents and Spectrophotometry.

AMMONS, Nellie Perrel, Prof. of Biology, W. Va. Univ., Morgantown, W. Va. BOTANY. b. Rices Landing, Pa., May 23, 1889. d. John M. and Minerva (Moredock) A. Edn.: Ph.D., Univ. of Pittsburgh, 1937. Exp.: Biol. Tchr., Fairmont Eastside H. S., W. Va., 1918-20; Instr. in Bot., W. Va. Univ., Morgantown, W. Va., 1920-37; Asst. Prof. of Botany, *ibid.*, 1937-45; Assoc. Prof. of Botany, *ibid.*, 1945-53; Prof. of Biology, *ibid.*, 1953—. Hon. Pos.: Pres., W. Va. Acad. of Sci. Mem.: Fellow, A.A.A.S.; Botanical Soc. of Amer.; W. Va. Acad. of Sci.; W. Va. Educational Assn.; Sigma Xi; Phi Epsilon Phi. Author: Liverworts of W. Va., 1940; Woody Plants of W. Va. in Winter Condition, with Earl L. Core, 1946; Shrubs of W. Va., 1950. Contrb. to: Amer. Midland Naturalist; Castanea; The Bryologist. Special Int.: Bryophytes and Plant Anatomy.

AMOSS, Harold Lindsay, Consultant in Med., Greenwich Hosp., 68 Deerfield Dr., Greenwich, Conn. INTERNAL MEDICINE.

AMSDEN, George Samuel, retired, Acworth, N. H. PSYCHIATRY.

ANASTASI, Anne, Prof. of Psychol., Fordham Univ., N. Y. 58, N. Y. PSYCHOLOGY.

ANDERSCH, Marie, Univ. of Md. Med. Coll., Baltimore, Md. CLINICAL CHEMISTRY.

ANDERSEN, Alice M., Grain and Seed Div., P. M. A., Beltsville Rsch. Center, Beltsville, Md. BOTANICAL SCIENCES.

ANDERSEN, Ariel Andrew, Chf., Hot Branch, BW Div., Dugway Proving Grounds, Tooele, Utah; Home Address: 1000 Briar Ave., Provo, Utah. BACTERIOLOGY. b. Hyrum, Utah, July 6, 1905. s. Joseph Willard and Carrie (Thoresen) A. Edn.: B.S., Utah State Agril. Coll., 1932; M.S., *ibid.*, 1935; Ph.D., Iowa State Coll., 1941. m. Ines Morgan, June 1, 1932. c.: Marlo; Cordell; Gayle; Howard; Jolene. Exp.: Grad. Asst., Utah State Coll., Logan, Utah, 1932-35; Rsch. Fellow, Iowa State Coll., Ames, Iowa, 1935-38; Instr. and Asst. Prof., Utah State Coll., 1938-40; Rsch. Assoc., Iowa State, 1940-41; Rsch. Assoc., Inst. for Med. Rsch., The Christ Hosp., Cincinnati, Ohio, 1941-42; Bacteriol., Western Regional Rsch. Lab., U. S. Dept. of Agri., Albany, Calif., 1942-52; Bacteriologist, Dugway Proving Grounds, Tooele, Utah, 1952—. Mem.: Sigma Xi; A.A.A.S.; Soc. of Amer. Bacteriologists; Inst. of Food Tech.; Amer. Chem. Soc. Contrb. to: Jour. of Bacteriol.; Food Tech.; Jour. of Indus. and Engrng. Chem.; Sci. Special Int.: Developed an Accurate Rapid Method for the Quantitative Determination of the Spores of *Clostridium botulinum*, the Deadly Food-Poisoning Organism. General Int.: Food Bacteriol.

ANDERSEN, Emma Nathali, Asst. Prof. of Botany, Univ. of Nebr., Lincoln, Nebr. MORPHOLOGY.

ANDERSON, Alfred L., Prof. of Geology, Dept. of Geology, McGraw Hall, Cornell Univ., Ithaca, N. Y. GEOLOGY (ECONOMIC). b. Moscow, Idaho, November 19, 1900. s. Carl F. and Anna E. (Weholt) A. Edn.: B.S., Univ. of Idaho, 1922; M.S., Univ. of Idaho, 1923; Ph.D., Univ. of Chicago, 1931. m. Evelyn Bennett of Forest Grove, Ore., July 2, 1934. d. George H. and Cynthia Bennett. c.: Patricia Evelyn; Alfred Bennett. Exp.: Asst. Prof., Idaho Tech. Inst., Pocatello, Idaho, 1924-26; Asst. Prof., Geol. Univ. of Idaho, Moscow, Idaho, 1927-30; Prof. of Geol., Univ. of Idaho, Moscow, Idaho, 1931-39; Asst. Prof. Geol., Cornell Univ., Ithaca, N. Y., 1939-40; Assoc. Prof., Geol., Cornell Univ., Ithaca, New York, 1940-51; Prof. of Geol., *ibid.*, 1952—; Geologist, Idaho Bureau of Mines and Geology, 1926-50; Geologist, U. S. Geological Survey, 1931-45, 1948—; Mem.: Sigma Xi; Fellow, Geol. Soc. of Am.; Fellow, Mineral Soc. of Amer.; Mem., Soc. of Ex. Geologists; Mem., Amer. Institute of Mining and Metallurgical Engrs.; Mem., Geophysical Union; Phi Beta Kappa; Fellow, A.A.A.S.; Delta Tau Delta. Author: *Bulletins* 944-b and 944-c, (1948) U. S. Geological Survey (Govt. Printing Office); Many Bull. and Pamphlets of the Idaho Bur. of Mines and Geol., 1924—. Contrb. to: Bull. Geol. Soc. of Amer.; Jour. of Geol.; Ec. Geol.; Amer. Jour. Sci. Ph.D. Dissertation: Geol. and Min. Resources of E. Cassia Co., Idaho. Travel: Widespread travel in W. States. Hobby: Travel. Listed in: Who's Who in the East; Who's Who in Engrng.; Who Knows— and What; Who's Who in N. Y. Special Int.: Genesis of Mineral Deposits; Petrology of the Igneous Rocks; Mineral Resources.

ANDERSON, Arthur, Agri. Economist, Bureau of Reclamation, U. S. Dept. of Interior, 4122 Edmunds St., N. W., Washington, D. C. LAND CLASSIFICATION.

ANDERSON, Arthur von Krogh, Prof. of Physiol. Chem., Pa. State Coll., State Coll., Pa. BIOCHEMISTRY. b. Montevideo, Minn., Feb. 27, 1890. s. Abel and Mary (Olson) A. Edn.: B.S., Univ. of Minn., 1913; M.S., *ibid.*, 1915; Ph.D., *ibid.*, 1923. m. Edith Elizabeth Huntington, Dec. 27, 1923. c.: Barbara Jane; Mary Eldrid; Rebecca Ann; Arthur von Krogh, Jr. Exp.: Grad. Asst., Univ. of Minn., 1913-15; Shevlin Fellow, *ibid.*, 1915-16; Hd., Dept. of Chem., St. Olaf Coll., 1916-18; Instr. in Chem., Univ. of Minn., 1919-20; Instr. in Agril. Biochem., *ibid.*, 1920-23; Assoc. Prof. of Physiol. Chem., Pa. State Coll., 1923-29; Prof. of Physiol. Chem., *ibid.*, 1929—. Mem.: Amer. Chem. Soc.; A.A.A.S.; Pa. Chem. Soc.; Pa. Acad. of Sci.; Alpha Gamma Rho; Sigma Xi; Phi Kappa Phi; Gamma Sigma Delta; Phi Lambda Upsilon; Gamma Alpha; Alpha Epsilon Delta. Author: *Essentials of Physiol. Chem.*, 1935; *Lab. Experiments in Physiol. Chem.*, 1936. Contrb. to: Jour. Biol. Chem.; Jour. Lab. and Clin. Med.; Jour. Amer. Chem. Soc.; Jour. Indus. and Engrng. Chem.; Sci.; etc. Special Int.: Blood Chem.; Fungus Metabolism.

ANDERSON, Attell Baldwin, Mem. of Tech. Staff, Bell Telephone Labs., Whippany, N. J. PHYSIOLOGICAL ACUSTICS; SERVO ELECTRONICS. b. Brooklyn, N. Y., July 25, 1913. s. Axel Leonard and Bertha E. (Olson) A. Edn.: B.S., N. Y. Univ., 1940. m. Ruth T. Johnson, June 22, 1946. c.: Martin Leonard; Attell Theodore. Exp.: Mem. of Technical Staff, Bell Telephone Labs., Whippany, N. J., 1940—. Mem.: Inst. of Radio Engrs.; Acoustical Soc. of Amer.; Pi Mu Epsilon; Sigma Pi Sigma; Psi Chi. Contrb. to: Jour. Soc. of Motion Picture Engrs.; Jour. Acoustical Soc. of Amer. Special Int.: Studies of Physiol. Acoustics; Design of Electronic Circuits and for Electronic Fire Control Equipment.

ANDERSON, Bertil Gottfrid, Prof. of Zool. and Hd. Dept., The Pa. State Coll., State Coll., Pa. ZOOLOGICAL PHYSIOLOGY. b. Escanaba, Mich., Jan. 5, 1904. s. August B. and Anna M. (Johnson) A. Edn.: A.B., Augustana Coll., 1926; M.S., State Univ. of Iowa, 1929; Ph.D., *ibid.*, 1930. m. Lorraine D. Ossian, June 9, 1931. c.: Louise; John; James. Exp.: Instr. in Biol., West. Reserve Univ., 1930-38; Asst. Prof. of Biol., *ibid.*, 1938-41; Rsch. Assoc., Franz Theodore Stone Lab., Ohio State Univ., 1941-42; Instr. in Zool., W. Va. Univ., 1942-43;

Asst. Prof., *ibid.*, 1943-45; Assoc. Prof., *ibid.*, 1945-49; Prof. of Biol., *ibid.*, 1949-53; Prof. of Zool. and Hd. Dept. of Zool. and Entomol., Pa. State Coll., State Coll., Pa., 1953—. Mem.: A.A.A.S.; W. Va. Acad. of Sci.; Ohio Acad. Sci.; Amer. Soc. Naturalists; Amer. Soc. of Limnology and Oceanography; Amer. Fisheries Soc.; Aquatic Life Advisory Com., Ohio River Valley Water Sanitation Comm.; Com. on Toxicity, Federation of Sewage Works Assn.; Gamma Alpha; Sigma Xi. Contrb. to: Ohio Jour. Sci.; Amer. Naturalist; Physiol. Zool.; Sewage and Industrial Wastes; Trans. Amer. Fisheries Soc.; Growth; Sci.; Sci. Edn.; Ecology; Assoc. Editor, Transactions of the Amer. Fisheries Soc. Special Int.: Biol. of the Cladocera; Toxicity of Industrial Wastes; Industrial Pollution.

ANDERSON, Carl David, Prof. of Physics, Calif. Inst. of Tech., Pasadena, Calif. PHYSICS—COSMIC RAYS—ELEMENTARY PARTICLE RESEARCH. b. N. Y., N. Y., Sept. 3, 1905. s. Carl David and Emma Adolfin (Ajaxson) A. Edn.: Ph.D., Calif. Inst. of Tech., 1930. Hon. Deg.: Sc.D., Colgate Univ., 1937; LL.D., Temple Univ., 1948. m. Lorraine E. Anderson, June 30, 1946. c.: Marshall; David. Exp.: Rsch. Fellow, Calif. Inst. of Tech., 1930-33; Asst. Prof., *ibid.*, 1933-37; Assoc. Prof., *ibid.*, 1937-39; Prof., *ibid.*, 1939—. Mem.: Natl. Acad. Sci.; Amer. Philos. Soc.; Amer. Physical Soc.; Sigma Xi; Tau Beta Pi. Contrb. to: Physical Rev.; Nature; Sci. War Record; With N.D.R.C. and O.S.R.D. Special Int.: Physics, Cosmic Rays, Elem. Particle Rsch.

ANDERSON, Carrolle E., Asst. Prof. of Biol., Sweet Briar Coll., Sweet Briar, Va. ANATOMY, MORPHOLOGY.

ANDERSON, Dean Albert, Prof. of Biology, Chmn. Division of Natural Sci., Los Angeles State Coll., Los Angeles, Calif. b. Sept. 27, 1905, Pleasant Grove, Utah. BACTERIAL PHYSIOLOGY. s. Albert and Annie Caroline (Radmall) A. Edn.: B.S., Brigham Young Univ., 1929; M.S., Ia. St. Coll., 1930; Ph.D., *ibid.*, 1932. m. Elva Brown of Pleasant Grove, Utah, May 26, 1927. d. Walter C. and Maude K. Brown. c.: LaDeane, Gordon Knight. Exp.: Tchng. Fellow, Ia. State Coll., 1929-30; Rsch. Fellow, *ibid.*, 1930-33; Hd., Dept. of Bacteriol., Weber Coll., Ogden, Utah, 1933-41; Ogden City Bacteriol., 1934-35; Rsch. Assoc., Intermt. Forest and Range Exp. Sta., summers 1936-38; Asst. Prof. of Bacteriol. and Agron., Brigham Young Univ., 1941-43; Assoc. Prof., 1943—; Rsch. Assoc., Stanford Univ., 1948 (on leave); Major, U. S. Army, 1943-46; Prof. of Biol., Chmn., Div. of Nat. Sci., Los Angeles State Coll., 1950—. Hon. Pos.: Chmn., Applied Biol. Sci. Sect., Utah Acad. of Sci., 1940-41, and 1947; Fellow, Utah Acad. of Sci., 1942; Fellow, A.A.A.S., 1943; Sec., Lab. Sect., Utah Pub. Health Assn., 1940-42; Dir., Utah Pub. Health Assn., 1947; Sec., *ibid.*, 1949; Mem. of House of Delegates, Utah Edn. Assn., 1938-39; Sec., 1947 and Pres., 1948-49, Intermt. Br., Soc. of Amer. Bacteriologists; Coun., So. Calif. Branch, Soc. Amer. Bact., 1952. Mem.: A.A.A.S.; Amer. Pub. Health Assn., Soc. for Gen. Microbiol.; Utah Edn. Assn.; Utah Acad. of Sci.; Sigma Xi; Phi Kappa Phi; Gamma Sigma Delta; Phi Lambda Upsilon. Contrb. to: Soil Sci.; Jour. of Bacteriol.; Centralblatt für Bakteriologie. Ph.D. Dissertation: The Production of Gums by Certain Species of Rhizobium. Hobbies: Book Collecting; Photography. Special Int.: Pub. Health bacteriology, bacterial veruses, general bacteriology.

ANDERSON, Donald B., Prof. of Botany, N. C. State Coll., Raleigh, N. C. PLANT PHYSIOLOGY.

ANDERSON, Douglas Smith, Prof. Emer. Elec. Engrng., Tulane Univ., New Orleans, La.; Ogunquit, Maine. ELECTRICAL ENGINEERING.

ANDERSON, Earl Jennings, Plant Pathologist, Pineapple Rsch. Inst., Box 3166 Honolulu, Hawaii. PLANT PATHOLOGY.

ANDERSON, Edgar, Geneticist, Mo. Botanical Garden and Engelmann Prof. of Botany, Wash. Univ., St. Louis, Mo. SPECIES PROBLEMS.

ANDERSON, Edward Everett, Asst. Rsch. Prof. in Food Technology, Food Technology Dept., Univ. of Mass., Amherst, Mass. FOOD TECHNOL-

OGY. b. Peabody, Mass., December 20, 1919. s. Lewis Leonard and Flora Wills (Orchard) A. Edn.: B.S. in Bact., Mass. State Coll., 1941; M.S. ibid., 1942; Ph.D., Univ. of Mass., 1949. m. Elva Marie Foerster Anderson of Springfield, Mass., June 12, 1948. d. William and Dorothy Foerster. c.: Gail Anne; Noel Edward. Exp.: Fed. Food Insp., 1942-44 in the War Food Admin.; Tchng. Fellow at the Univ. of Mass., 1947-48; Asst. Rsch. Prof. at the Univ. of Mass., 1948—. Mem.: Sigma Xi; Amer. Chem. Soc.; Amer. Assn. Advancement Sci.; Inst. of Food Technologists; Fellow, Amer. Public Health Assn.; Sigma Alpha Epsilon. Contrb. to: Food Rsch.; Food Ind.; Food Technol.; Jour. Amer. Dietetic Assn. Ph.D. Dissertation: The Influence of Food Ingredients on the Thermal Resistance of the Acid Food Spoilage Organism *Bacillus Thermoacidurans*. War Record: 1944-46, Lt. in the U. S. Naval Reserve. Travel: Japan; Philippines, (with the Navy). Hobbies: Golf, Tennis; Philately. Listed in: A.M.S. Special Int.: (1) Use of Synthetic Sweetness in Canned and Frozen Fruits; (2) Thermal destruction Characteristics of Food Spoilage Organisms and Enzymes; (3) Quality Evaluation of Processed and Frozen Foods.

ANDERSON, Edwin J., Asst. Prof. of Apiculture, 12 Frear Lab., Pa. State Coll., State Coll., Pa. BEEKEEPING.

ANDERSON, Elda E., Prof. of Physics, Milwaukee-Downer Coll., Milwaukee, Wis. SPECTROSCOPY.

ANDERSON, Ernest, Prof. of Chem., Univ. of Ariz., Tucson, Ariz. ORGANIC CHEMISTRY. b. Kaufman, Tex., Feb. 1, 1881. s. William Robert and Emily (Muckleroy) A. Edn.: B.A., Trinity Univ., 1903; B.S., Univ. of Tex., 1903; M.S. ibid., 1904; Ph.D., Univ. of Chicago, 1909. m. Lillian Hilliard, 1907. c.: William Ernest; Frank Hilliard. Exp.: Rsch. Asst., Univ. of Chicago, Chicago, Ill., 1909-12; Prof. of Chem., Mass. State Coll., 1912-17; Prof. of Agril. Chem., Univ. of South Africa, 1917-20; Prof. of Chem., Univ. of Nebr., 1920-23; Prof. of Chem., Hd. of Dept., Univ. of Ariz., 1923-52; Retired Prof. of Chem., ibid., 1952—. Mem.: Phi Beta Kappa; Sigma Xi. Contrb. to: Jour. Amer. Chem. Soc.; Jour. Biol. Chem.; Jour. Amer. Pharmaceutical Assn. Special Int.: Chem. of Carbohydrated, Especially the Sugars, Plant Gums and Mucilages.

ANDERSON, Ernst Gustaf, Div. of Biol., Calif. Inst. of Tech., Pasadena, Calif. ZOOLOGICAL SCIENCES.

ANDERSON, Gaylord West, Mayo Prof. and Dir., Schl. of Public Health, Univ. of Minn., Minneapolis 14, Minn. PUBLIC HEALTH. b. Minneapolis, Minn., Dec. 31, 1901. s. Frank Maloy and Mary G. (Steele) A. Edn.: A.B., Dartmouth, 1922; M.D., Harvard, 1928; Dr.P.H., ibid., 1942. m. Viola M. Dennis, Oct. 26, 1929. c.: Gail Elizabeth. Exp.: Epidemiol., Mass. Dept. of Public Health, 1929-30; Asst. Dir., Div. of Communicable Diseases, ibid., 1930-31; Dir., ibid., 1931-37; Deputy Commr. of Public Health, ibid., 1931-37; Prof. and Hd., Dept. of Preventive Med. and Public Health, Univ. of Minn., Minneapolis, Minn., 1937-46; Mayo Prof. and Dir., Schl. of Public Health, ibid., 1946—. Mem.: Amer. Public Health Assn., (Pres., 1952); Amer. Epidemiol. Soc. (Pres., 1951); Amer. Med. Assn.; Mass. Med. Soc.; A.A.A.S.; Phi Beta Kappa; Sigma Xi; Alpha Omega Alpha. Contrb. to: Amer. Jour. of Public Health; Amer. Jour. of Hygiene; Jour. of Pediatrics. Special Int.: Epidemiol.

ANDERSON, George Harold, Vice-Pres., Lone Star Steel Co., 215 Cotton Exchange Bldg., Dallas, Tex. MINING GEOLOGY.

ANDERSON, Gordon Vladimir, Asst. Dir., Testing and Guid. Bur.; Lectr. in Edn., Psychol., Univ. of Tex., Austin, Tex. PSYCHOLOGY. b. Apr. 6, 1910, Wausa, Nebr. s. Carl A. and Olga E. (Monteen) A. Edn.: A.B., Augustana Coll., Ill., 1932; M.A., Univ. of Nebr., 1940; Ph.D., Univ. of Minn., 1945. m. Atha Grothe of Walthill, Nebr., Nov. 28, 1935. d. H. J. Grothe. c.: Roger Kent. Exp.: Ed., Wausa, Nebr., Gazette, 1929-31, 1934-36; Soc. Sci. and Music Tehr., Hazleton, Ia., H. S., 1932-34; Interviewer and Admin. Asst., U. S. Emp. Serv., Lincoln, Nebr., 1936-41; Dir., Stud. Coun. Bur. and Asst.

Prof. Psychol., Univ. of Minn., 1942-45; Asst. Prof. of Psychol. and Dir. Grad. Trng., Pers. Wk., Div. of Correlated Studies, Northwestern Univ., Evanston, Ill., 1945-47; Lectr. in Edn. Psychol. and Asst. Dir., Testing and Guid. Bur., Univ. of Tex., 1947—. Mem.: Am. Psychol. Assn.; Tex. Psychol. Assn.; Psychometric Soc.; Sigma Xi; Phi Delta Kappa; Amer. Coll. Pers. Assn.; Pi Upsilon Gamma. Contrb. to: Rev. Ednl. Res. Ph.D. Dissertation: Factorial Analysis of Attitudes Toward Community Problems. Travel: Europe; Great Britain; Scandinavia. Hobbies: Golf; Music. Listed in: A.M.S.

ANDERSON, Hamilton H., Div. Pharmacol., Univ. of Calif., Med. Schl., San Francisco, Calif. MEDICINE.

ANDERSON, Harry Warren, Prof. of Plant Pathol. and Hd., Div. of Horticulture, Univ. of Ill., Urbana, Ill. PLANT PATHOLOGY.

ANDERSON, Irving Howard, Assoc. Prof. of Ednl. Psychol., Schl. of Edn., Univ. of Mich., Ann Arbor, Mich. EDUCATIONAL PSYCHOLOGY.

ANDERSON, John A., retired, Box 332, Pasadena, Calif. PHYSICS, ASTRONOMY.

ANDERSON, John Arlington, Assoc. Prof. of Bacteriol., Rutgers Univ., New Brunswick, N. J. BACTERIOLOGY.

ANDERSON, John Edward, Dir., Inst. Child Welfare, Univ. of Minn., Minneapolis, Minn. PSYCHOLOGY, CHILD DEVELOPMENT.

ANDERSON, John F., Hon. Dir., Bd. of Dirs., E. R. Squibb and Sons, 195 College Ave., New Brunswick, N. J. BACTERIOLOGY, EXPERIMENTAL MEDICINE AND PUBLIC HEALTH.

ANDERSON, Leroy, retired, Box 269, Rt. 1, San Jose, Calif. AGRICULTURE.

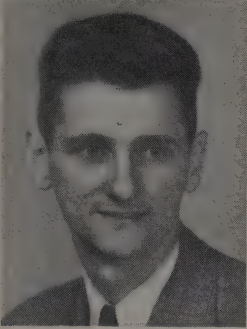
ANDERSON, Myron S., Sr. Chemist, Plant Industry Station, U. S. D. A., 1433 Manchester Lane, N. W., Washington, D. C. CHEMISTRY.

ANDERSON, Nelson J., Prof. of Chem. Bus. Address: Suffolk Univ., 20 Derne St., Boston, Mass.

Home Address: 339 Lowell St., Wakefield, Mass. PHYSICAL CHEMISTRY. b. Burchar, Nebr., Dec. 19, 1894. s. Anson and Ida (Botcholett) A. Edn.: B.S., Kans. State Coll., 1920; M.S., Univ. of Ill., 1922; Ph.D., Univ. of Chicago, 1934. m. Christine Coll of Manhattan, Kans., 1923. c.: Robert Dean; Ida Mae; Carol Jay; Arvin Dale. Exp.: Prin., Olsburg H. S., Olsburg, Kans., 1920-21; Grad. Asst., Tchng. and Rsch., Univ. of Ill., 1921-22; Dir., Dept. of Phys. Sci., Parsons Jr. Coll., 1922-25; Dir., Dept. of Chem., W.T.H.S., Waukegan, Ill., 1925-36; Instr. of Chem., Montana St. Coll., 1936-39; Prof. of Chem., Billings Polytechnical Inst., Billings, Mont., 1939-40; Prof. of Chem., Evansville Coll., Evansville, Ind., 1946-48; Dir., Dept. of Chem., Suffolk Univ., Boston, 1948—. Hon. Pos.: Chmn., S. E. Sect., Kans. State Tchrs. Assn. Mem.: Phi Kappa Phi; Sigma Xi; Amer. Chem. Soc.; Gamma Sigma Delta; Lambda Chi Alpha; Mason; Scabbard and Blade. Contrb. to: Jour. Chem. Edn. Ph.D. Dissertation: The E.M.F. of the Cell Pt, H₂, HCl, AgCl, Ag with extremely dilute electrolyte. War Record: Veteran 3 major engagements World War I; Lt. Col. QMC, Army, 6 yrs. World War II. Travel: N. Amer.; England; France; Belgium; Germany. Hobbies: Tennis; History. Listed in: A.M.S.; Who Knows. Special Int.: Cooling Curves for Aqueous Solutions of Alkali Halides.

ANDERSON, Rudolph John, Yale Univ., New Haven, Conn.

ANDERSON, Robert Edwin, Asst. Prof. of Elec. Engrng. and Asst. Exec. Assoc., Newark Coll. of Engrng., 21 Theodore St., Wharton, N. J. ELECTRICAL ENGINEERING. b. Wharton, N. J., Feb. 22, 1919. s. Edwin William and Johanna (Waters) A. Edn.: B.S., Newark Coll. of Engrng., 1939; M.S., Univ. of N. H., 1948. m. Frances H. MacPhail, Apr. 11, 1942. c.: Barbara Jean; Carol Jane. Exp.: Elec. Engr., Asst. Foreman, Federal Shipbuilding and Dry Dock Co., 1938-43; Radar Specialist, U.S.N.R. Officer, 1943-46; Electric Shop Instr., Edison Technical H. S., 1946-



47; Asst. Prof. of Elec. Engrng., Univ. of N. H., 1947-49; Asst. Prof. of Elec. Engrng., Newark Coll. of Engrng., 1949—; Special Lectr., Internatl. Business Machines, 1949—; Design Engr., Byrne Associates, Summer, 1951; Rsch. Engr., Boeing Airplane Co., Summer 1952. Mem.: Amer. Inst. Elec. Engrs.; Amer. Soc. Engrng. Edn.: Tau Beta Pi; Vector Soc.; F. & A. M.; etc. Co-author: An Introduction to Electrical Machines. War Record: Radar Specialist, U.S.N.R., 1943-46. Special Int.: Radar and Guided Missiles.

ANDERSON, Rudolph Martin, Honorary Curator, Mammalogy, Natl. Museum Can., 58 The Driveway, Ottawa, Ont., Can. MAMMALOGY.

ANDERSON, Virgil A. SPEECH AND HEARING.

ANDERSON, William, Prof. and Chmn., Dept. of Political Sci., Univ. of Minn., Minneapolis, Minn. POLITICAL SCIENCE.

ANDERSON, William Ballantyne, Emer. Prof. of Physics, Ore. State Coll., 310 N. 26th St., Corvallis, Ore. PHYSICS, ASTRONOMY, METEOROLOGY.

ANDERSON, William Elijah, Prof. Emer. Math., Miami Univ., 112 E. Walnut St., Oxford, Ohio. MATHEMATICS, ASTRONOMY.

ANDERSON, Wilmer Clayton, Dir. of Physical Rsch., Dearing Miliken Rsch. Trust, 56 Sound View Dr., Greenwich, Conn. ELECTRONICS.

ANDERVONT, Howard B., Biologist, U. S. P. H. S., Natl. Cancer Inst., Bethesda, Md. MEDICAL SCIENCES.

ANDES, Ralph Verne, Group Leader, Chem. Engrng. Dept., Brown and Bigelow, 1286 Univ. Ave., St. Paul, Minn. PHYSICAL CHEMISTRY.

ANDREW, Seymour L., retired, 25 Clark St., Brooklyn, N. Y. SOCIAL AND ECONOMIC SCIENCES.

ANDREW, Warren, Prof. of Anat., Bowman Gray Schl. of Med., Winston-Salem, N. C. MEDICINE. b. July 19, 1910, Portland, Ore. s. John and Alice (Lucke) A. Edn.: B.A., Carleton C., 1932; M.S., Brown Univ., 1933; Ph.D., Yale, 1934; Univ. of Ill., 1936; M.D., Baylor Univ., 1943. m. Nancy Valerie Miellmier of Akron, Ohio, Aug. 18, 1936. d. Fred and Anna Miellmier. c.: Linda Nancy. Exp.: Univ. of Ga., Med. Schl., Teaching Fellow, Instr., 1936-39; Baylor Med. C., Instr. in Anat., 1939-41; Asst. Prof., 1941-43; Assoc. Prof., Southwestern Med. Coll., 1943-46; Prof. of Histol., 1946-47; Prof. of Anat., Chmn. Dept., Geo. Wash. Univ., 1947-52; Visiting Prof., Univ. of Montevideo, Uruguay, 1945-46; Visiting Prof., Wash. Univ., 1948-49. Mem.: Phi Beta Kappa; A.A.A.S.; Sigma Xi; Phi Beta Kappa; Anatomists; Zoologists; Gerontologists (Coun. Mem., 1950-53). Author: Many Med. Publications. Ph.D. Dissertation: The Nissl Substance of the Purkinje Cell in the Mouse and Rat from Birth to Senility. Travel: Mexico; Bahamas; Panama; Guatemala; Uruguay; France; Italy; England. Gen. Int.: Young Man of the Year, Distinguished Service Medal, Dallas Jr. C. of C.

Hobbies: Lang.; Hiking; Nature Study. Listed in: A.M.S.; Who Knows—and What, W.W.A.

ANDREWS, Andrew I., Ceramics Bldg., Univ. of Ill., Urbana, Ill. CERAMICS.

ANDREWS, David A., Geologist, U. S. Geological Survey, Washington, D. C. GEOLOGY OF FUELS.

ANDREWS, Ethan Allen, Prof. Emer. Zool., Johns Hopkins Univ., 107 E. Lake Ave., Baltimore, Md. ZOOLOGICAL SCIENCES.

ANDREWS, James Clarence, Prof. of Biol. Chem., Schl. of Med., Univ. of N. C., Chapel Hill, N. C. BIOLOGICAL CHEMISTRY AND NUTRITION. b. Colfax, Ind., Mar. 8, 1892. s. James and Mary (Greulich) A. Edn.: B.S., State Univ. of Iowa, 1915; Ph.D., Columbia Univ., 1918. m. Kathleen Crandall of Chattanooga, Tenn., July 6, 1918. d. W. I. and Bertha Crandall. c.: James Crandall Andrews, Dorothy Elizabeth. Exp.: Asst. in Chem., Columbia Univ., 1915-18; Res. Chem., E. I. du Pont de Nemours and Co., 1918-22; Instr. in Physiol. Chem., Schl. of Med., Univ. of Pa., 1922-26; Asst. Prof. of Physiol. Chem., Univ. of Pa., 1926-37; Prof. of Biol. Chem. and Nutrition, Schl. of Med., Univ. of N. C., 1937—; Exchange Prof., Med. Schl., Natl. Univ. of Guatemala, 1944, 1948; Hon. Prof., ibid. Mem.: Sigma Xi; Phi Lambda Upsilon; Amer. Chem. Soc.; Amer. Soc. of Biol. Chem.; Elisha Mitchell Scientific Soc.; N. C. State Acad. of Sci. Author: A Lab. Manual of Food Chem.; Lab. Manual of Biol. Chem. Contrb. to: Jour. of Biol. Chem.; Jour. of Pharmacology and Experimental Therapeutics and other scientific Jours.; Rsch. on Sulfur Metabolism and the Absorption and Metabolism of Quinine and Other Anti-Malarials. Ph.D. Dissertation: The Solubilities of Acids in Aqueous Solutions of Other Acids. Listed in: A.M.S.; Who's Who in Amer. Special Int.: Sulfur Metabolism, Calculus Formation.

ANDREWS, Justin Meredith, Deputy Officer in Chg. and Sr. Scientist, Communicable Disease Center, U. S. P. H. S., Atlanta, Ga. MALARIOLOGY.

ANDREWS, Lale Clark, Mech. Engr., The M. W. Kellogg Co., 83-12 35th Ave., Jackson Heights, N. Y. HIGH TEMPERATURE PIPING—FLEXIBILITY, STRESS ANALYSIS, AND DESIGN. b. Kansas City, Mo., Dec. 18, 1900. s. B. Bell and Cora Amy (Clark) A. m. Mary Teresa Leary, July 23, 1926. c.: Lale Clark, Jr. (dec.). Exp.: Engrng. Designer, Corlite Corp., N. Y., 1925-35; Engrng. Designer, Standard Oil Co. of Calif., El Segundo, Calif., 1925-35; Engrng. Designer, Greenawalt Engrng. Co., N. Y., 1925-35; Engrng. Designer, The Dorr Co., N. Y., 1925-35; The



Texas Co., N. Y., 1925-35; Engrng. Designer, The Resin Products Co., North Bergen, N. J., 1925-35; Engrng. Designer, Checker, Design Leader, and Mechanical Engr. on Oil Refineries and Chemical Plants, The M. W. Kellogg Co., N. Y., N. Y., 1935—; Stress Analyst and Consultant on High Temperature Piping, ibid., 1940—; Engr.-in-Chg. of the Development and Operation of the Kellogg Model Test Lab., ibid., 1940—. Mem.: Soc. for Exptl. Stress Analysis; A.A.A.S.; Natl. Farm Chemurgic Council; Cornell Soc. of Engrs.; Phi Kappa Psi; etc. Contrb. to: Heating, Piping and Air Conditioning; Natl. Petroleum News; Combustion; Trans. A.S.M.E.; etc. Special Int.: The Development of Procedures and Instruments for the Determination, by Mathematical and Model Analysis, of the End Reactions and Stress in Complex Piping Systems and Similar Structures, Due to Thermal Expansion, Weight, Wind, and Vibratory Loading.

ANDREWS, Philip, Consulting Geologist, P. O. Box 266, Boulder, Colo. PETROLEUM GEOLOGY.

ANDREWS, Ted F. Assoc. Prof. of Biol. Kans. State Tchrs. Coll., Emporia, Kans. **LIMNOLOGY.**



b. Atchison, Kans., Aug. 17, 1917. s. Andrew Marion and Mary Elizabeth (Ennis) A. Edn.: A.B., Kans. State Tchrs. Coll., 1940; M.S., State Univ. of Iowa, 1942; Ph.D., Ohio State Univ., 1948. m. Mae Bryant, June 24, 1936. c.: Kenneth; Glen; Dwight; Dwayne. Exp.: Instr., Army Air Force Tech. Trng. Command, Lincoln, Nebr., 1942-43; Instr. in Phys., Univ. of Nebr., Lincoln, Nebr., 1943; Grad. Rsch. Fellow, Franz Theodore Stone Lab. of Hydrobiol., Ohio State Univ., 1946-48; Asst. Prof. of Biol., Kans. State Tchrs. Coll., 1948-51; Assoc. Prof., *ibid.*, 1951—. Hon. Pos.: Pres., Kans. Ornithological Soc., 1952; Natl. Pres., Alpha Kappa Lambda Fraternity, 1951-52; Assoc. Editor, Amer. Biol. Tchr. Jour., 1948-52. Mem.: A.A.A.S.; Amer. Inst. of Biological Sci.; Ecological Soc. of Amer.; Amer. Biol. Tchrs. Assn.; Herpetologists League; Amer. Microscopical Soc.; Alpha Kappa Lambda; Beta Beta Beta; Xi Phi; Sigma Xi; Kappa Delta Pi. Contrb. to: Trans. Kans. Acad. of Sci.; Trans. Amer. Microscopical Soc.; Amer. Biol. Tchr.; Ecology; Ohio Jour. of Sci. War Record; U.S.N.R., Ensign, Naval Air Force, 1943-46. Special Int.: Limnology.

ANDREWS, Thomas Gayleon, Prof. of Geol. and Hd. Dept., Univ. of Ala., University, Ala. **ECONOMIC GEOLOGY.**

ANDRUSHKIW, Joseph, Assoc. Prof. of Math., Seton Hall Univ., 180 S. 21st St., Irvington, N. J. **MATHEMATICS.** b. Horodok, Ukraine, Mar. 21, 1906. s. Basilus and Apollonia (Jachowski) A. Edn.: M.S., Univ. of J. Casimirus in Lwów, 1930; M.Ed., *ibid.*, 1932; Ph.D., Ukrainian Free Univ. of Munich, Germany, 1946; Dr. Habil., *ibid.*, 1947. m. Sophie Kulchysky, 1932. c.: Bohdan; Roman. Exp.: Staff, State Tchrs. Coll., Kentucky, Poland, 1930-35; State Gymnasium and Lyceum, *ibid.*, 1936-39; Instr. in Math., Univ. of Lwów, 1939-40; Prof. of Math., then Dir. of Coll., Ukrainian Tchrs. Coll., 1945-48; Asst. Prof. of Math., Ukrainian Free Univ. in Munich, 1947-49; Asst. then Assoc. Prof. of Math., Seton Hall Univ., South Orange, N. J., 1949—. Hon. Pos.: Vice-Pres., Shevchenko Scientific Soc., N. Y., N. Y. Mem.: Amer. Math. Soc.; Math. Assn. of Amer.; Soc. of Ukrainian Engrs. in Amer. Contrb. to: Bull. Amer. Math. Soc.; Proc. Shevchenko Soc. Special Int.: Algebra (Real Fields); Theory of Functions (Integral Functions).



ANGEL, Grover L (aMarr), Asst. Director, Coll. of Gen. Studies, Geo. Wash. Univ., Wash., D. C. Home: 9205 Glenville Rd., Silver Spring, Md. and Mars Hill, N. C. **SCIENTIFIC PERSONNEL SPECIALIST.** b. July 2, 1909, Mars Hill, N. C. s. Samuel Whittington and Sue (Gardner) A. Edn.: A.B., High Point Coll., 1929; M.A., Geo. Wash. Univ., 1946; Doctorate Work, *ibid.*, 1946-50; Univ. of N. C., summer 1930; Mars Hill-Meredith-Wake Forest Summer Schl., 1937; Northwestern Univ., summer 1950. m. Mary Nell English of Mars Hill, N. C., Dec. 27, 1937. d. Lattie B. and Ada (Metcalf) English. Exp.: Tchr., Denton, N. C. H. S., 1929-31; Tchr., Spring Creek, N. C. H. S., 1931-35; Tchr., Beech Glen, N. C. H. S., 1936-37; Hd. Eng. Dept., Marshall, N. C. H. S., 1937-39;

Prin., Hot Springs, N. C. H. S., 1939-42; Newspaper Corres., The Asheville (N.C.) Citizen-Times, 1931-42; Spec. Investigator, Dun and Bradstreet, Inc., Wash., D. C., 1942-43; Mgr., *ibid.*, 1943-45; Consultant, Office of Naval Rsch., Navy Dept., 1946; Employment Adviser and Rep., Sci. Personnel Div., Navy Dept., and Naval Rsch. Lab., Wash., D. C., 1946-47; Rsch. Assoc., Amer. Coun. on Edn., Wash., D. C., 1947-50; Asst. to the Dean, Coll. of Gen. Studies, Geo. Wash. Univ., Wash., D. C., 1950—. Mem.: N.E.A.; N.C.E.A.; A.A.A.S.; Amer. Ednl. Rsch. Assn.; Natl. Voc. Guidance Assn.; Soc. for Adv. of Mgt.; Soc. for Personnel Admin.; Phi Delta Kappa; Epsilon Eta Phi; Jr. Order of United Amer. Mechanics; Navy Labs. Adv. Com. on Scientific Personnel; Methodist Ch.; Red Cross; Y.M.C.A. Author: Poetry in Contemporary Amer. Writers, 1937-38; Tchr. Application Forms, 1946. Travel: Canada; U. S. Hobbies: Oil Painting; Poetry; Journalism. Listed in: Who's Who in Amer.; Who Knows—And What; Who's Who in the South and Southwest; A.M.S.; Internatl. World Who's Who; Internatl. Blue Book. Special Int.: Scientific Personnel Rsch.; Ednl. Rsch.

ANGERER, Clifford A. Asst. Prof. of Physiol., Ohio State Univ., Columbus, Ohio. **PHYSIOLOGY.**

ANGIER, James Franklin, Consultant to Administrator, Civil Aeronautics Admin., 239 Maple Ave., Takoma Park, Md. **AERONAUTICS.**

ANGRIST, Alfred Alvin, Dir. of Labs., Queens General Triboro Jewish Memorial Hosps., 166-19 89th Ave., Jamaica, N. Y. **PATHOLOGY.**

ANGULO Y, Gonzalez A. W., Assoc. Prof. of Anatomy, Hahnemann Med. Coll., Philadelphia, Pa. **ANATOMY.**

ANNAND, Percy Nicol, Chf., Bureau Entomol. and Plant Quarantine, 4247 Vacation Lane, Arlington, Va. **ENTOMOLOGY.**

ANSBACHER, Heinz Ludwig, Assoc. Prof. of Psychol., Univ. of Vt., Burlington, Vt. **PSYCHOLOGY.**

ANSBACHER, Stefan, 17 Loel Court, Rockville Center, N. Y. **MEDICAL CHEMISTRY, NUTRITION.**

ANSLOW, Gladys Amelia, Prof. of Physics and Dir., Grad. Study, Smith Coll., Northampton, Mass. **ATOMIC PHYSICS AND SPECTROSCOPY.**

ANSON, Barry, Northwestern Univ. Med. Schl., Chicago, Ill. **ANATOMY.**

ANSPACH, Charles LeRoy, Pres., Central Mich. Coll. of Edn., Mt. Pleasant, Mich. **SOCIOLOGY.**

ANTEVS, Ernst Valdemar, Private Rsch., The Corral, Globe, Ariz. **GEOLOGY OF THE PLEISTOCENE EPOCH.** b. Vartofta, Sweden, Nov. 20, 1888. s. Clas F. and Ada S. (Eriksson) A. Edn.: Ph.Mag., Univ. of Stockholm, 1912; Ph.Lic., *ibid.*, 1916; Ph.D., *ibid.*, 1917. m. Ada E. Bradford, Oct. 8, 1929. Exp.: Rsch. Assoc., Amer. Geographical Soc., 1921-22; Rsch. Assoc., Carnegie Institution of Wash., 1922-23; Rsch. Assoc., Geol. Survey of Can., 1923-24; Harvard Univ., 1924-26; Rsch. Assoc., Carnegie Institution of Wash., 1928-29; Geol. Survey of Can., 1929-30; Carnegie Institution of Wash., 1934-40; Private Rsch., 1940—. Mem.: Amer. Anthropol. Assn.; A.A.A.S.; Amer. Geog. Soc.; Amer. Geophys. Union; Amer. Met. Soc.; Assn. Amer. Geographers; Ecol. Soc. Amer.; Geol. Soc. Amer.; Phila. Acad. Natural Sci.; Soc. Amer. Archaeol. Contrb. to: Jour. Geol.; Amer. Jour. Sci.; Bull. Geol. Soc. Amer.; etc. Special Int.: Geol. of the Pleistocene, especially chronology and climate of the last 25,000 years; Age of Early Man in America.

ANTHONY, Myron Vernon, Asst. Production Mgr., Stauffer Chemical Co., 420 Lexington Ave., N. Y., N. Y.

ANTHONY, Roy David, Rsch. Prof. of Pomology, Pa. State Coll., State Coll., Pa. **POMOLOGY.**

ANTMAN, Martin A., Technical Advisor, U. S. Air Force Cambridge Rsch. Center, 54 Grant Ave.,

Watertown 72, Mass. **MILITARY ELECTRONIC SYSTEMS.** b. N. Y., N. Y., Aug. 4, 1919. s. Harry O. and Helen (Edelman) A. Edn.: S.B., Mass. Inst. of Tech., 1940. m. Dorothea Jean Anderson, Aug. 4, 1946. c.: Bruce Harmon. Exp.: Electronic Scientist, U. S. Air Force Wright-Patterson Air Force Base, 1940-50; Electronic Scientist, U. S. Air Force Cambridge Rsch. Center, 1951—. Hon. Pos.: Mem., IRE Circuits Com., 1947-48; Officer, Various IRE Section Committees. Mem.: Senior Mem., Inst. of Radio Engrs.; A.A.A.S.; Rsch. Soc. Amer. Gen. Int.: Co-inventor, Infomax Technique for Extending Range of Radio Communications; Inventor, Various Circuits and Systems used in Radio and Radar. Special Int.: Formulation of Information for Radio Communication; Processing of Radar Data.

ANTONOFF, George, Prof. of Physical Chem., Fordham Univ., N. Y., N. Y. PHYSICAL CHEMISTRY.

ANTOPOL, William, Pathologist, Dir. of Labs., and Rsch., Beth Israel Hosp., New York 3, N. Y. EXPERIMENTAL MEDICINE AND PATHOLOGY. b. N. Y., N. Y., Apr. 6, 1903. s. Israel A. and Mata (Elman) A. Edn.: B.S., Coll. of City of N. Y., 1923; M.D., Long Island Coll. Hosp., 1927. m. Bella Scholer, 1937. c.: Michel Richard; Stephen Charles. Exp.: Interne, Beth El Hosp., Brooklyn, N. Y., 1927-28; Geo. Blumenthal Fellow in Pathol., The Mt. Sinai Hosp., N. Y., N. Y., 1928-29; Theo. Escherich Fellow in Pathol., *ibid.*, 1929-30; Asst. in Pathol., *ibid.*, 1930-36; Pathologist and Dir. of Labs., Bayonne Hosp., and Dispensary, 1930-35; Pathologist and Dir. of Labs., Newark Beth Israel Hosp., 1935-49; Consultant, *ibid.*, 1949; Leave of Absence 1943-46, Army of U. S. Discharged as Lt. Col. Med. Corps; Pathologist and Dir. of Labs. and Rsch., Beth Israel Hosp., N. Y., N. Y., 1949—. Dir. of Rsch., Joseph and Hemen Yeamans Levy Foundation, 1949—. Clinical Prof. of Pathol., N. Y. Univ. Med. Schl., 1949—. Chf. Consultant in Pathol., U. S. Veterans Hosp., Lyons, N. J., 1947—. Mem.: Sigma Xi; Fellow, N. Y. Acad. Med.; Acad. of Med. of Northern N. J.; Amer. Soc. Clinical Pathologists; Assn. Amer. Pathologists and Bacteriologists; Amer. Public Health Assn.; Soc. Exptl. Biol. and Med.; Biochem. Soc. of Great Britain; Coll. of Amer. Pathologists; N. Y. Pathol. Soc.; Harvey Soc.; Amer. Assn. for Cancer Rsch.; A.A.A.S.; N. Y. Acad. of Sci.; N. Y. Microscopical Soc. Contrb. to: Arch. Pathol.; Amer. Heart Jour.; Amer. Jour. Med. Sci.; Jour. Urology; Jour. A.M.A.; etc. Gen. Int.: Received Grants from Com. of Scientific Rsch. of the A.M.A. for investigation of Cholinesterase, 1934, and Nature of Shwartzman Phenomenon, 1936; Received Commendation from Surgeon General and Army Commendation Ribbon from Sec. of War for a rapid method for determining the adequacy of excision of traumatic neuromata in cases of paralysis. Special Int.: Pathol. and Physiol. of the Heart; Cholinesterase in Health and Disease; Vitamins, Their Toxicity and Mechanism of Action; Tumor and Growth; Lycopodium and Talc Granuloma; Cortisone Toxicity; Exptl. Med. and Pathol.

APFEL, Earl Taylor, Chmn. and Prof., Dept. of Geol., Syracuse Univ., Syracuse, N. Y. GENERAL GEOLOGY.

APFELBAUM, Percy Max, Asst. Prof., Coll. of the City of N. Y., N. Y., N. Y. ORGANIC CHEMISTRY.

APGAR, Charles Scheirer, Assoc. Prof. and Chf., Biol. Dept., Elizabethtown Coll., Elizabethtown, Pa. ANATOMY.

APKER, LeRoy Woodard, Physicist, Rsch. Lab., General Electric Co., Schenectady, N. Y. ELECTRONICS.

APP, Bernard Auman, Entomol., U. S. Bur. of Entomol. and Plant Quarantine, Agricultural Rsch. Center, Beltsville, Md. ENTOMOL. b. Elgin, Ill., Dec. 18, 1906. s. Oliver S. and Cornelia S. (Auman) A. Edn.: A.B., Univ. of Ill., 1930; M.S., Ohio State Univ., 1950. m. Elizabeth Mitchell, Jan. 23, 1931. c.: Josephene Helen; Donald Edward. Exp.: Entomol., U. S. Bur. of Entomol. and Plant Quarantine, 1930—. Mem.: Sigma Xi;

Gamma Sigma Delta. Special Int.: Rsch. on Injurious Insects of Legumes and the Forage Grasses.

APP, Frank, Consultant, Bridgeton, N. J. AGRICULTURE.

APPLE, James MacGregor, Prof. of Industrial Engineering, Mich. State College, East Lansing, Mich. INDUSTRIAL ENGINEERING. b.



Springfield, Mass., Sept. 6, 1915. s. Lynford Andrew and Helen (Wicks) A. Edn.: B.S., Pa. State Coll., 1938; M.S., Mich. State Coll., 1952. m. Mary Elizabeth Miller, Aug. 31, 1940. c.: James M., Jr.; Barbara Lynne; Margaret Jackson. Exp.: Production Engrng., York Corp., 1938-40; Production Engrng., Anaconda Wire and Cable Co., 1940-41; Tech. Instr., Conf. Leader, General Motors Inst., 1941-47; Assoc. Prof. of Industrial Engrng., Mich. State Coll., 1947-53; Prof., *ibid.*, 1953—. Mem.: Amer. Soc. of Engrng Edn.; Amer. Soc. Mech. Engrs.; Amer. Inst. of Indus. Engrs.; Amer. Material Handling Soc.; Triangle Frat.; Soc. for Advancement of Mgmt. Author: Plant Layout and Materials Handling, 1950; Problem Manual for P.L. and M.H., 1951. Contrb. to: Jour. Engrng. Edn. Special Int.: Plant Layout; Materials Handling.

APPLEBAUM, Edmund, Prof. of Dental Anatomy, Columbia Univ., Coll. of Physicians and Surgeons, 630 W. 168th St., N. Y. 32, N. Y. DENTAL HISTOLOGY AND EMBRYOLOGY.

APPLEBY, John I., Pres. of Staff, Bellevue Hosp., 250 W. Main St., Bellevue, Ohio. ANATOMY



HISTOLOGY AND EMBRYOLOGY; GENERAL SURGERY. b. Springfield, Mo., Aug. 13, 1893. s. Robert L. and Sarah Sadie (Hall) A. Edn.: A.B., Park Coll., 1915; A.M., Univ. of Mo., 1918; M.B., and M.D., Univ. of Minn., 1920. m. Raugua Klippen, Oct. 26, 1932. Exp.: Anatomy Asst., Univ. of Mo., 1917-18; Company Surgeon, N. Y. C. and St. L. R. R. Co., 1923-53; Pres. of Staff, Bellevue Hosp., Bellevue, Ohio, 1953—. Mem.: Sigma Xi; Amer. Assn. Anatomists;

Amer. Railway Surgeons; A.M.A.; Fellow, Amer. Assn. Adv. Sci.; Elks; Mason. Contrb. to: Carnegie Contributions to Embryol. War Record; World War I.

APPLEMAN, Milo Don, Prof. in Bacteriol., Chmn. of the Dept., Univ. of Sou. Calif., 1939 W. 79th St., Los Angeles 47, Calif. BACTERIOLOGY. b.



Wellston, Mo., Dec. 3, 1909. s. Milo Donaldson and Emma Catherine (Faust) A. Edn.: A.B., Univ. of Ill., 1931; M.S., Univ. of Ill., 1935; Ph.D., Univ. of Ill., 1940. m. Lucille Elizabeth Mieher of Carlinville, Ill., July 28, 1936. d. E. C. and Irma Mieher. c. Milo Don. Exp.: Rsch. and Tchng. Asst. in Soil Bact., Dept. of Agron., Univ. of Ill., 1936-40; Assoc. in Soil Bact., Studying Quick-freezing and Vacuum-drying of Bacteria, Univ. of Ill.,

1940-43; Asst. Prof., Univ. of Ill., 1943-47; Assoc. Prof., Dept. of Bact., Univ. of Sou. Calif., Los Angeles, Calif., 1947-51; Prof., *ibid.*, 1951—. Mem.: The Societe de Diplomes of Univ. of Nantes, France; Electron Microscope Soc.; Soc. of Amer. Bacteriol.; Soil Science of Amer.; Amer. Soc. of Agron.; Sigma Xi; Phi Sigma; Gamma Sigma Delta; Los Angeles Harbor Pollution Technical Subcom.; Instl. Mem. Assoc. Food and Container Inst.; Advisory Comm., Calif. State Dept. of Pub. Health; Natl. Citrus Com., Inst. of Food Technologists. Author: (Station Publs.); Artificial Manures, 1943; Report of Commercial Legume Inoculants, 1944; Inoculation of Legumes, 1944; The Place of Soybeans in the Rotation, 1944; Effect of Soybeans on Soil Productivity, 1944; 1945 Report of Commercial Legume Inoculants, 1946; Citrus Concentrates, 1949-51; Campus Outline of Bacteriology. Co-author: Laboratory Manual of General Bacteriology with J. W. Bartholomew and S. C. Rittenberg. Consultant: Food Industries. Contrb. to: Proc. of Inst. of Food Tech.; Ency. Britannica; Proc. Soil Sci. Soc. Amer.; Jour. of Bact.; Handbook of Biological Data, 1953—. Natl. Rsch. Council; 1952-53, publications in Food and Soil Bacteriology in Jour. Bact. and Proc. of Inst. of Food Tech. Ph.D. Dissertation: Bacterial Degradation of Starch. Hobbies: Tennis; Chess; Deep-sea Fishing. Listed in: Who's Who in World News—and Why; Who's Who on the Pacific Coast; Amer. Men of Sci.; Internatl. Blue Book; Who's Who in Amer., 1953; World Biography; Who Knows—and What; Who's Who in the West. Special Int.: Yeasts, Canning Technology, Dental Bacteriology.

APPLEMAN, Charles O., Prof. of Plant Physiol. and Dean, Grad. Schl., Univ. of Md., College Park, Md. PLANT PHYSIOLOGY.

APPLETON, Joseph Luke Teasdale, Prof. of Bacteriopathol. and Dean, Schl. of Dentistry, Univ. of Pa., Philadelphia, Pa. BACTERIOLOGY.

APPLEZWEIG, Norman, Rsch. Dir., J. B. Shohan Labs., 78 Wheeler Pt. Rd., Newark, N. J. BIOCHEMISTRY.

APPLING, John William, Dir. of Microbiol. Rsch., Buckman Lab., Inc., 2116 Univ. Circle, Memphis, Tenn. INDUSTRIAL MICROBIOLOGY. b. Urbana, Ill., Aug. 25, 1899. s. John and Julia Etta (Clements) A. Edn.: B.S., Univ. of Ill., 1921; M.S., *ibid.*, 1925; Ph.D., *ibid.*, 1940. m. Margie Elnora Dickey of Champaign, Ill., June 12, 1924. d. Charles and Martha Dickey. c.: Elizabeth Eleanor; Helen Louise (deceased). Exp.: Sci. Tchr., Belmont, Ill., H. S., 1921-23; Chem. and Phys. Tchr., Univ. H. S., Urbana, Ill., 1923-25; Chem. Prof., Mackenzie Coll., Sao Paulo, Brazil.



1925-37; Prof. of Microbiol. and Rsch. Assoc. at the Inst. of Paper Chem., Appleton, Wis., 1940-47; Dir. of Microbiol. Rsch., Buckman Lab., Inc., Memphis, Tenn., 1947 to date. Mem.: Phi Delta Kappa; Sigma Xi; Soc. of Amer. Bacteriol.; Inst. of Food Tech. Contrb. to: Tappi; Ind. and Eng. Chem. Ph.D. Dissertation: Microbiology of Pulp and Paper. War Record: Student Army Trng. Corps, U. S. Army, 1918. Travel: Brazil. Hobbies: Gardening. Listed in: A.M.S. Special Int.: Control of Microorganisms in Paper and Pulp Mills; Also in Other Industrial Processes.

APPUHN, William E. F., Prof. and Hd., Dept. of Math., St. Francis Coll., 8419 86th St., Woodhaven, L. I., N. Y. MATHEMATICS, ENGINEERING.

ARBuckle, Wendell Sherwood, Prof. Dairy Mfg. and Chief of Dairy Inspection Serv., Univ. of Md., Coll. Park, Md. DAIRY TECHNOLOGY. b. March 16, 1911, Scott County, Ind. s. Charles E. and Julia (Barton) A. Edn.: B.S.A., Purdue Univ., 1933; A.M., Univ. of Mo., 1937; Ph.D.,

1940. m. Ruth Beryl Weaver of Columbia, Mo., July 12, 1941; d. L. A. and Sadie Gordon Weaver; c.: J. Gordon, Wendy Ellen. Exp.: Earlham Coll., Richmond, Ind., Dairyman, 1933-36; Rsch. Asst. Instr., Instr., Univ. of Mo., 1936-40; Asst. Prof., Assoc. in Dairy Manufactures, Tex. A. & M. Coll., Texas Agri. Expt. Sta., 1941-45; Assoc. Prof. Dairy Manufacturer, N. Carolina St. Coll., Raleigh, 1945, 1946-49; Prof., Dairy Mfg., Univ. of Md., Coll. Park, Md., 1949—. Mem.: A.A.A.S.; American Dairy Science Association, Gamma Alpha; Sigma Xi; Gamma Sigma Delta; Kiwanis. Author: Expt. Sta. Bull., 1936—. Contrb. to: Jour. of Dairy Sci. Ph.D. Dissertation: A Microscopic and Statistical Analysis of the Texture of Ice Cream. Travel: U. S. A. Hobby: Photography. Listed in: A.M.S. Special Int.: Microscopic Analysis of Internal Structure of Ice Cream.

ARCADI, John Albert, Asst. in Urol., The Johns Hopkins Univ., Baltimore 5, Md. UROLOGY;



HISTOCHEMISTRY OF GENITOURINARY ORGANS. b. Whittier, Calif., Oct. 23, 1924. s. Antonio and Josiephine (Ramirez) A. Edn.: B.S., Univ. of Notre Dame, 1947; M.D., Johns Hopkins University Schl. of Med., 1950. m. Doris M., April 11, 1951. c.: Patrick Anthony; Michael Joseph. Exp.: Intern in Urology, The Johns Hopkins Hospital, Baltimore 5, Md., 1950-51; Fellow in Urology, National Inst. of Health, Brady Urological Inst. of the Johns Hopkins Hosp., Baltimore 5,

Md., 1951-52; Asst. in Urology, the Johns Hopkins Univ., also Urologist-in-Charge, the Inlow Clinic, Shelbyville, Ind., 1952-53. Mem.: Amer. Microscopical Soc.; Amer. Assn. of Anatomists; A.A.A.S.; The Johns Hopkins Med. and Surgical Assn.; Phi Beta Pi. Contrb. to: Jour. of Urology; Anatomical Record; Urologic and Cutaneous Review; Trans. Amer. Micro. Soc.; Stain Tech. Gen. Int.: First Published Description of Clinical Findings, and Pathological Anatomy of Cysts of the Tunica Albuginea Testis. Special Int.: Histochemistry of the Prostate of Man, Dog and Rat; Histochemistry of Renal Tumors. Function of the Connective Tissue in the Growth and Atrophy of the Prostate Gland.

ARCENEUX, George, Sr. Agronomist, U. S. D. A., 225 Bayou Black Dr., Houma, La. AGRONOMY.

ARCHER, Allan Frost, Hd., Biol. Dept., Union Univ., Jackson, Tenn. ARACHNOLOGY AND ENTOMOLOGY. b. Roxbury, Mass., Jan. 22, 1908. s. Gleason L. and Elizabeth Glenn (Snyder) A. Edn.: A.B., Harvard, 1931; M.A., Univ. of Mich., 1933; Ph.D., *ibid.*, 1936. m. Mableann Hanson, July 31, 1942. c. Allan Frost and Anne Hanson. Exp.: Asst., Mollusk Dept., Univ. Museums, Univ. of Mich., Ann Arbor, Mich., 1936-37; H. D. Rackham Postdoctora Fellowship, *ibid.*, 1937-38; Dir. of Rsch., Ala. Dept. of Conservation, Montgomery, Ala., 1939-42; State Ecol., *ibid.*, 1942-47; State Ecol., Geol. Survey of Ala., *ibid.*, 1947-49; Sr. Ecol. and Consulting Ecol., Ala. Museum of Natural Hist., Geol. Survey of Ala., University, Ala., 1949-52; Hd., Biol. Dept., Union Univ., 1952—. Mem.: Delta Mu; Sigma Xi; Amer. Entomol. Soc.; Soc. of Systematic Zool.; Ala. Acad. of Sci. Contrb. to: Amer. Museum Novitates; Nat. Hist. Miscellaneous; Museum Papers; Psyche; Nautilus. Special Int.: Study of Spiders as Predators, Particularly Their Habits, Distribution, Ecol., Morphol. and Phylogeny with Especial Attention to the Families of Web Spiders; Work on the Ecol. of Forest Insects, Especially Beetles and Termites Affecting the Econ. of Forest Trees and Shrubs, Particularly in the Tropics and Subtropics.

ARCHER, Vincent William, Prof. of Roentgenology, Univ. of Va., Box 1637, Univ. Station, Charlottesville, Va. MEDICINE, RADIOLOGY.

ARCHIBALD, Edgar Spinney, Dir., Dept. of Agri., Exptl. Farms Service, Ottawa, Ont., Can.

ARCHIBALD, R. C., Brown Univ., Providence, R. I. HISTORY OF MATHEMATICS.

ARENSON, Saul Bryan, Prof. Emer. of Inorganic Chem., Univ. of Cincinnati, 1884 Laurel Canyon Blvd., Los Angeles, Calif. INORGANIC AND ANALYTICAL CHEMISTRY.

ARENTS, Chester Abbo, Coordinator of Rsch., Ill. Inst. of Tech., Chicago 16, Ill. MECHANICAL, METALLURGICAL AND ELECTRICAL ENGINEERING. b. Leonardville, Kans., Apr. 19, 1910. s. Abbo Edward and Hazel M. (Johnson) A. Edn.: B.S., Ore. State Coll., 1932; M.S., *ibid.*, 1946; M.E., *ibid.*, 1953. m. Edna Louisa Van Vleet, 1935. Exp.: Test Engr., City of Portland, Ore., 1936-41; Assoc. Elec. Engr., Booneville Power Admin., Portland, Ore., 1941-43; Asst. Prof. Mech. Engrng., Ore. State Coll., Corvallis, Ore., 1943-46; Assoc. Prof. of Mech. Engrng., Mont. State Coll., Bozeman, Mont., 1946-47; Prof. of Mech. Engrng., Ill. Inst. of Tech., Chicago, Ill., 1947—; Coordinator of Rsch. in Chg., Ill. Inst. of Tech. Rsch. Program, *ibid.*, 1951—. Hon. Pos.: Hon. Chmn., Amer. Soc. of Mech. Engrs. Mem.: Amer. Soc. of Mech. Engrs.; Amer. Inst. of Elec. Engrs.; Ill. Soc. of Prof. Engrs.; Natl. Soc. of Prof. Engrs.; Amer. Soc. of Univ. Prof.; A.A.U.P.; Tau Beta Pi; Pi Tau Sigma; Eta Kappa Nu; Delta Lambda Xi. Contrb. to: Automotive News. Special Int.: Vibration Engrng., Project Dir. of Office of Naval Rsch. Contract on Resilient Mountings for Reciprocating and Rotating Machinery.

AREY, Leslie Brainard, Prof. of Anatomy, Northwestern Univ., Chicago, Ill. EMBRYOLOGY.

ARIES, Leon J., Asst. Prof. of Surgery, Northwestern Univ., 30 N. Michigan Ave., Chicago, Ill. SURGERY. b. Feb. 25, 1909, Chicago, Ill. s. Frank and Lizzie (Norins) A. Edn.: B.S., Univ. of Ill., 1929; M.S., *ibid.*, 1931; M.D., *ibid.*, 1931; Ph.D., Northwestern Univ., 1940. m. Marie Dorothy Lnevine of Tulsa, Okla., Sept. 26, 1945. d. Dr. Morris B. Lnevine. c.: Jane; Elizabeth; Nancy. Exp.: Instr., Surg. and Anat., Univ. of Ill., 1932-45; Assoc. Surg., Northwestern Univ., 1935-45; Asst. Prof. Surgery, *ibid.*, 1945—; Attending Surg., Cook Co. Hosp., Mt. Sinai Hosp., Grant Hosp.; Prof. of Surg., Cook Co. Grad. Schl., 1940-53. Mem.: Chicago Surg. Soc.; Alpha Omega Alpha; Sigma Xi; Phi Delta Epsilon; Amer. Coll. Surgeons; Internatl. Coll. Surgeons; Anshe Emet. Contrb. to: Surg. Gyne. Obst.; Anals Surg. Surgery; A.M.A. Ph.D. Dissertation: Growth of Femur. War Record: Lt., N. R., Med. Corps, Maj., A. U. S. Travel: Europe; N. Amer.; Cuba. Gen. Int.: Surgical Rsch.; Chicago Surgical Soc. Prize. Hobbies: Photography; Music. Listed in: A.M.S.; Who's Who in Western Hemisphere.

ARIES, Robert S(ancier), Consulting Chem. Engr., R. S. Aries & Associates, 400 Madison Ave., N. Y. 17, N. Y. NEW PRODUCTS FOR CHEMICAL PROCESS INDUSTRY. b. July 21, 1919. s. Robert Emile and Sophie (Presente) A. Edn.: Grad. Magna cum laude, Amer. Coll., 1937; Grad. Work: Univ. of Lyon, 1937-39; Columbia Univ., 1941; M.Sc., Yale Univ., 1948; B.Ch.E., Poly. Inst. of Brooklyn, N. Y., 1941; M.Ch.E., 1943, D.Ch.E., 1947, A.M., Minn., 1942. Exp.: Chem. Engr., Northwood Chem. Co., 1940-42; Conn. Hard Rubber Co., 1942; Sargent & Co., 1943; Publisher Indus., 1944; Natl.



Foam System, 1945; Instr., Dept. of Econ. Hist., Poly. Inst. of Brooklyn, 1941-42; Rsch. Assoc., Yale Univ., 1943-45; Lectr. in Engrng. and Econ., Poly. Inst. of Brooklyn, 1945—; Licensed Professional Engr., Pa., Conn., and Calif.; Consultant to Chem. Welfare Service, 1947-49; Office of Special Services, U. S. N., 1949—; Office of Naval Rsch., 1951—; Tech. Dir., Northeast Wood Utilization Coun., 1942—. Mem.: A.C.S.; Amer. Econ. Assn.; Amer. Marketing Assn.; Society for Advancement

of Mgt.; Amer. Statist. Assn.; Chem. Mkt. Rsch. Assn., Amer. Inst. of Chem. Engrng.; Amer. Soc. of Mech. Engrng.; Tech. Assn. Pulp and Paper (TAPPI); Amer. Inst. of Chemists; Société de Chimie Industrielle (Paris); Assn. of Consulting Chemists and Chemical Engrs.; Soc. of the Chem. Indus. (London). Contrb. to: Contrb. of about 100 articles in Tech. Jours. Listed in: Who's Who; A.M.S.; Who's Who in Commerce and Indus.; Who's Who in the East; Who Knows; International World Who's Who; Chem. Who's Who. Author and Co-author: Chemical Engrng. Cost Estimation; Mktg. of Chem. Products. Gen. Int.: Designed Plants in U. S. and Abroad for Industrial Alcohol, White Pigments, Hardwood Pulp and Plastics. Special Int.: Synthetic Pyridines; Nicotinic and Isonicotinic Acids; Liver Extracts; Wood Utilization including Pulp, Charcoal, Wall Board, Furfural; Organic Acids from Molasses; Bagasse Pulping.

ARISTEI, Jerome, Senior Engr., Vitro Co. of Amer., Silver Spring, Md. COMMUNICATION ENGINEERING. b. Villerupt, France, Feb. 14, 1921. s. Joseph and Josephine (Santarelli) A. Edn.: B.E.E., Pratt Inst. m. Eleanor Clark, June 8, 1946. c.: Jerome Clark; Stephen Craig. Exp.: Asst. Project Engr., Sperry Gyroscope Co., Garden City, Long Island, N. Y., 1944; Jr. Engr., *ibid.*, 1944; Asst. Staff Engr., Carbide and Carbon Chem. Co., Oak Ridge, Tenn., 1944-46; Senior Engr., Silver Spring Lab., Vitro Co., Silver Spring, Md., 1946—. Mem.: Inst. of Radio Engrs.; Philosophical Soc. of Wash. Special Int.: Radar Electronics, Servomechanisms. Analog Computers as Applied to the Field of Guided Missiles, Measurements, Control, System Evolution and Their Operational Evaluation.

ARKIN, Aaron, Rush Prof. of Med., Univ. of Ill., 25 E. Washington St., Chicago 2, Ill. INTERNAL MEDICINE, CARDIOLOGY.

ARLITT, Ada Hart, Prof. and Hd. Dept., Coll. Home Econ., Univ. of Cincinnati, Cincinnati, Ohio. PSYCHOLOGY.

ARLOW, Dr. Jacob A., Rsch. Assoc., Psychiatry, 120 W. 59th St., New York 19, N. Y. PSYCHIATRY AND PSYCHOANALYSIS. b. Sept. 3, 1912, N. Y. City. s. Adolph and Ida (Feldman) A. Edn.: B.S., N. Y. U., 1932; M.D., *ibid.*, 1936. m. Alice Diamond, Brooklyn, N. Y., October 31, 1936. d. Jacob and Judith Diamond. c.: Michael; Allan; Seth; Jonathan. Exp.: Resident Neuropsychiatrist, U. S. Public Health Service, 1938-39; Assistant Psychiatrist, King County Hospital, 1941; Assistant Clin. Neurol., Monta. Hosp., 1942-44; Instr. Neurol., Coll. Phys., 1942-44; Con. Psychiat., Pride of Judea Childrens Home, 1940-45; Rsch. Assoc., Col. Univ., 1944—. Mem.: Amer. Med. Assn.; Amer. Psychiat. Assn.; Amer. Psychol. Soc.; Amer. Psychol. Assn.; N. Y. Psychol. Assn.; Great Neck Edn. Assn. Author: Chap. Arthritis in Dunbar-Synopsis Psychol. Med. Contrb. to: Amer. Jour. Orthopsychiatry; Psycho. Quart.; Assoc. Editor, Annual Review of Psychoanalysis; Trustee, N. Y. Psychoanalytic Inst.; Amer. Jour. Psychol. Med. Listed in: Who's Who in Med.; A.M.S. Special Int.: Psychoanalysis; Psychosomatic Medicine.

ARMSBY, Henry H(orton), Chf. for Engrng. Edn., U. S. Office of Edn., Wash. 25, D. C. ENGINEERING EDUCATION. b. Mar. 12, 1891, State Coll., Pa. s. Henry Prentis and Lucy Atwood (Harding) A. Edn.: B.S. in C.E., Penn. State Coll., 1911; Civil Engr., *ibid.* m. (Mary) Ruth Bundy of Ottawa, Kans., June 22, 1937. c.: Robert Henry and Richard Edward. Exp.: Draftsman Penna. R. R., 1912-15; Prof. of Drawing, Math., and Surveying, Wis. Mining Schl., 1915-17; Instr., Asst. Prof., Assoc. Prof. of Civil Engrng., Mo. Schl. of Mines, 1917-19; Student Advisor and Assoc. Prof. of C. E., *ibid.*, 1919-20; Registrar and Student Advisor, *ibid.*, 1920-41; Field Coordinator E.D.T., E.S.M.D.T., E.S.M. W.T., U. S. Office of Edn., 1941-46; Specialist Assoc. Chf. and Chf. for Engrng. Edn., *ibid.*, 1946—. Hon. Pos.: Natl. Treas. Amer. Assn. Coll. Registrars, 1937-40; Pres. Mo. Sect., 1940-41; Pres. Mo. Sect. A.S.E.E., 1937-38; Sec., 1932-33; Mem., Natl. Coun., A.S.E.E., 1938-41, 1947-48, and 1952—; V.-Pres., 1949-51; Chmn., Com. on Secondary Schls., 1943-48; Chmn. Comm. on Atomic Energy Edn., 1951—; Chmn. Comm. on Constitution, 1951—; Comm. on Improvement of Engrng. Edn., 1950-52; Comm. on

Evaluation of Engrng. Edn., 1952—; Comm. on Soc. Function, 1952—; Mem.: Phi Kappa Phi; Sigma Nu. Author: Engrng., Sci., and Management War Trng. Final Report, 1947; A Survey of Co-operative Engineering Education, 1949. Contrb. to: Jour. of Engrng. Education (S.P.E.E.-A.S.-E.E. Jour.), Jour. of Amer. Assn. of Collegiate Registrars; Jour. of Higher Edn.; Industry and Power. Listed in: Who's Who in Engrng.

ARMSTRONG, Charles, Natl. Institutes of Health, Bethesda 14, Md.

ARMSTRONG, Clairette P., Consulting Psychologist, 114 E. 40th St., N. Y., N. Y.

ARMSTRONG, Donald Budd, 2nd Vice-Pres., Metropolitan Life Ins. Co., 1 Madison Ave., N. Y., N. Y. PUBLIC HEALTH.

ARMSTRONG, George Miller, Hd. Dept. of Botany and Bacteriology, Department of Botany and Bacteriology, Clemson, S. C. PLANT PATHOLOGY. b. Appleton, S. C., November 13, 1893. s. John B. and Elizabeth (Miller) A. Edn.: B.S., Clemson Agri. Coll., 1914; M.A., Univ. of Wis., 1917; Ph.D., Wash. Univ., St. Louis, 1921. m. Joanne L. Karner of Seattle, Wash., June 14, 1922. d. Frank and Theresa Karner. c.: George Miller, Jr.; Glenn Karner. Exp.: Grad. Asst., Clemson, 1914-15; Tchng. Asst., Univ. of Wis., 1915-17; Inst. in Bot., Clemson, 1917-18; Extension Pathologist, Ala., 1918-19; Asst. Prof. of Bot., Wash. Univ., 1921-24; Hd., Dir. of Boll Weevil Control, S. C. Exp. Sta., 1924-28; Hd., Dept. of Bot. and Bact., Clemson Coll., 1928—. Hon. Pos.: Chmn., Sou. Sect., Amer. Phytopath. Soc.; Chmn. Cotton Disease Coun.; War Comm. Amer. Phytopath. Soc. Mem.: A.A.A.S.; Amer. Soc. Plant Physiology; Amer. Phytopath. Soc.; Bot. Soc. of Amer.; S. C. Acad. of Sci.; Acacia; Phi Kappa Phi; Alpha Zeta; Rotary; Clemson Fellowship Club. Contrb. to: Jour. Agri. Res.; Annals Mo. Bot. Garden; Phytopath.; Plant Physiology. Hobby: Gardening. Special Int.: Fusaria Causing Wilt Diseases; Cotton Diseases.

ARMSTRONG, Harry George, The Surgeon General U. S. Air Force, Headquarters, U. S. Air Force, Washington 25, D. C.

AVIATION MEDICINE. b. De Smet, S. Dak., Feb. 17, 1899. s. Robert John and Lucy Anna (Flan-tje) A. Edn.: B.S., Univ. of S. Dak., 1923; M.D., Univ. of Louisville, 1925; M.A., Univ. of Cincinnati, 1940; M.S., Univ. of Toronto, Can., 1941. Hon. Deg.: D.Sc., Univ. of S. Dak., 1942; D.Sc., Univ. of Louisville, 1948. m. Mary Evelyn Sutherland on May 28, 1925. c. Jeff; Bradley. Exp.: Intern, St. Luke's Hosp., St. Paul, Minn., 1925-26; Private Practice,

Minneapolis, Minn., 1926-30; Asst. Station Surgeon, Ft. Snelling, Minn., 1930; Asst. Station Surgeon, Camp Custer, Mich., 1931; Flight Surgeon, 1st Pursuit Gr. Selfridge Field, Mich., 1931-34; Dir., Aero Med. Rsch. Lab., Wright Field, Dayton, Ohio, 1934-40; Rsch. Fellow, Univ. of Toronto, 1940-41; Military Attache, U. S. Embassy, London, England, 1941; Rsch. Div., Office of Air Surgeon, Hq. A.A.F., Washington, D. C., 1941; Dir. of Rsch., Schl. of Aviation Med., Randolph Field, Tex., 1941-42; Asst. Air Surgeon, Eighth Air Force, England, 1942-44; Air Surgeon, ibid., 1944-45; Air Surgeon, Armed Forces Div., Office of Military Govt., U. S., Berlin, Germany, 1945; Rsch. Div., Office of Air Surgeon, Hq. A. A. F., Washington, D. C., 1946; Commandant, Schl. of Aviation Med., Randolph Field, Tex., 1946-49; Deputy Surgeon General, Office of the Surgeon General, Hq. U.S.A.F., Washington, D. C., 1949; Surgeon General, ibid., 1949—. Mem.: Natl. Bd. of Med. Examiners; Brazilian Acad. of Military Med.; Airline Med. Examiners Assn.; Southeastern Surgical Congress; Amer. Med. Assn.; Aero Med. Assn.; Amer. Coll. of Phys.; Royal Soc.



of Med., (London); etc. Author: Principles and Practice of Aviation Med., 1939, 3rd Ed., 1952; Fit to Fly, with Maj. Gen. Malcolm C. Grow, 1941.

ARMSTRONG, Wallace David, Prof. and Hd. Dept. of Physiol. Chem., Univ. of Minn., Minneapolis, Minn. PHYSIOLOGICAL CHEMISTRY.

ARNASON, Thomas Johann, Assoc. Prof. of Biol., Univ. of Saskatchewan, Saskatoon, Sask., Can. GENETICS.

ARNDT, Charles H., Assoc. Botanist, S. C. Agri. Station, Clemson, S. C. BOTANY.

ARNIM, Sumter Smith, Prof. of Dentistry, Coll. of Dentistry, Ohio State Univ., Columbus, Ohio. OPERATIVE DENTISTRY.

ARNOLD, Chester Arthur, Assoc. Prof. of Botany, Univ. of Mich., Ann Arbor, Mich. PALEOBOTANY.

ARNOLD, Francis Arthur, Jr., Dental Surgeon, U. S. P. H. S., Natl. Inst. Health, Bethesda, Md. DENTISTRY.

ARNOLD, Genevieve, Dir., Speech and Hearing Clinic, Univ. of Houston, Houston 4, Tex. SPEECH PATHOLOGY. b. Montevideo, Minn., Feb. 15, 1916. d. Jerome Clarence and Martha (Wanous) A. Edn.: B.A., cum laude, Univ. of Minn., 1935; M.A., ibid., 1936. Exp.: Supvr. of Speech Correction, Austin, Minn. Public Schls., 1936-42; Vice-Pres., Central State Speech Assn., 1941-42; Instr. in Speech, Univ. of Hawaii, Honolulu, 1943-48; Assoc. Prof. of Speech Pathol., Dir., Speech and Hearing Clinic, Univ. of Houston, Houston, Tex., 1948—. Mem.: Amer. Speech and Hearing Assn.; Speech Assn. of Amer.; Southern Speech Assn.; Tex. Speech Assn.; Delta Sigma Rho; Zeta Phi Eta. Author: Speech Games, 1939; A Practice Manual for the Correction of Speech Sounds, 1950; Speech Is Fun!, 1953. Contrb. to: Hawaii Edn. Jour. Special Int.: Laterality Index; Speech Correction Programs in the Public Schls.; Stuttering; Articulation Problems.

ARNOLD, Godfrey Edward Thomas, Clinical Int., N. Y. Univ.; Asst. Surgeon, N. Y. Eye and Ear Infirmary; Asst. Adjunct, Lenox Hill Hospital; Dir. of Rsch. Dept., Natl. Hospital for Speech Disorders, 103 East 78th St., N. Y. 21, N. Y. OTOLARYNGOLOGY, AUDIOLOGY, VOICE AND SPEECH PATHOLOGY, DISORDERS OF MUSICAL RECEPTION. b. Olmuetz, Moravia, Then Austria-Hungary, now Czechoslovakia, Jan. 6, 1914. s. Anton and Maria (Schicht) A. Edn.: Theresian Acad. in Vienna, Cert. of Maturity, (equivalent to B.A.), 1932. State Acad. for Music in Vienna, Music Instructor's License (equivalent to M.A.), in 1935; Diploma of Artistic Maturity, 1936; Univ. of Vienna, Med. Schl., M.D., 1937; Univ. of Vienna, First Dept. of Otolaryngology, 1936-41; Diplomate German Bd. of Otolaryngology, 1940; Austrian Bd. of Otolaryngology, 1946. m. Isolde Maria Reuter, Feb. 14. Exp.: Music Correspondent of "Musical Times" London, 1936-39, 46-48; Dem., Resid. Asst., Ear, Nose, and Throat Dept. of Vienna Univ., 1936-41; Chief, Voice and Speech Clinic, Ear, Nose and Throat Dept., Vienna Univ., 1938-45; Asst. Prof., Vienna Univ. Med. Schl., 1941-45; Consultant on Voice, Speech and Hearing Disorders to the City of Vienna and German Army, 1941-45; Chief Otolaryngologist, Displaced Persons Section, Vienna Area Command, U. S. Army, 1945-48; Fellow in Otolaryngology, N. Y. Univ., 1949-51; Research Asst., N. Y. Eye and Ear Infirmary, 1949-51; Clinical Visiting Otolaryngologist, Bellevue Med. Center, 1951-52. Mem.: N. Y. Acad. of Sci.; Amer. Speech and Hearing Assn.; N. Y. County Med. Soc.; German Otolaryngological Soc.; German Phoniatric Soc. Author: The Traumatic and Constitutional Disturbances of Voice and Speech, 1948; Textbook of Voice and Speech Pathology, 1949. Contrb. to: Musical Times, London; Monatsschrift fuer Ohrenheilkunde, Vienna; Archiv fuer Hals-Nasen-Ohrenheilkunde, Berlin; Archiv fuer Phonetik, Berlin; Wiener klinische Wochenschrift; Wiener Medizinische Wochenschrift; Folia Phoniatrica, Basel; Zeitschrift fuer Hals-Nasen-Ohrenheilkunde, Berlin; Zeitschrift fuer gesamte Neurologie, Berlin; Merck Report, N. Y.; Talk Magazine, N. Y.; Clinical Med., Willmet, Ill.; Jour. of Ins. Med.,

Topeka, Kansas; Klin'sche Medizin, Vienna; etc. Gen. Int.: Rehabilitation of the Voice following Injury or Paralysis of the Larynx. Special Int.: Disorders of Voice, Speech and Hearing; Laryngeal Paralysis; Hearing Disorders due to Cerebral Disease; Pathology of Musical Reception.

ARNOLD, Herbert J., Asst. Prof. of Natural Sciences, Tchrs. Coll., Columbia Univ., N. Y. 27, N. Y. GEOLOGY, MINERALOGY, EDUCATION.

ARNOLD, Howard C., 76 Standish Blvd., Pittsburgh 28, Pa. CERAMICS.

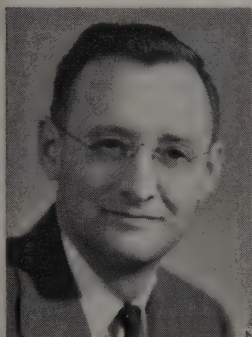
ARNOLD, Hubert Andrew, Apt. 14, 68 W. Third St., N. Y., N. Y. MATHEMATICS.

ARNOLD, John William, Engr., Internatl. Telephone and Telegraph Corp., 67 Broad St., N. Y., N. Y. COMMUNICATION ENGINEERING.

ARNOLD, Joseph F., Range Conservationist, P. O. Box 951, Tucson, Ariz. ECOLOGY—BOTANY AND CONSERVATION. b. Colorado Springs, Colo., Oct. 9, 1911. s. Charles F. and Rosa (Zobel) A. Edn.: B.A., Colo. Coll., 1934; M.S., Univ. of Ariz., 1936; M.P.A., Harvard Univ., 1951. m. Elaine Bagocius, June 15, 1946. c. Clay B. Exp.: Summer Asst. to Dr. Frederic E. Clements, Carnegie Inst. of Wash., 1932-33; Instr. and Rsch. Asst. in Botany and Range Ecol., Univ. of Ariz., 1934-41; Mobile Range Examiner, U. S. Soil Conservation Service, 1941-42; Work Unit Conservationist, *ibid.*, 1945-46; Range Conservationist, U. S. Forest Service, 1946-50; Student, Harvard Univ., 1950-51; Range Conservationist, U. S. Forest Service, 1951—. Mem.: Soil Conservation Soc. of Amer.; Amer. Soc. of Range Management; Sigma Xi; Delta Epsilon. Contrb. to: Jour. Forestry; Jour. Wildlife Management. War Record: U.S.N.R., 1942-45. Special Int.: Range and Conservation of Natural Resources.

ARNOLD, Lloyd, Consultant, Bacteriol. and Sanitation, 1538 E. 57th St., Jackson Park Station, Chicago, Ill. BACTERIOLOGY.

ARNOLD, Melvin Roy, Rsch. Chemist, The Miner Labs, 9 S. Clinton St., Chicago 6, Ill. CHEMISTRY.



b. Ambrose, N. Dak., Aug. 11, 1915. s. Roy and Elise (Gifford) A. Edn.: B.S., Jamestown Coll., 1938; M.S., N. Dak. State Coll., 1940. m. LaVerna M. Semington, Nov. 17, 1937. c.: Derry DeeAnne. Exp.: Day Supvr., Ind. Ordnance Works, Charleston, Ind., 1940-43; Rsch. Supvr., The Girdler Corp., Louisville, Ky., 1943-52; Chemist, The Miner Labs., Chicago, Ill., 1952—. Mem.: Amer. Chem. Soc. Special Int.: Catalysis; Production and Purification of Gases; Military

Explosives.

ARNOLD, Paul J., Head, of Department of Biology, Head of Division of Science and Mathematics, State Tchrs. Coll., Jacksonville, Ala. BIOLOGY. b. Wheatley, Ky., July 1, 1896. s. James T. and Katie (Ahnutt) A. m. Sallie Ford Moore of Georgetown, Ky., Sept. 2, 1919. c.: James Hugh (deceased), William Thomas. Edn.: B.S., Georgetown Coll., 1918; M.A., George Peabody Coll., 1929; V-Pres., Psi Chapter, Pi Delta Kappa, 1936-37; Grad. Study, George Peabody Coll., 1935-37; Tehnz. Fellowship, Peabody Coll., 1937. Exp.: Supt. of Augusta Pub. Schls., 1921-25; Supt. of Williams-town Pub. Schls., 1925-29; Tchrs. of Sci., S. T. Coll., Ala., 1929-32; Prof. of Biol., State Tchrs. Coll., 1933-46; Head of Div. Sci. and Math., *ibid.*, 1946—. Mem.: Pi Delta Kappa; A.A.U.P. Spec. Int.: Tchrs. of Sci.

ARNOLD, Russell E., Box E, East Akron Station, Akron 5, Ohio. CERAMICS.

ARNOLD, Weld, Prof. of Civil Engrng., Univ. of Nev., Reno, Nev.

ARNOLD, William Shannon, Secy., Dir. Production and Chf. Chemist, C. M. Pitt and Sons Co., Key Highway and Boyle St., Baltimore, Md. CHEMISTRY.

ARNON, Daniel Israel, Assoc. Prof. of Plant Nutrition and Plant Physiol., Univ. of Calif., Berkeley, Calif. PLANT PHYSIOLOGY.

ARNOW, Leslie Earle, Dir. of Rsch., Sharp & Dohme, Inc., West Point, Pa. BIOCHEMISTRY. b. Micanopy, Fla., June 22, 1909. s. Joseph Leslie and Mabel (Thrasher) A. Edn.: Ph.G. and B.S., Univ. of Fla., 1930; Ph.D., Univ. of Minn., 1934; M.B., and M.D., *ibid.*, 1940. m. Jennie Martin, July 17, 1933. c.: Peter Leslie. Exp.: Asst. Physiol. Chem. and Biophys., Univ. of Minn., 1931-34; Instr., Physiol. Chem., *ibid.*, 1934-40; Asst. Prof., *ibid.*, 1940-42; Dir., Biochem. Rsch., Sharp & Dohme, Inc., West Point, Pa., 1942-44; Dir. of Rsch., *ibid.*, 1944—. Mem.: Affiliate Fellow, A.M.A.; Philadelphia Co. Med. Soc.; Fellow, A.A.A.S.; Fellow, N. Y. Acad. of Sci.; Amer. Chem. Soc.; Amer. Soc. of Biol. Chemists; Soc. for Exptl. Biol. and Med.; Assn. for Study of Internal Secretions; A.A.U.P.; Physiol. Soc. of Philadelphia; Gamma Sigma Epsilon; Rho Chi; Phi Sigma; Alpha Epsilon Delta; Alpha Omega Alpha; Sigma Xi; Sigma Chi; Phi Beta Pi; Gamma Alpha. Author: Introduction to Physiol. and Pathol. Chem., 1949; Introduction to Organic and Biol. Chem., 1949. Contrb. to: Proc. Soc. Exptl. Biol. and Med.; Indus. and Engrng. Chem. Anal.; Jour. Phys. Chem.; Jour. Biol. Chem.; etc. Special Int.: Rsch. Admin.

ARNY, Clara Brown, Univ. Farm, Univ. of Minn., St. Paul, Minn. EDUCATION, PSYCHOLOGY.

ARONBERG, Lester, 607 N. Western Ave., Chicago, Ill. PHYSICS.

ARONSON, Joseph David, Assoc. Prof. of Bacteriol., Henry Phipps Inst., Univ. of Pa., Philadelphia, Pa. PATHOLOGY, BACTERIOLOGY.

ARONSON, Lester Ralph, Chmn. and Assoc. Curator, Dept. of Animal Behavior, Amer. Museum of Natural Hist., Central Park West at 79 St., N. Y., N. Y. ANIMAL BEHAVIOR, ENDOCRINOLOGY AND NEUROLOGY. b. N. Y., N. Y., Apr. 9, 1911. s. Samuel and Hannah (Besthoff) A. Edn.: B.A., Cornell Univ., 1932; M.A., *ibid.*, 1933; Ph.D., N. Y. Univ., 1945. m. Evelyn Aronson, 1936. c.: Carl; Frederick. Exp.: Asst., Dept. of Animal Behavior, Amer. Museum of Nat. Hist., N. Y., N. Y., 1938; Staff Asst., Dept. of Animal Behavior, *ibid.*, 1942; Asst. Curator, *ibid.*, 1943; Acting Chmn. and Assoc. Curator, *ibid.*, 1949—; Tehnz. Staff, Schl. of General Studies, Hunter Coll. of the City of N. Y., 1946—; Adjunct Assoc. Prof. of Biol., N. Y. Univ., N. Y., N. Y., 1949—. Mem.: Fellow, N. Y. Acad. of Sci.; Fellow, N. Y. Zool. Soc.; Amer. Soc. of Zoologists; Amer. Soc. of Ichthyologists and Herpetologists; A.A.A.S.; Amer. Soc. of Naturalists. Contrb. to: Bull. Amer. Museum of Natural Hist.; Amer. Museum Novitates; Amer. Naturalist; Physiol. Zool.; Zoologica; Copeia; Amer. Midland Naturalist; Anatomical Record; Annals of N. Y. Acad. of Sci. Special Int.: Neurological and Endocrinological Factors in Reproductive and Parental Behavior, especially in Fish and Amphibia.



ARRINGTON, Ruth E., Rt. 1, Manassas, Va.

ARROE, O. H., Dept. of Physics, Univ. of Wis., Madison, Wis. ATOMIC SPECTRA.

ARTHUR, Jett Clinton, Jr., Chemist, Hd., Biochem. Section, Fruit and Vegetable Div., Southern Regional Rsch. Lab., BAIC, U. S. Dept. of Agri., 2100 Robert E. Lee Blvd., New Orleans 19, La. PHYSICAL

CHEMISTRY AND CHEMICAL ENGINEERING. b. Hemphill, Tex., May 31, 1918. s. Jett C. and Anna Alice (Smith) A. Edn.: B.A., Stephen F. Austin State Coll., 1939; M.A., Univ. of Tex., 1946. m. Oma LaVerne Pitts, June 2, 1941. c.: Martha Ann and James Clinton. Exp.: Tehng. Asst., Stephen F. Austin State Coll., Nacogdoches, Tex., 1937-39; Alpha Chi Grad. Scholar, Univ. of Tex., Austin, Tex., 1939-40; Tehr., Appleby Jr. H. S., and Corpus Christi H. S., Tex., 1940-41; Chemist, Southern Regional Rsch. Lab., New Orleans, La., 1941—. Mem.: Sigma Xi; Amer. Chem. Soc.; Alpha Chi Scholarship Soc.; Great Books Foundation. Contrb. to: More than 30 Publications and U. S. Patents; Jour. Amer. Chem. Soc.; Jour. Amer. Oil Chemists' Soc.; Jour. Colloid Sci.; Jour. Southern Rsch.; Rubber Age; Amer. Dyestuff Reprtr.; Textile Rsch. Jour. War Record; U. S. Navy, Radar Officer on Amphibious Staff, Participated in Combat Operations at Lingayen Gulf, Philippine Islands and Okinawa. Gen. Int.: Contributed to Knowledge of Vegetable Protein Chem. Special Int.: Vegetable Protein Fibers and Glues, Phys. Chem. of Vegetable Proteins and Food Processing.

ARTHUR, John Morris, Biochemist and Secy., Boyce Thompson Inst. Plant Rsch., Inc., Yonkers, N. Y. **PLANT PHYSIOLOGY.**

ARTOM, Camillo, Bowman Gray Schl. of Med., Winston-Salem, N. C. **BIOCHEMISTRY.**

ARTSCHWAGER, Ernst, Sr. Plant Anatomist, U. S. D. A., Beltsville, Md. **PLANT ANATOMY.**

ARVIN, J. A., 18409 Perth Ave., Homewood, Ill. **RESINS.**

ASCH, Solomon E., 513 Elm Ave., Swarthmore, Pa. **PSYCHOLOGY.**

ASDELL, Sydney A., Prof. of Animal Physiol., Lab. Animal Nutrition, Cornell Univ., Ithaca, N. Y. **MAMMALIAN REPRODUCTION.**

ASHBAUGH, Ernest James, Dean, Schl. of Edn., Miami Univ., Oxford, Ohio. **EDUCATION.**

ASHBROOK, Donald Sinclair, Pres., Decorative Fabrics Co., Inc., 158 Middle St., Pawtucket, R. I. **TEXTILE CHEMISTRY.**

ASHBY, Winifred Mayer, Sr. Scientist, Federal Security, U. S. Govt., 305 10th St., N. E., Washington, D. C. **ENZYMOLGY OF CENTRAL NERVOUS SYSTEM.**

ASHDOWN, Avery Allen, Mass. Inst. of Tech., Cambridge, Mass. **CHEMISTRY.**

ASHE, Benjamin I., Assoc. Clinical Prof. of Med., Columbia Univ., 889 Lexington Ave., N. Y., N. Y. **INTERNAL MEDICINE.**

ASHLEY, George H., Consulting Engr., 3037 N. Front St., Harrisburg, Pa. **GEOLOGY OF COAL.**

ASHMAN, Edward Thomas, Tehr. of Math., Darien H. S., Darien, Conn. **MATHEMATICS.**

ASHMAN, George Cromwell, Prof. Emer., Bradley Poly. Inst., 306 Barker Ave., Peoria, Ill. **CHEMISTRY.**

ASHWORTH, Ural S., Asst. Prof. of Dairy Husbandry, Wash. State Coll., Pullman, Wash. **BIO-CHEMISTRY.**

ASMAN, Arnold William, Chief, Division of Mining Engineering, Pat. State Coll., State College, Pa. **MINING ENGINEERING.** b. Lombard, Ill., Jan. 28, 1916. s. Charles and Susan (Asman) A. Edn.: B.S., Univ. of Ill., 1938; Graduate Work, Colo. Schl. of Mines and M.I.T., summer, 1951 and 1952. m. Laura McCavitt of Saxton, Pa., June 23, 1941. d. E. R. McCavitt. c.: Valeria; Peter. Exp.: Chf., Div. of Mining, Pa. State Coll., 1948—; Chf. Engr., Mining Div., ARMO Steel Corp., 1941-48; Pres. Engr., 41. Hon. Pos.: Pres., Centre Co. Chapter, Reserve Officers Assn. Mem.: Amer. Inst. of Mining Engrs.; Coal Mining Inst. of Amer. Author: American Mining Congress, 1949. Contrb. to: Mechanization. War Record: ETO, Chf., Mining Section Civil Af-

fairs, Milit. Govt., Lt. Col., C. E. Hobbies: Golf; Photography. Listed in: Who's Who in East.

ASMUNDSON, Vigfus Samundur, Prof. of Poultry Husbandry and Poultry Husbandman, Expt. Station, Univ. of Calif., Davis, Calif. **GENETICS, POULTRY.**

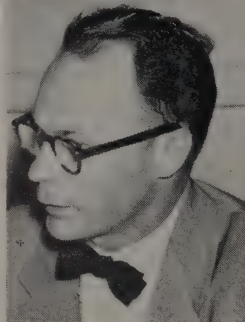
ASPINHOOK, Harold Prensor, Pres., Aspinhook Rsch. Laboratories, Ann St., Clarendon Hills, Ill. **INDUSTRIAL CHEMISTRY.** b. Pinola, Ind., Oct. 9, 1909. s. Clarence Ball and Isabella (Tuchbreiter) A. Edn.: B.A., Elmhurst Coll., 1928; M.S., Northwestern Univ., 1931. m. Hazeline Prentice on June 19, 1930. c.: Hans Albrecht; Lusja; Otto Karl. Exp.: Tutor in Elem. Sci., Groton Schl., 1933; Instr. in Chem., Univ. of Chicago, 1935-38; Consultant, M & R Dietetic Laboratories, 1939-41; Founder and Pres., Aspinhook Rsch. Labs., 1946—. Mem.: Amer. Public Health Assn.; Ind. Psychol. Assn.; Alpha Delta Phi. Author: Light and Lenses, 1943; Microphotography, 1947. Contrb. to: Jour. Amer. Med. Assn. War Record: Lt. Col., U. S. Army, 1941-46. Gen. Int.: Developed a camera for underwater photographic study. Special Int.: Microphotography.

ASSADOURIAN, Fred, Project Engineer, Department of Grad. Math., 333-3rd Ave., N. Y. 10, N. Y. b. Panderma, Turkey, Apr. 13, 1915. s. Garabed and Isabel (Der Stepanian) A. Edn.: B.S., Univ. Coll., N. Y. Univ., 1935; M.S., Grad. Schl., ibid., 1936; Ph.D., ibid., 1940. Exp.: Instr. of Math., Coll. of Eng., N. Y. Univ., 1937-42; Assoc. Prof., Tex. Tech. Coll., 1942-44; Rsch. Engr., Westinghouse Rsch. Labs., Inc., 1944-46; Development Engr., Fed. Telecommunication Labs., Inc., 1946-51; Project Engr. in Chg. of a Theory and Rsch. Group, ibid., 1951—; also Mem. of Grad. Math. Dept., Brooklyn Polytech. Inst., 1950—. Mem.: Amer. Math. Soc.; Phi Beta Kappa. Contrb. to: Issue of Duke Math. Jour., I.R.E. Proceedings, and Electrical Communications. Ph.D. Dissertation: Intransitive Abelian Almost-Translation Groups of Almost-Periodic Functions. Hobbies: Music; Bridge. Listed in: A.M.S.

ASSMUTH, Joseph, Dept. of Biol., Fordham Univ., N. Y., N. Y. **ZOOLOGICAL SCIENCES.**

ASTON, J. G., Chem. Dept., Pa. State Coll., State College, Pa. **PHYSICAL ORGANIC CHEMISTRY.**

ATCHISON, Joseph Edward, Chf., Pulp and Paper Branch, Mutual Security Agency, 806 Connecticut Ave., Washington, D. C. **PULP AND PAPER TECHNOLOGY.** b. Barnum, W. Va., Dec. 25, 1914. s. Edward W. and Freda (Kerns) A. Edn.: B.S., L.S.U., 1938; M.S., Inst. of Paper Chem., 1940; Ph.D., ibid., 1942. m. Frances Winebriner, July 10, 1951. Exp.: Chf., Pulp and Paper Branch, Indus. Div., Econ. Cooperation Admin., Wash., D. C., 1948-51; Chf., Pulp and Paper Branch, Mutual Security Agency, Washington, D. C., 1951—. Mem.: Tech. Assn. of the Pulp and Paper Indus.; Phi Delta Theta; Tau Beta Pi; Omicron Delta Kappa; Phi Kappa Phi; Phi Eta Sigma; Alpha Chi Sigma; Scabbard and Blade. Contrb. to: The Paper Trade Jour.; Paper Mill News; Pulp and Paper; The Paper Indus.; Fibre Containers; Pulp and Paper Mag. of Can. Indian Pulp and Paper; World's Paper Trade Rev.; La Revue des Papiers et Cartons; Papier-Zeitung; L'industrial della Carta. Special Int.: Utilization of Straw, Sugar Cane Bagasse, and Fast Growing Hardwoods for Pulp and Paper Production; Authority on Internatl. Developments in the Pulp and Paper Field and the Internatl. Flow of Pulp and Paper.



ATKINS, Richard Elton, Assoc. Prof. of Farm Corps, Iowa State Coll., Ames, Iowa. **BREEDING AND IMPROVEMENT OF CEREAL GRAIN**

CROPS. b. Corning, Kans., Feb. 10, 1919. s. Irvin D. and Dora Mae (Followell) A. Edn.: B.S., Kans. State Coll., 1941; M.S., Iowa State Coll., 1942; Ph.D., ibid., 1948. Exp.: Rsch. Grad. Asst., Iowa State Coll., Ames, Iowa, 1941-42; 1946-48; Asst. Prof., ibid., 1948-50; Assoc. Prof., ibid., 1950—. Mem.: Gamma Sigma Delta; Sigma Xi; Alpha Zeta; Kappa Sigma. Contrb. to: Agron. Jour. Special Int.: Areas of Special Interest and Rsch. Lie in the Breeding and Improvement of Oats, Barley, Wheat and Flax and with Allied Cultural and Quality Problems.

ATCHLEY, Dana Winslow, Prof. of Clinical Med., Columbia Univ., N. Y., N. Y. **MEDICINE.**

ATKINS, Irvin Milburn, Agron. in Chg., Small Grains, Tex. Expt. Substa. No. 6, Denton, Tex. **PLANT BREEDING AND AGRONOMY.** b.

Corning, Nemaha Co., Kans., July 24, 1904. s. Irvin D. and Dora M. (Followell) A. Edn.: B.S., Kans. State Coll., 1928; M.S., ibid., 1936; Ph.D., Univ. of Minn., 1945. m. Mary R. Lovelless, Aug. 28, 1932. c.: Mary Virginia and Irvin Milburn, Jr. Exp.: Jr. Agron., U. S. Dept. of Agri., U. S. San Antonio Field Sta., San Antonio, Tex., 1928-30; Jr. to Assoc. Agron., Tex. Agri. Exptl. Sta., Denton, Tex., 1930-38; Agron. in Chg., Small

Grain Rsch., ibid., 1938—. Mem.: Sigma Xi; Phi Kappa Phi; Alpha Zeta; Gamma Sigma Delta; Alpha Gamma Rho; Kiwanis Club. Contrb. to: Amer. Soc. of Agron. Jour.; Jour. of Agri. Rsch.; U. S. Dept. of Agri. Bull.; Tex. Agri. Expt. Sta. Bull. and Rsch. Reports.

ATKINSON, Ralph Waldo, Chf. Rsch. Engr., General Cable Corp., Bayonne, N. J.

ATSATT, Sarah R., Assoc. Prof. of Zool., Univ. of Calif., 405 Hilgard Ave., Los Angeles, Calif. **HERPETOLOGY.**

ATTERBURY, Mrs. Boudinot, 2475 Palisade Ave., N. Y., N. Y. **MEDICINE.**

ATWATER, Reginald Myers, Exec. Secy., Amer. Public Health Assn., 1790 Broadway, N. Y., N. Y. **PUBLIC HEALTH.**

ATWOOD, F. Clarke, Hotel Puritan, Commonwealth Ave., Boston, Mass. **CHEMISTRY.**

ATWOOD, Horace, Prof. Emer., W. Va. Univ., 146 Flagler Ave., Stuart, Fla.

ATWOOD, Wallace Walter, Pres. Emer., Clark Univ., 21 Otsego Rd., Worcester, Mass. **GEOGRAPHY.**

AUGELLI, John P., Asst. Prof., Univ. of Md., Coll. Park, Md. **GEOGRAPHY.** b. Celenza, Prov. of Foggia, Italy, Jan. 30,

1921. s. P. John and Marie Antoinette (Caruso) A. Edn.: B.A., Clark Univ., 1943; M.A., Harvard Univ., 1949; Ph.D., ibid., 1951. m. Conchita G., Aug. 24, 1948. c.: Johnse. Exp.: Asst. Prof. to Assoc. Prof. and Hd. of Dept., Univ. of Puerto Rico, 1948-52; Consult. Geographer, Puerto Rico Planning Bd. and Puerto Rico Dept. of Edn., 1949-52; Asst. Prof., Univ. of Md., Coll. Park, Md., 1952—. Hon. Pos.: Hd., Dept. of Geography, Univ. of Puerto Rico,

1950-52. Mem.: Assn. of Amer. Geographers; A.A.-A.S.; Natl. Coun. of Geography Tchrs. Contrb. to: Econ. Geography; Jour. of Geography; Amer. Jour. of Econ. and Sociol.; Revista Colegial. War Record: Meteorologist, U. S. Army Air Forces; Military Intelligence, U. S. Army. Special Int.: Geography of Latin Amer. and the Caribbean; Econ. Geography of the Tropics; Political Geography.

ATWOOD, Winfred McKenzie, Prof. of Plant Physiology, Ore. State Coll., Corvallis, Ore. **PLANT PHYSIOLOGY.**

AUB, Joseph C., Mass. Gen. Hosp., Boston, Mass. **ENDOCRINOLOGY—CLINICAL RESEARCH.**

AUDRIETH, L. F., Univ. of Ill., Urbana, Ill. **CHEMISTRY.**

AUGUSTINE, Donald Leslie, Assoc. Prof. and Hd. Dept. of Comparative Pathol. and Tropical Med., Harvard Univ. Med. Schl., 25 Shattuck St., Boston, Mass. **PARASITOLOGY.**

AULL, William Barre, Vice-Dean, Schl. Agri. and Prof. Bacteriol., Clemson Agri. Coll., Clemson, S. C. **BACTERIOLOGY.**

AUSEMUS, Elmer R., Agronomist, U. S. D. A., Univ. of Minn., Univ. Farm, St. Paul, Minn. **WHEAT IMPROVEMENT.**

AUSTIN, Chester R., Mgr., Development Section, Rsch. Dept., Koppers Co., Pittsburgh, Pa. **CERAMIC ENGINEERING, CHEMICAL ENGINEERING.** b. Bellefontaine, Ohio, July 3, 1907. s. Gideon L. and Julia (Faris) A. Edn.: B.Cer. Engrng., Ohio State Univ., 1928; M.Sc., ibid., 1929. m. Pauline Boyd, Aug. 2, 1930. Exp.: Rsch. Engr., Ohio State Univ. Engrng. Expt. Station, Columbus, Ohio, 1929-32; Rsch. Engr., Battelle Memorial Inst., Columbus, Ohio, 1932-40; Asst. Supvr., Ceramic Dept., ibid., 1940-42; Supvr., ibid., 1942-48; Ceramic Engr., Koppers Co., Pittsburgh, Pa., 1948-50; Mgr., Development Section, Rsch. Dept., ibid., 1950—. Mem.: Amer. Ceramic Soc.; British Iron and Steel Inst.; Sigma Xi; Keramos; Masons. Contrb. to: Jour. Amer. Ceramic Soc.; Brick and Clay Record; etc. Special Int.: Refractories, Enamels, Insulation, Glass, Whiteware, Structural Clay Products, Building Materials.

AUSTIN, James Bliss, Dir. of Rsch., U. S. Steel Co., Lincoln Hwy., Kearny, N. J. **HIGH TEMPERATURE CHEMISTRY AND METALLURGY.** b.

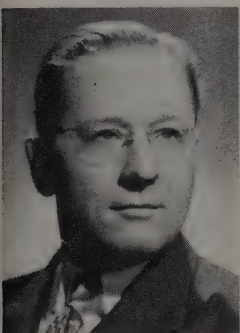


Washington, D. C., July 16, 1904. s. Harry A. and Pauline (Rearick) A. Edn.: Ch.E., Yale Univ., 1925; Ph.D., Yale Univ., 1928. m. Janet Evans, Oct. 7, 1930. c. Peter A.; Winifred M. Exp.: Phys. Chemist, U. S. Steel Corp. Rsch. Lab., Kearny, N. J., 1928-44; Asst. Dir., ibid., 1944-46; Dir. of Rsch., U. S. Steel Co., Kearny, N. J., 1946—. Mem.: Amer. Chem. Soc.; Amer. Soc. for Metals; Amer. Ceramic Soc.

Amer. Inst. Mining and Metallurgical Engrs.; Amer. Iron and Steel Inst.; Electrochem. Soc.; Optical Soc. of Amer.; Tau Beta Pi; Phi Beta Kappa; Scabbard and Blade; Gamma Alpha. Author: Flow of Heat in Metals, 1942. Contrb. to: Jour. Amer. Chem. Soc.; Jour. Amer. Ceramic Soc.; Jour. of Metals; Trans. Amer. Soc. for Metals; Jour. Iron and Steel Inst.; Phys. Rev. Special Int.: Properties of Metals and Non-Metallic Substances at High Temperature; Metallurgical Thermodynamics.

AUSTIN, Mary L., Assoc. Prof. of Zool., Wellesley Coll., Wellesley, Mass. **PROTOZOOLOGY.**

AUSTIN, William E., 2446 University Ave., N. Y., N. Y. **CHEMISTRY, PSYCHOLOGY.**



AUTREY, Kenneth Maxwell, Hd. Prof., Dept. Dairy Husbandry, Ala. Poly. Inst., Auburn, Ala. DAIRY

CATTLE NUTRITION. b. November 11, 1917, Mansfield, La. s. Byron and Ina (Norris) A. Edn.: B.S., La.

State Univ., 1938; M.S., Ia. State Coll., 1939; Ph.D., *ibid.*, 1941. m.

Vera Harrison of Wilkes-Barre, Pa., Aug. 29, 1942. d. H. W. and Mrs. Harrison. c.

Kenneth Maxwell; Janice Louise. Exp.

Asst. Prof. of Dairying, Univ. of Ga., 1941-44;

Ensign U. S. N. R., 1944-46; Assoc. Prof. of Dairying, Pa. State Coll.,

1946; Hd. Prof. Dairying, Ala. Poly. Inst.,

1947—. Mem.: A.P.I., Sigma Xi, Chmn., 1950; A.D.-S.A.; A.A.A.S.; Alpha Zeta; Gamma Sigma Delta; Blue Key; Lions Internatl. Contr. to: Jour. Dairy Sci. Ph.D. Dissertation: The Physiol. and Econ. Efficiency of Rations Containing Different Amounts of Grain When Fed to Dairy Cattle. War Record: (See above). Travel: N. Amer.; Hawaiian Islands; Philippines; China; Japan. Hobbies: Softball; Color Photography. Listed in: A.M.S.; Who's Who. Special Int.: Nutrition and Animal Physiology.

AVERBACH, B. L., Assoc. Prof., Dept. of Metallurgy, Mass. Inst. of Tech., Cambridge 39, Mass. PHYSICAL METALLURGY AND SOLID STATE

PHYSICS. b. Rochester, N. Y., Aug. 12, 1919. Edn.: B.S., Rensselaer Poly. Inst., 1940; M.S., *ibid.*,

1942; Sc.D., Mass. Inst. of Tech., 1947. Exp.

Chf. Metallurgist, U. S. Radiator Corp., Geneva, N. Y., 1943-45; Metallurgist, Gen. Elec. Co., Schenectady, N. Y., 1945-47; Asst. Prof. of Metallurgy,

Mass. Inst. of Tech., Cambridge, Mass., 1947—. Mem.: A.S.M.; A.I.M.E.; Amer. Phys. Soc.; Iron

and Steel Inst.; Inst. of Metals; Chi Phi. Contr. to: Trans. Amer. Soc. for Metals; Trans. A.I.M.E.;

Jour. of Applied Physics; Phys. Rev. Special Int.: Physics. Metallurgy; X-Ray Diffraction; Thermodynamics of Solid Solutions; Phase Transformations.

AVERY, Mary Ellen, Mem. of House Staff, Harriet Lane Home, Johns Hopkins Hosp., 119 E. Maple Ave., Moorestown, N. J. MEDICINE; PEDIATRICS. b. Camden, N. J.,

May 6, 1927. d. William C. and Mary (Miller) A. Edn.: A.B.,

Wheaton Coll., 1948; M.D., Johns Hopkins

Med. Schl., 1952. Exp.

Intern in Pediatrics Harriet Lane Home Johns Hopkins Hosp.,

Baltimore, Md., 1952—. Mem.: Phi Beta Kappa.

AVERILL, Lawrence A., Prof. of Psychol., State Tchrs. Coll., Worcester, Mass. PSYCHOLOGY.

AVERY, George Sherman, Jr., Dir., Brooklyn Botanic Garden, 1000 Washington Ave., Brooklyn, N. Y. PLANT PHYSIOLOGY.

AVERY, Oswald Theodore, Hoods Hill Rd., Nashville 5, Tenn.

AXELROD, Daniel I., Prof. of Geol., Univ. of Calif., Los Angeles 24, Calif. TERTIARY PALEOBOT-

ANY. b. Brooklyn, N. Y., July 16, 1910. s.

Morris and Augusta (Gallup) A. Edn.: A.B.,

Univ. of Calif., 1933; M.A., *ibid.*, 1936; Ph.D.,

ibid., 1938. m. Nancy Robinson, June 3, 1939.

c. James Peter. Exp.

Jr. Forester, Calif. Forest and Range Expt.

Station 1934-36; Rsch. Asst., Carnegie Institution

of Wash., 1938-39; Natl. Research Fellow,

1939-40; 1940-41; Rsch. Assoc., Carnegie Institution

of Wash., 1946; Asst. Prof. of Geol.,

Univ. of Calif., Los Angeles, 1946; Assoc.

Prof., *ibid.*, 1948-51; Prof., *ibid.*, 1952—. John Simon Guggenheim Fellow, 1952-53. Mem.: Geol.

Soc. Amer.; Amer. Soc. Naturalists; Amer. Soc. Plant Taxon.; Soc. for Study of Evolution. Contr.

to: Evolution; Amer. Jour. Sci.; Torrey Bot. Club Bull.; Jour. Geol.; Carnegie Inst. Wash. Pub.; etc.

War Record: Army Air Force, 1942-46. Special Int.: Evolution of Madro-Tertiary Flora; Evolution

of Desert Vegetation; Pliocene Floras and Climates; Theory of Angiosperm Evolution; Evolution of Tertiary

Floras and Climates; Stratigraphy of Late Tertiary; Paleobotanical Criteria for Age Analysis.

AYDELOTTE, Frank, Dir., Inst. for Advanced Study, Princeton, N. J. ELIZABETHAN LITERATURE.

AYER, James Bourne, Prof. Emer. Neurol., Harvard Med. Schl., 319 Longwood Ave., Boston, Mass. NEUROLOGY.

AYMOND, John Branch, Dir., Poliomyelitis Center, Charity Hosp., New Orleans, La. PUBLIC HEALTH.

AYRES, Gilbert Ballou, Biochemist, Chf. Penicillin Development, Lederle Labs., Inc., Pearl River, N. Y. BIOCHEMISTRY.

AYRES, William Leake, Hd. Dept. of Math., Purdue Univ., Lafayette, Ind. TOPOLOGY.

BAADE, Walter F., Mt. Wilson & Palomar Observatories, Pasadena 4, Calif. **ASTRONOMY**.

BABB, Myron Francis, Physiologist and Acting Supt. Cheyenne Horticultural Field Station, P. O. Box 1250, Cheyenne, Wyo. **PLANT PHYSIOLOGY**.

BABBERGER, Carl William, Chf. of Aerodynamics and Rsch., Hughes Aircraft Co., 533 N. Isabel St., Glendale 6, California. **AERONAUTICAL ENGINEERING**. b. Canon City, Colo., Apr. 6, 1909.



s. Wm. and Lucy (Wallack) B. Edn.: A.B., Stanford Univ., 1932; M.E., *ibid.*, 1934. Exp.: Prof. of Mechanical Engrng. and Dept. Hd., Poly. Coll. of Engrng., Oakland, Calif., 1935-36; Rsch. Engr. at NACA's full scale wind tunnel at Langley Memorial Aeronautical Lab., Hampton, Va., 1936-39; Chf. of Aerodynamics and Rsch., Hughes Aircraft Co., 1939— **Hon. Pos.:**

Chmn. of the Mechanical Engrng. Comm., Hughes Aircraft Co. Mem.: Inst. of Aeronautical Sci.; Tau Beta Pi; Sigma Xi. Contbr. to: Weight Engrng. Gen. Int.; Aerodynamic and Hydrodynamic Design of the Hughes Flying Boat. Special Int.: Aerodynamics of Airplanes and Missiles; Suppression of Aircraft Fires.

BABBITT, Harold Eaton, Prof. of Sanitary Engr., Univ. of Ill., Urbana, Ill. **ENGINEERING**. b. Jan. 7, 1888, E. Orange, N. J. s. Charles Jacob and Cornelia Jules (Snow) B. Edn.: S.B., Mass. Inst. Tech., 1911; M.S., Univ. of Ill., 1917. m. Elma Jones of Urbana, Ill., July 23, 1930. d. Mr. and Mrs. Charles D. Jones. Exp.: Instr. to Prof., Univ. of Ill., 1913—. Mem.: Sigma Xi; Tau Beta Pi; A.S.E.E.; A.S.C.E.; Amer. Water Works Assn.; A.P.H.A.; Kiwanis. Author: Sewerage and Sewage Treatment, 1st Ed., 1922; 7th Ed., 1953; Water Supply Engr., 1st Ed., 1929; 4th Ed., 1949; Plumbing, 1st Ed., 1924; 2nd Edn., 1950; Engrng. in Pub. Health, 1952. Contbr. to: J.A.W.W.A. War Record: Capt. Corps of Engr., A.E.F., France, World War I. Gen. Int.: Secy., Ill. Soc. of Prof. Engr., 1924-53; Sec. Emeritus, 1953—. Listed in: W.W.A.; A.M.S.

BABBOTT, Frank L., Chmn., Bd. Trustees, L. I. Coll. of Med., 250 Henry St., Brooklyn, N. Y. **PEDIATRICS, MEDICAL EDUCATION**.

BABCOCK, Clarence L., 1718 Potomac, Toledo 7, Ohio. **CERAMICS**.

BABCOCK, Donald Eric, Tech. Consultant and Rsch. Engr., 65 Leighton Ave., Youngstown 12, Ohio. **GENERAL PROCESS AND REDUCTION METALLURGY OF IRON AND STEEL**. b. November 10, 1907, Canton, Ohio. s. Alfred Amos and Chloe (Hake) B. Edn.: A.B., with honors, Ohio State Univ., 1931; M.A., *ibid.*, 1933; Ph.D., *ibid.*, 1935. m. Leah Brink of Schenectady, N. Y., Oct. 10, 1936. d. Edith and George Brink. c.: Beverly Jean; Shirley Ruth; Eileen Kay. Exp.: Asst. Dept. Chem., Ohio State Univ., 1931-35; Rsch. Metallurgist, Massillon and Youngstown, Republic Steel Corp.; Industrial Fellow, Mellon Inst., Pittsburgh; Mgr. Rsch. Lab., Fiberglass Corp., Newark, O.; Asst. to Dir., Rsch. Foundation, Ohio State Univ.; Asst. Chief Metallurgist, Youngstown Dist., Republic Steel Corp.; Tech. Consultant and Rsch. Engr., 1947—; Asst. Prof., Youngstown Coll., 1944-49. Mem.: Sigma Xi; Phi Beta Kappa; Phi Lambda Upsilon; A. C. S.; A. S. M.; A. I. C. E.; A. I. M. M. E.; Namid; P.-T. A. Ph.D. Dissertation: Nature of Electro-organic Reductions. War Record: Naval and Aircraft Development Com. Travel: N. Amer. Gen. Int.: Amer. Iron and Steel Institute Medal, 1949. Hobbies: Photography; Swimming; Skating. Listed in Who's Who in the Midwest; A.M.S.; Chem. Who's Who. Special Int.: Vitamin and Nutrition Rsch.

BABCOCK, Ernest Brown, Prof. Emer., Univ. of Calif., Berkeley 4, Calif. **GENETICS, PLANT TAXONOMY AND EVOLUTION**. b. July 10, 1877, Edgerton, Wis. s. Emilus W. and Mary Eliza (Brown) B. Edn.: B.S., Univ. of Calif., 1906; M.S., *ibid.* 1911. Hon. LL.D., Univ. of Calif., 1950. n



Georgia Bowen of Edgerton, Wis., June 24, 1907 d. Zadok H. and Nancy Truman B. Exp.: Tchi of Agril. Nature Study Los Angeles Nor. Schl. 1906-07; Instr. in Plan Pathol. Univ. of Calif. 1907-09; Asst. Prof. 1908-09; Asst. Prof. Agril. Edn., 1909-13 Prof. Genetics, 1913-47

Prof. Emer., 1947—. Mem.: Natl. Acad. Sci.; A.A. A.S.; Amer. Nat.; Amer. Gen. Assn.; Genetics Soc. of Amer.; Botanical Soc. of Amer. Western Soc. Nature; Calif. Botanical Soc.; Amer. Soc. Plant Taxonomy; Wash. Acad. Sci.; Calif. Acad. Sci.; Hon. Mem.: Royal Bot. Soc. Belgium; Correspondent, Acad. Nat. Sci. Phila.; Hon. Mem. Bot. Soc. Japan; Phi Beta Kappa; Sigma Xi; Alpha Zeta; Phi Sigma; Faculty Club, Berkeley; Cosmos; City Commons Club, Berkeley. Author: Genetics in Relation to Agri. (with R. E. Clauen) 1918; 2nd. Ed., 1927; Genetics Lab. Manual (with J. L. Collins), 1918; The Genus Youngia (with G. L. Stebbins, Jr.), 1937; The Amer. Species of Crepis (with G. L. Stebbins), 1938; The Genus Crepis, 1947. War Record: Army Ednl. Corps, 1919. Travel: England; France; New Zealand; Australia; Europe; N. Africa; So. Europe. Listed in: Who's Who in Amer.; A.M.S. Gen. Int.: Co-author of First Textbook on Genetics and Agri., 1918; Founder of Div. of Genetics in Coll. of Agri., Univ. of Calif., 1913. Special Int.: Plant Genetics, Taxonomy and Evolution.

BABCOCK, Harold Delos, Mount Wilson Observatory, Pasadena, Calif.

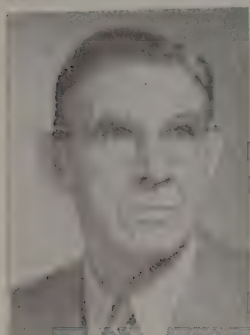
BABCOCK, Harriet, Rsch. and Consulting Psychologist, 1790 Broadway, N. Y., N. Y. **PSYCHOLOGY**.

BABCOCK, Harriet, Clinical and Rsch. Psychologist, 15 Gramercy Park, N. Y. 3, N. Y. **PSYCHOLOGY**. b. Westerly, R. I. d. William W. and Mary (Dixon) B. Edn.: Ph.D., Columbia Univ., 1930. m. H. Hobart Babcock in 1901. Exp.: Psychologist, Manhattan State Hosp., 1924-25; Psychologist, Bellevue Hospital, N. Y., 1926-28; Began Rsch. in Schls., Businesses, Mental Hospitals, etc., 1929; Psychologist, Hudson Schl. for Girls, 1929; Special Consultant to The Guidance Bureau, rsch., and writing, 1930—. Fellow: Amer. Psychol. Assn.; Amer. Assn. of Applied Psychol.; N. Y. Acad. of Sci. Mem.: A.A.A.S.; Natl. Council of Women Psychologists. Author: An Expt. in the Measurement of Mental Deterioration, 1930; Dementia Praecox: A Psychological Study, 1933; Time and the Mind, 1941; The MacQuarrie Test as a Clinical Instrument, 1950. Contbr. to: Jour. Applied Psychol.; Jour. of Clinical Psychol.; Psychol. Rev.; Amer. Jour. Orthopsychiatry. Gen. Int.: Devised Exam. for Measuring Efficiency of Mental Functioning in Normal and Abnormal Mental Conditions in Individual Cases; Disclosure of the Place of the Alleged "Psychogenic Psychoses" between Normal and Abnormal Functioning. Special Int.: Abnormal Psychol.; Marginal Malfunctioning; Efficiency Variable in the Normal Population.

BABCOCK, Horace W., Astronomer, Mt. Wilson and Palomar Observatories 813 Santa Barbara St., Pasadena 4, Calif. **ASTROPHYSICS**. b. Sept. 13, 1912, Pasadena, Calif. s. Harold D. and Mary G. (Henderson) B. Edn.: B.S., Calif. Inst. of Tech., 1934; Ph.D., Univ. of Calif., 1938. m. Margaret B., July 1, 1940. c.: Ann Lucille and Bruce Harold. Exp.: Asst., Lick Observatory, 1938-39; Instr., Yerkes and McDonald Observatories, 1939-41; Radiation Lab., Mass. Inst. Tech., 1941-42; Calif. Inst. of Tech., 1942-45; Mt. Wilson Observatory, Carnegie Institution of Wash., 1946—. Mem.: Amer

Astronomical Soc.; Astronomical Soc. of the Pacific; Optical Soc. of Southern Calif.; Sigma Xi; Tau Beta Pi. Contrb. to: *Astrophys. Jour.*; Publications of Astronomical Soc. of Pacific; *Jour. of Optical Soc. of Amer.*; *Phys. Rev.*; *Nature*. Special Int.: Stellar Spectroscopy; Diffraction of gratings; Solar Physics.

BABCOCK, Orville Gorman, Entomologist, U. S. Bureau Entomology and Plant Quarantine, Box 5452, Sonora, Tex. IN-



SECTS AFFECTING MAN AND ANIMALS. b. Denver, Colo., July 21, 1885. s. John S. and Eva A. (Boughton) B. Edn.: B.S., Colo. Agril. Coll., 1910. m. Edith Stelle Knoll on Feb. 4, 1911. c. Gertrude Marion; Kenneth Knoll; Edith May. Exp.: Work on Peach Lecanium Scale, Md. Agril. Coll., 1910-11; Studies of the Bill Bugs, Economic Status, Minn. Agril. Coll., 1912-13; Dir., Insects Affecting Man and Animals, U. S. Bureau Entomology and Plant Quarantine, 1917-48. Mem.: A.A.-A.S.; Assn. of Econ. Entomologist; Tex. Entomological Soc. Contrb. to: Proc. of the Entomological Soc. of Washington; Tex. Agri. Expt. Station Bull.; Md. Agri. Expt. Station Bull. Special Int.: Econ. Control Goat Lice, Cattle Lice, Sheep Scab, Goat Scab, Poultry Lice.

ogy and Plant Quarantine, 1917-48. Mem.: A.A.-A.S.; Assn. of Econ. Entomologist; Tex. Entomological Soc. Contrb. to: Proc. of the Entomological Soc. of Washington; Tex. Agri. Expt. Station Bull.; Md. Agri. Expt. Station Bull. Special Int.: Econ. Control Goat Lice, Cattle Lice, Sheep Scab, Goat Scab, Poultry Lice.

BABEL, Fred John, Prof. of Dairy Microbiol., Purdue Univ., W. Lafayette, Ind. b. Oct. 22, 1911, Traverse City, Mich. s. John Frank and Josephine Frances (Maxbauer) B. Edn.: B.S., Mich. State Coll., 1935; M.S., Purdue Univ., 1936; Ph.D., Iowa State Coll., 1939. m. E. Marcella Ewing, June, 1939. Exp.: Rsch. Chem. and Bacteriol. N. Amer. Creameries, Inc., Minneapolis, Minn., 1939-40; Rsch. Assoc. Prof., Iowa State Coll., 1940-47; Prof. of Dairy Microbiol., Purdue Univ., W. Lafayette, Ind., 1947—. Mem.: Alpha Zeta; Phi Kappa Phi; Sigma Xi; Phi Lambda Upsilon. Contrb. to: *Jour. of Dairy Sci.*; *Expt. Sta. Bulletins*; *Natl. Butter and Cheese Jour.* Special Int.: Dairy Bacteriol.; Bacteriophage; Enzymes; Cheese; Milk; Ice Cream; Butter and Fermented Milks.

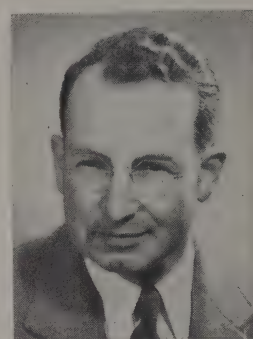
BABER, Clinton Wiley, Mgr., Chem. Rsch. Dept., Larus and Brother Co., 22nd and Cary Sts., Richmond, Va. **CHEMICAL ENGINEERING**. b. Fluvanna Co., Va., Sept. 12, 1909. s. Clinton T. and Lily (Norvell) B. Edn.: B.S., Va. Poly. Inst., Blacksburg, Va., 1935. m. Lucille Anderson on May 31, 1941. Exp.: Lab. Asst., Tobacco By-Products and Chem. Corp., Richmond, Va., 1927-31; Chem. Eng., *ibid.*, 1935-39; Chem. Engr., Larus and Brother Co., Inc., Richmond, Va., 1939-40; Lt. Col., Chem. Corps., U. S. A., 1940-45; Mgr., Chem. Rsch. Dept., Larus and Brother Co., 1945—. Mem.: Amer. Chem. Soc.; Va. Acad. of Sci.; Amer. Soc. for Quality Control; Southern Assn. of Sci. and Indus.; Richmond C. of C. Special Int.: Cigarettes and Smoking Tobacco manufacturing technology; Tobacco Chem.; Production and Field Application of Nicotine Insecticides.

BABER, Erl Armitage, M.D., Supt. and Managing Officer, Longview Hosp., Cincinnati 16, Ohio. **PSYCHIATRY**. b. May 3, 1883, Griggsville, Ill. s. Granville H. and Ella (Armitage) B. Edn.: M.D., Univ. of Louisville, 1909. m. Harriet Page, Dec. 25, 1923. c.: John Page and Jane Page. Exp.: Admin., Southern Pacific Railway Hosp., Guaymas, Sonora, Mex., 1907-98; Asst. Physician, Dayton State Hosp., Dayton, Ohio, 1909-11; Supt., *ibid.*, 1911-22; Supt., Longview State Hosp., Cincinnati, Ohio, 1923—. Mem.: Great Lakes Hist. Soc.; Cincinnati Museum Assn.; Alliance Francaise; Rotary; Amer. Bd. of Psychiatry and Neurol.; Amer. Med. Assn.; Amer. Psychiatric Assn.; Ohio Hosp. Assn.; Acad. of Med.; Natl. Assn. for Mental Health, Inc.; A.A.A.S. Contrb. to: *The Ohio State Med. Jour.* Special Int.: Psychiatric Hosp. Admin.

BABERS, Frank H., Biochemist, Agri. Rsch. Center, Beltsville, Md. **BIOCHEMISTRY AND IN-**

SECT PHYSIOLOGY. b. Ft. Pierce, Fla., June 26, 1904. s. Charles A. and Fannie C. (Hunter) Edn.: B.S., Univ. of Fla., 1926; M.S., *ibid.*, 1927; M.A., Princeton Univ., 1929. m. Grace Tabbutt, 1938. c. Catherine Ann. Exp.: Hospital of the Rockefeller Inst. for Med. Rsch., N. Y. C., 1929-35; Bur. Entomol. and Plant Quarantine, USDA, Beltsville, Md., 1935-41; Bur. Entomol. and Plant Quarantine, USDA, Orlando, Fla., 1946-48; Biochemist, Agri. Rsch. Center, Beltsville, Md., 1948—. Mem.: Amer. Chem. Soc.; Amer. Assn. Adv. Sci.; Entomological Soc. of Amer., Wash., D. C.; Acad. Sci.; Phi Kappa Phi; Gamma Sigma Epsilon; Scabbard and Blade. Contrb. to: *Physiol. Zool.*; *Sci. Ann. Ent. Soc.*; *Amer. Jour. Agri. Rsch.*; *Jour. Biol. Chem.*; *Jour. Expt. Med.*; *Jour. Parasitology*; *Jour. Econ. Ent.* War Record: Officer, U. S. Army Coast Artillery (AA) Corps, 1941-46. Overseas service in Southwest Pacific, Bronze Star Medal, Present status, Col. Cml-C USAR. Special Int.: Insect Physiology, Mode of Action of Insecticides and the Resistance of Insects to Insecticides.

BACHER, Robert F., Chmn., Div. of Physics, Math. and Astron. and Prof. of Physics, Norman Bridge Lab. of Physics, Calif.



Inst. of Tech., Pasadena, Calif. **NUCLEAR PHYSICS**. b. Loudonville, Ohio, Aug. 31, 1905. s. Harry and Byrl (Fox) B. Edn.: B.S., Univ. of Mich., 1926; Ph.D., *ibid.*, 1930; Alfred Lloyd Fellow, 1932-33; Natl. Rsch. Council Fellow Physics, Calif. Inst. Tech., 1930-31; Mass. Inst. Tech., 1931-32. Hon. Deg.: Sc.D., Univ. of Mich., 1948. m. Jean Dow, 1930. c.: Martha; Andrew Dow. Exp.: Instr., Columbia Univ., 1934-35; Instr., Cornell Univ., 1935-37; Asst. Prof., *ibid.*, 1937-40; Assoc. Prof., *ibid.*, 1940-45; Prof. of Physics, *ibid.*, 1945-50; Dir. of Lab. of Nuclear Studies, *ibid.*, 1946; Radiation Lab., Mass. Inst. of Tech., 1940-45; Hd., Exptl. Physics Div., Los Alamos Lab., Atomic Bomb Project, 1943-44; Bomb Physics Div., *ibid.*, 1944-45; Mem., Atomic Energy Comm., 1946-49; Chmn., Div. of Physics, Math. and Astron. and Dir., Norman Bridge Lab. of Physics, Calif. Inst. of Tech., Pasadena, Calif., 1949—. Mem.: Amer. Physical Soc.; Natl. Acad. Sci.; Amer. Philos. Soc.; A.A.A.S.; Sigma Xi Author: Atomic Energy States, (with S. Goudsmit), 1932. Contrb. to: *Physical Rev.*; *Rev. Modern Physics*; etc. Special Int.: Nuclear Physics; Neutrons; Atomic Energy; High Energy Physics; Atomic Spectra.

BACHE-WIIG, Sara, Assoc. Prof. of Botany, Smith Coll., Northampton, Mass. **MYCOLOGY**.

BACHMAN, George Jean, Prof. and Chmn., Dept. of Physiol., Emory Univ. Schl. of Med., Emory Univ., Ga. **PHYSIOLOGY**.

BACHMAN, George William, Med. Economist, Brookings Inst., 722 Jackson Place, N. W., Washington, D. C. **PARASITOLOGY**. b. Germantown, Ohio, May 12, 1890. s. George William and Katherine (Miller) B. Edn.: B.S., Heidelberg Coll., Tiffin, Ohio, 1917; A.M., Columbia, 1923; Ph.D., Univ. of Chicago, 1927; D.Sc., Heidelberg Coll., 1944. Exp.: Prof. of Biol., Huping Coll., China, 1918-23; Act. Pres., *ibid.*, 1923-25; Instr. in Parasitol., Univ. of Chicago, 1928-29; Asst. in Parasitol., Johns Hopkins Univ., Baltimore, Md., 1928-29; Assoc. Prof. of Parasitol., Schl. of Tropical Med., San Juan, Puerto Rico, 1930-31; Act. Dir., *ibid.*, 1930-31; Dir., *ibid.*, 1931-41; Prof. of Parasitol., Columbia Univ., N. Y. C., 1931-41; Field Dir., Amer. Bur. for Med. Aid to China, 1942—; Med. Econ., Brookings Inst., Washington, D. C., 1942—. Mem.: Amer. Soc. of Parasitol.; N. Y. Acad. of Sci.; Royal Soc. of Tropical Med. and Hygiene; Sigma Xi; Gamma Alpha. Author: Agents of Disease and Host Resistance, Section on Helminths and Disease Agents; The Issue of Compulsory Health Insurance; Hoover Commission Task

Force Report on Public Welfare; and Health Resources in the U. S. Contr. to: Numerous Professional Jours.

BACHMANN, Freda M., retired, 2705 Sherbrooke Rd., Toledo, Ohio. BACTERIOLOGY.

BACK, Ernest Adna, Entomologist, Bureau Entomol. and Plant Quarantine, U. S. D. A., 2936 Macomb St., Washington, D. C. ENTOMOLOGY.

BACKUS, Cyrus D., Asst. Patent Attorney and Special Advisor, Patent Dept., Internatl. Telephone and Telegraph Corp., 67 Broad St., N. Y., N. Y. ELECTRICAL ENGINEERING AND LAW.

BACKUS, Ollie L. SPEECH AND HEARING.

BACON, Alfons Rosthorn, Private Practice, 2333 N. Cleveland Ave., Chicago, Ill. GYNECOLOGY, OBSTETRICS.

BACON, Charles S., Prof. and Hd. of Dept. of Geology and Mineralogy, Case Inst. of Tech., Univ. Circle, Cleveland 6, Ohio. GEOLOGY, PETROLOGY, ENGINEERING GEOLOGY. b. Chicago, Ill., 1901. s. Charles S. and Marie (Rosthorn) B. Edn.: B.S., Univ. of Chicago, 1922; M.S., *ibid.*, 1923; Ph.D., Univ. of Vienna, Austria, 1926. m. Irene Hillyer, 1936. c.: John; Robert; Mary. Exp.: Field Geologist, Huesteca Petroleum Co., Tampico, Mex., 1926-27; Refinery Technologist, Pure Oil Co., Chicago, Ill., 1927-28; Asst. Prof., Riverside Coll., Riverside, Calif., 1928-36; Assoc. Prof. of Geology, Tex. A. and M. Coll., Coll. Station, Tex., 1936-42; Geologist, U. S. Geological Survey, 1942-46; Prof. of Geology and Hd. of Dept., Case Inst. of Tech., Univ. Circle, Cleveland, Ohio, 1948—. Mem.: Amer. Assn. of Petroleum Geologists; Mineralogical Soc. of Amer.; A.A.A.S. Author: Laboratory Manual of Coll. Geology. Contrb. to: Bull. of the Geological Soc. of Amer.; Amer. Mineralogist; Tschermak's Mineralogische und Petrographische Mitteilungen. Gen. Int.: A Catalogue of Rocks Based Upon a Seven Component System. Special Int.: Petrology, Petroleum Geology, Engrng. Geology.

BACON, Charles Walter, Sr. Physiologist, Bureau of Plant Industry, Soils and Agril. Engrng., U. S. D. A., Beltsville, Md. CHEMISTRY OF TOBACCO.

BACON, Egbert King, Assoc. Prof. of Chem., Chemical Lab., Union Coll., Schenectady, N. Y. CHEMISTRY.

BACON, Franklin J., Prof. of Botany and Pharmacognosy and Hd. Div. Biol., Western Reserve Univ., Cleveland, Ohio. PHARMACOGNOSY AND BOTANY.

BACON, Harold Maile, Assoc. Prof. of Math., Stanford Univ., Calif. MATHEMATICS.

BACON, Raymond F., 500 Fifth Ave., N. Y., N. Y. CHEMISTRY.

BADERTSCHER, Jacob A., Prof. of Anatomy, Ind. Univ. Schl. of Med., 312 S. Fess Ave., Bloomington, Ind. HISTOLOGY AND NEUROANATOMY.

BADGER, Alfred E., Libbey-Owens-Ford Glass Co., 1701 E. Broadway, Toledo 5, Ohio. CERAMICS.

BADGER, Richard McLean, Gates and Crellin Labs. of Chem., Calif. Inst. of Tech., Pasadena, Calif.

BADGETT, Charles Oscar, Rsch. Technologist, Leeds and Northrup Co., 725 Garden Rd., Glenside, Pa. ORGANIC AND PHYSICAL CHEMISTRY; ULTRASONICS AS APPLIED TO ORGANIC CHEMISTRY. b. Mt. Vernon, Ill., Mar. 6, 1917. s. Oscar Henry and Carrie Luella (Shew) B. Edn.: B.S., Temple Univ., 1944. m. D. Juanita Lee, Mar. 19, 1937. c. DeLois Yvonne; Luella Marie (dec.). Exp.: Agri. Marketing Service, U. S. Dept. Agri., 1938-40; Eastern Regional Rsch. Lab., *ibid.*, 1940-52; Rsch. Technologist, Leeds and Northrup Co., 1952—. Mem.: Organic Chemists Club of Philadelphia; Electrochemical Soc.; Amer. Chem. Soc.; Amer. Inst. of Chemists; Kappa Phi Kappa; Chemeka. Contrb. to: Jour. Amer. Chem. Soc.; Indus. and Engrng. Chem.; Arch. of Biochem. Special Int.: Catalysis;

Organic Synthesis; Ultrasonics; Electronics; Organic Separation Techniques; Alkaloids; Tobacco Chem.; Instrumentation.

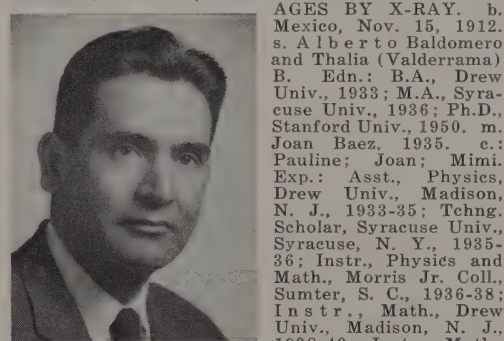
BAEHR, George, Pres. and Med. Dir., Health Ins. Plan of Greater N. Y., 7 East 12 St., N. Y. 3, N. Y. MEDICAL CARE, CLINICAL RESEARCH. b. N. Y. C., April 16, 1887. s. Herman and Sara (Gusky) B. Edn.: M.D. Columbia Univ., 1908. m. Francine Gordon, Oct. 6, 1917. c.: Barbara. Exp.: Clinical Prof. of Med.; Columbia Univ., 1932-50; Chief of First Med. Service, Mount Sinai Hosp., N. Y., 1927-50; Dir. Clinical Rsch., Mount Sinai Hosp., N. Y., 1944-50; Public Health Council, St. of N. Y., 1936—; Bd. of Health, N. Y. C., 1944-46; Bd. of Hospitals, N. Y. C., 1950—. Hon. Pos.: Pres. N. Y. Acad. of Med., 1945-48; Vice Pres. Amer. Public Health Assn., 1952-53; Trustee, N. Y. Acad. of Med., 1948—. Mem.: Assoc. Amer. Phys.; Amer. Soc. Clin. Rsch.; A.M.A., A.P.H.A., A.A.A.S.; Assn. Amer. Pathol. and Bacteriol.; Amer. Heart Assn.; Soc. for Biol. and Exper. Med., Harvey Soc.; Sigma Xi; Players, Cosmos and Army and Navy (Wash., D. C.). Author: Preventive Med. in Med. Practices, 1935. War Record: W. W. I. W. II. Gen. Int.: Mem. Amer. Red Cross Commissions to Balkans; U. S. Delegate to International Congress on International Dist. of Causes of Death, Paris 1938 and 1948. Special Int.: Pathology, Exper. Pharmacology, Clinical Investigation.

BAEKELAND, George, Vice-Pres., Bakelite Corp., 30 E. 42nd St., N. Y., N. Y.

BAER, Clarence E., Physicist and Radio Engr., Aircraft Radiation Lab., Wright Field, Dayton, Ohio. PHYSICS, EDUCATION.

BAERG, William J., Hd. Dept. of Entomol. and Entomologist, Expt. Station, Univ. of Ark., Fayetteville, Ark. ENTOMOLOGY, ORNITHOLOGY.

BAEZ, Albert Vinicio, Prof. of Physics, Univ. of Redlands, Redlands, Calif. FORMATION OF IM-



AGES BY X-RAY. b. Mexico, Nov. 15, 1912. s. Alberto Baldomero and Thalia (Valderrama) B. Edn.: B.A., Drew Univ., 1933; M.A., Syracuse Univ., 1936; Ph.D., Stanford Univ., 1950. m. Joan Baez, 1935. c.: Pauline; Joan; Mimi. Exp.: Asst., Physics, Drew Univ., Madison, N. J., 1933-35; Tchng. Scholar, Syracuse Univ., Syracuse, N. Y., 1935-36; Instr., Physics and Math., Morris Jr. Coll., Sumter, S. C., 1936-38; Instr., Math., Drew Univ., Madison, N. J., 1938-40; Instr., Math.,

to Prof. of Physics, Wagner Coll., Staten Island, N. Y., 1940-44; Acting Instr., Stanford Univ., Palo Alto, Calif., 1944-45; Instr., *ibid.*, 1945-46; Acting Instr., Math., *ibid.*, 1946-47; Rsch. Asst., *ibid.*, 1947-49; Rsch. Physicist, Cornell Aeronautic Lab., Ithaca, N. Y., 1949-50; Prof. of Physics, Univ. of Redlands, Redlands, Calif., 1950—; Head, UNESCO, Technical Assistance Team to Baghdad, Iraq; Head, Physics Dept., Coll. of Arts and Sci., *ibid.*, 1951-52. Mem.: Amer. Assn. Phys. Tchrs.; Amer. Phys. Soc.; Math. Assn. Amer.; Operations Rsch. Soc.; Opt. Soc. Amer.; Sigma Xi; Soc. of Friends; A.C.L.V.; Soc. for Social Responsibility in Sci. Contrb. to: Amer. Jour. Physics; Jour. Opt. Soc. Amer.; Physical Review; Nature. Gen. Int.: Holder of Grants in X-Ray Microscopy from the Amer. Cancer Soc. and Rsch. Corp.

BAGG, Thomas C., Physicist, Natl. Bur. of Standards, Rt. 3, Bethesda, Md. RADIOLOGY, ELECTRONIC ORDINANCE. b. Philadelphia, Pa., Oct. 28, 1917. s. Thomas C. and Anna (Vansant) B. Edn.: B.S., Lafayette Coll., 1939. m. Elizabeth Miller, May 2, 1942. c.: Patricia; Carol; Thomas. Exp.: Lab. Staff, Univ. of Pa., Philadelphia, Pa., 1939-41; Proximity Fuze Dev., Natl. Bur. of Standards, Washington, D. C., 1941-46; Guided Missile Development, *ibid.*, 1946-51; Physicist, *ibid.*,

1951—. Mem.: A.A.A.S.; Amer. Phys. Soc.; Franklin Inst.; Amer. Ord. Assn.; Int. of Radio Engrng. Special Int.: Electronic Ord.; Radiometry in Ultraviolet and Infrared.

BA HLI, Freddy, Rsch. Fellow, Rsch. Lab. of Electronics, Mass. Inst. of Tech., Cambridge 39, Mass. **ELECTRICAL COMMUNICATIONS ENGINEERING.** b. Moulmein, Burma, June 28, 1922. s. T. and Daw Thein (Hmyin) B. Edn.: B.Sc., Univ. of Rangoon, 1943; M.S. in E.E., Lehigh Univ., 1949; Sc.D., Mass. Inst. Tech., 1953. Exp.: Asst. Director of Tele-communications, Government of Burma and Visiting Lectr. and Director of Curriculum in Elec. Communications Engrng., Univ. of Rangoon, 1950-52; Rsch. Fellow in Rsch. Lab. of Electronics, M. I. T., Cambridge, Mass., 1952—. Mem.: Amer. Phys. Soc.; Amer. Soc. for Engrng. Edn.; Amer. Inst. of Elec. Engrs.; Inst. of Radio Engrs.; A.A.A.S.; Amer.-Burma Assn., Rangoon. Special Int.: Elec. Network Synthesis for Prescribed Transient Response; Dimensional Analysis; Magnetic Permeability and Elec. Permittivity; VHF and UHF Oscillators and Power Supplies; Radio and Wire Communications.

BAIL, P. Milo, Butler Univ., Indianapolis, Ind.

BAILAR, J. C., Univ. of Ill., Urbana, Ill. **CHEMISTRY.**

BAILEY, A. E., Babcock & Wilcox Co., New York, N. Y. **COMBUSTION AND POWER ENGINEERING.**

BAILEY, Alfred M., Dir., Colo. Museum National History, City Park, Denver, Colo. **ORNITHOLOGY.**

BAILEY, Cameron Vernon, 235 E. 22nd St., N. Y., N. Y.

BAILEY, Clyde H., Dean of Dept. of Agri., Univ. of Minn., St. Paul 1, Minn. **AGRICULTURAL BIOCHEMISTRY.** b. Minneapolis, Minn., Apr. 15, 1887. s. George W. and Sophie (McKenney) B. Edn.: B.S., N. Dak. Agri. Coll., 1913; M.S., Univ. of Minn., 1916; Ph.D., Univ. of Md., 1921. Hon. Deg.: D.Sc., N. Dak. Agri. Coll., 1951. m. Anne L. Wilkins, June 20, 1910. c.: Barbara A. Exp.: Sci. Asst., U. S. Dept. of Agri., Washington, D. C., 1907-11; Asst. Chemist, Minn. Agri. Expt. Station, Minneapolis, Minn., 1911; Agri. Biochem., ibid., 1920; Instr., Univ. of Minn., Minneapolis, Minn., 1913-14; Asst. Prof., ibid., 1915-16; Assoc. Prof., ibid., 1917-20; Prof., ibid., 1920-53. Mem.: Alpha Zeta; Gamma Alpha; Alpha Chi Sigma; Mason; Rotary Internatl.; Fellow, A.A.A.S.; Amer. Soc. Naturalists; Sigma Xi; Gamma Sigma Delta; Phi Lambda Upsilon; Amer. Chem. Soc. Author: Chem. of Wheat Flour, 1925; Phys. Tests of Flour Quality, 1940. Contrb. to: Jour. of Amer. Chem. Soc. Indus. Engrng. Chem.; Jour. Agri. Sci.; Jour. Assn. Offic. Agri. Chemists; Cereal Chem. Special Int.: Cereal Chem. and Tech.

BAILEY, Donald LeRoy, Rsch. Chemist, Linde Air Products Co., 163 Bennington Rd., Snyder 21, N. Y. **ORGANIC SILICON COMPOUNDS.** b. Benzonia, Mich., July 29, 1922. s. William and Marie Hermel (Dell) B. Edn.: B.S., Mich. State Coll., 1943; M.S., ibid., 1944; Ph.D., Pa. State Coll., 1949. m. Patrice Scully, 1943. Exp.: Staff, Linde Air Products Co., Tonawanda, N. Y., 1948—. Mem.: Sigma Xi; Amer. Chem. Soc.; Alpha Chi Sigma; Phi Lambda Upsilon. Contrb. to: Jour. Amer. Chem. Soc.; Food Rsch.; Indus. and Engrng. Chem. Special Int.: Organic Chem. in General; Organic Silicon Compounds; Vinyl Polymers; Fibers.

BAILEY, Dixon Lloyd, Prof. of Plant Pathol., Univ. of Toronto, Toronto, Ont., Can. **PLANT PATHOLOGY.**

BAILEY, Edna Watson, Prof. of Edn., Univ. of Calif., Berkeley, Calif. **SCIENCE EDUCATION.**

BAILEY, Ethel H., 30 Webster Pl., Brookline, Mass. **MECHANICAL ENGINEERING.**

BAILEY, Harold Wood, Assoc. Prof. of Math., Chicago Undergrad. Div., Univ. of Ill., 311 Admin. Bldg. East, Urbana, Ill. **MATHEMATICS.**

BAILEY, Howland Haskell, Mem. of Tech. Staff, Bell Telephone Labs., Whippany, N. J. **COMMUNICATIONS ENGINEERING.** b. Boston, Mass., Apr. 5, 1912. s. William H. and Edith (Haskell) B. Edn.: A.B., Haverford Coll., 1932; Ph.D., Calif. Inst. of Tech., 1941. m. Anne Becchetti, Aug. 30, 1941. c. Bernadine and Barbara Ruth. Exp.: Asst. Prof. of Physics, Univ. of Wyo., Laramie, Wyo., 1940-41; Asst. Prof. of Physics, Univ. of Okla., 1941-43; Mem. Tech. Staff, Radiation Lab., Mass. Inst. of Tech., Cambridge, Mass., 1943-45; Mem. Tech. Staff, Bell Telephone Labs., Whippany, N. J., 1945—. Mem.: Phi Beta Kappa; Sigma Xi. Contrb. to: Phys. Rev. Special Int.: Measurement of Phys. Constants; Radar and Bombing.

BAILEY, Irving Widmer, Harvard Univ., Cambridge, Mass.

BAILEY, James, 95 Steele Rd., W. Hartford 7, Conn. **CERAMICS.**

BAILEY, John Hays, Chf., Dept. of Bacteriol., Sterling-Winthrop Rsch. Inst., Rensselaer, N. Y. **BACTERIOLOGY.**

BAILEY, John Wendell, Prof. of Biol., Univ. of Richmond, Richmond, Va. **ZOOLOGY.**

BAILEY, Liberty Hyde, Cornell Univ., Ithaca, N. Y. **HORTICULTURE.**

BAILEY, Paul Clinton, Assoc. Prof. of Biol., Ala. Coll., Montevallo, Ala. **BIOLOGY.** b. Baylenton,



Ala., Oct. 26, 1921. s. Noel Robert and Lemma (Roberts) B. Edn.: B.S., State Tchrs. Coll., 1942; M.A., Vanderbilt Univ., 1946; Ph.D., ibid., 1949. m. Eileen Garmon, Oct. 1, 1944. c. Paul Clinton, Jr.; Charles Stanley. Exp.: Staff, Dept. of Biol., Ala. Coll., Montevallo, Ala., 1947-48, 1949—. Mem.: Sigma Xi; Beta Beta Beta; Torrey Bot. Club; A.A.A.S.; Amer. Genetic Assn.; Ala. Acad. Sci.; Lions Internatl. Contrb. to: Botanical Gazette; Bull. Torrey Botanical Club; Jour. Ala. Acad. Sci. War Record: Three years in Air Force and Med Corps. Special Int.: Cytotaxonomy of Trilliums; Natural Factors Influencing Rate of Mitosis and Effects of These Natural Factors upon the Mitotic Figure.

BAILEY, Pearce, 4725 Sedgwick, N. W., Washington 16, D. C. **NEUROLOGY.**

BAILEY, Percival, 912 S. Wood St., Chicago, Ill. **NEUROLOGY.**

BAILEY, Reed Warner, Dir., Intermountain Forest and Range Expt. Station, U. S. Forest Service, Ogden, Utah. **GEOLOGY.**

BAILEY, Russell M., Agri. Expt. Station, Orono, Maine.

BAILEY, Thomas Laval, Chf. Geologist, Rothschild Oil Co., Santa Fe Springs, Calif. **PETROLEUM GEOLOGY.**

BAILEY, William Marshall, Prof. Emer. Botany, Southern Ill. Normal Univ., 506 S. Poplar St., Carbondale, Ill. **BOTANICAL SCIENCE.**

BAILOR, Edwin Maurice, Prof. of Psychology, Dartmouth Coll., 8 Brockway Road, Hanover, N. H. **EDUCATIONAL PSYCHOLOGY.** b. Culbertson, Nebr., May 13, 1890. s. John Martin and Harriet (Shellhammer) B. Edn.: A.B., Wash. State Coll., 1914; A.M., ibid., 1915; Ph.D., Tchrs. Coll., Columbia Univ., 1924; Hon. Deg., A.M., Dartmouth Coll., 1928. m. Jane Galt of Canton, Ga., Apr. 21, 1920. d. Jabez Galt. Exp.: Tch. and Supt. of Schl., Lewis Co., Wash., 1909-13, and 1914-15; Instr. at Wash. State Coll., 1915-18; U. S. Army, 1918-19; Psychol. Expert Motor Transport Corps,

U.S.A., 1919-21; District Trng. Officer U. S. Veterans Bur., 1921-23; Instr. at Tchrs. Coll., Columbia Univ., 1923-25; Asst. Prof. of Psy., Dartmouth, 1925-28; Prof. since 1928. Mem.: A.A.A.S. Amer. Psychol. Assn.; Amer. Assn. of Univ. Prof.; Amer. Geog. Soc.; Dartmouth Scientific Assn.; Lambda Chi Alpha; F. & A.M.; Gamma Delta Chi; Kappa Phi Kappa; Phi Delta Kappa; Kappa Delta Pi; Dartmouth Co-operative Soc.; Howe Library Corp. Author: Developed Lessons in Psychol., 1929; Content and Form in Tests of Intelligence, 1924. Ph.D. Dissertation: Content and Form in Tests of Intelligence. War Record: Enlisted service (Psychol. Service), 1918. Commissioned 2nd Lt. San. C. Psychol. Expert Motor Transport Trng., 1919-21. Travel: Can., Mex., Eng., France, Holland, Germany, Italy, Switzerland, Algiers, Egypt, and Rhodesia. Hobbies: Ind. arts; travel; camping; music. Listed in: W. W. in Amer.; W. W. in the East; A.M.S.; Amer. Psychol. Assn.; W. W. in Amer. Edn. Special Int.: Psychological Measurement and Statistical Methods.

BAILY, Joshua Longstreth, Rsch. Assoc. Malacology, Natural History Museum, Balboa Park, San Diego, Calif. MALACOLOG.

BAIN, E. C., Vice-Pres., U. S. Steel Co., Pittsburgh, Pa. METALLURGY.

BAIN, Henry Franklin, P. O. Box 362, Wisconsin Rapids, Wis. PLANT PATHOLOGY.

BAIN, Read, Reed Coll., Portland, Ore. SOCIOLOGY.

BAIN, William Allen, Jr., Asst. Dir., Rsch. and Development Div., Vitro Corp. of Amer., P. O. Box 146, Verona, N. J. CHEMICAL ENGINEERING. b. Newport News, Va., July 11, 1915. s. William Allen and Corrie (Neblett) B. Edn.: B.S., N. C. State Coll., 1936; M.S., Univ. of Wis., 1938; Ph.D., ibid., 1943. m. Ann Whitehurst, Dec. 20, 1938. c. Anne Lee; Beverly May. Exp.: Instr., Dept. of Chem. Engrng., Univ. of Wis., Madison, Wis., 1937-39; Asst. Prof., Dept. of Chem. Engrng., N. C. State Coll., Raleigh, N. C., 1939-42; Rsch. Fellow, Univ. of Wis., Madison, Wis., 1942-43; Chem. Engr., Gen. Aniline and Film Corp., Central Rsch. Lab., Easton, Pa., 1943-45; Hd. of Engrng. Dept., ibid., 1945-47; Asst. to Dir., Rsch. and Development, Kellogg Corp., N. Y., 1947-48; Dir., Dept. of Chem. Rsch. and Development, ibid., (Kellogg Corp. changed name to Vitro Corp.), 1948-51; Asst. Dir., Rsch. and Development, ibid., 1951—. Mem.: Amer. Chem. Soc.; Amer. Inst. of Chem. Engrs.; Tau Beta Pi; Sigma Xi. Contrb. to: Amer. Inst. of Chem. Engrs. Special Int.: Inorganic Separations Processes; Ion Exchange Reactions; Chem. of Heavy Elements; Flow of Fluids; Distillations.



BAINBRIDGE, Kenneth Tompkins, Harvard Univ. Med. Schl., Boston 15, Mass.

BAIR, George J., Optical Glass Plant, Corning Glass Works, Corning, N. Y. CERAMICS.

BAIRD, Don O., Prof. of Biol., State Tchrs. Coll., Huntsville, Tex. BIOLOGY.

BAITSELL, George Alfred, Prof. of Biol., Yale Univ., New Haven, Conn. ZOOLOGY.

BAKER, A. W., Ontario Agri. Coll., Guelph, Ont., Can.

BAISH, Charles Francis, Col., Corps of Engrs., U.S.A., Prof. of Mil. Sci., M.I.T., Cambridge, Mass. ARMY ENGINEERING.



b. Olean, N. Y., Jan. 29, 1897. s. Curtin and Mary Jane (O'Hern) B. Edn.: S.B., U. S. Mil. Acad., 1918; B.S.C.E., M.I.T., 1921. m. Irene Goldie McGinley, Sept. 1, 1920. (dec. 1937); c.: Marie McGinley; Sheila C.; Charles F. m. 2nd. Adelaide Olivia Flournoy, Dec. 2, 1939. c.: Olivia A. Exp.: U.S.A., 2nd Lt. to Col., 1942; Instr. Math., U. S. Mil. Acad., 1918-20; 8th Mounted Engrs., 1921-24; Regimental Adj., 3rd Engrs., 1924-27; Sec. Army Engrs. Schl., 1927-30; Asst. Prof. Engrng., U. S. Mil. Acad., 1931-35; Exec. Officer, U. S. Engr. Office, Galveston, Tex., 1935-37; Engr. Reprodn. Plant, Wash., 1937-40; Comdg., 42 Engr. Regt. (Gen. Service), 1940-43; In Chg., Army Constrn. in Alaska, 1943-44; Dept. Comdr., Chf. Staff, Army Service Force Trng. Center, Ft. Lewis, Wash., 1944-46; Mem. Staff, Faculty Ind. Coll. Armed Forces, 1946-50; Prof., Mil. Sci. and Tactics, M.I.T., 1950—. Mem.: Knights of Columbus; B.P.O.E.; Scabbard and Blade. Special Int.: Construction and Edn.

BAKER, Arthur O., Directing Supvr. of Sci., Bd. of Edn., Cleveland, O. BIOLOGICAL SCIENCE. b.



Phillipsburg, Ohio, Apr. 15, 1901. s. Walter A. and Zourie (Black) B. Edn.: B.S., Miami, Ohio, 1926; A.M., Stanford, 1938. m. Viva Scheller of Sellersburg, Ind., 1931. d. Daniel and Hallie B. Scheller. c.: Janet. Exp.: Tchrs. of Sci., H. S., Union City, Ohio, 1921-23; Prin. of Ross, Ohio, Schl., 1923-24; Prin., Union City, Ohio, 1924-25; Tchrs. of Sci., John Adams H. S., Cleveland, O., 1926-34; Hd. of Sci. Dept., John Marshall H. S., 1934-42; Acting Dir. Supvr. of Health Edn., Bd. of Edn., Cleveland, O., 1943-45; Dir. Supvr. of Sci., Cleveland Pub. Schls., Cleveland, O., 1942—. Hon. Pos.: Chmn., Sci. Curr. Cent., Cleveland, 1939-43. Mem.: N.E.A.; Natl. Assn. of Biol. Tchrs.; Natl. Assn. for Rsch. in Sci. Tchng.; Cleveland Reg. Coun. of Sci. Tchrs.; Central Assn. of Sci. and Math. Tchrs., Pres., 1946; A.A.A.S. Coop. Com. on the Tchng. of Sci. and Math.; Natl. Sci. Tchrs. Assn., Pres., 1951-52; Ohio Edn. Assn.; Northeastern Ohio Tchrs. Assn.; Phi Sigma Biol. Soc.; Kappa Phi Kappa; Kappa Delta Pi; Phi Delta Kappa; Bus. Men's Club; Y.M.C.A. Author: Dynamic Biol., 1933, 1938; Activities for Dynamic Biol., 1943, 1948; Workbook for Dynamic Biol. Today, 1943, 1948. Contrb. to: Schl. Sci. and Math.; Sci. Edn.; The Sci. Tchrs. Travel; U. S. Hobbies: Swimming; Fishing; Trailer Travel. Special Int.: Science Education.

BAKER, Clinton Lyle, Prof. of Biol., Southwestern Coll., Memphis, Tenn. ZOOLOGY.

BAKER, E. L., Pyramid Process Co., Inc., East Rochester, N. Y.

BAKER, Ernest R., 1200 S. Broad St., New Orleans, La. ZOOLOGY.

BAKER, Gladys Elizabeth, Prof. of Plant Sci., Vassar Coll., Poughkeepsie, N. Y. MYCOLOGY.

BAKER, H. Dean, Prof., Columbia Univ., New York 27, N. Y. **HEAT.** b. Kaukauna, Wis., Feb. 29, 1904. s. Ernest Albert and Daisy (Phippin) B. Edn.: B.A., Univ. of Wis., 1932; Ph.D., *ibid.*, 1938. m. Ellen Nancy Hart on Sept. 16, 1940. Exp.: Appraiser, Amer. Appraisal Co., Milwaukee, Wis., 1923-25; Designer, Briggs and Stratton Corp., Milwaukee, Wis., 1925-28. 31-32; Instr., Univ. of Wis., Madison, Wis., 1934-37; Instr., Tex. A. and M. Coll., Coll. Station, Tex., 1938-39; Prof., Columbia Univ., N. Y., N. Y., 1939—; Consultant, Chem. Construction Corp., N. Y., N. Y., 1942—; Consultant, Pratt and Whitney Aircraft, E. Hartford, Conn., 1941-49; Consultant, Mergenthaler Linotype Co., Brooklyn, N. Y., 1951—. Mem.: Amer. Phys. Soc.; Amer. Soc. of Mechanical Engrs.; Amer. Soc. of Engrng. Edn.: Soc. of Exptl. Stress Analysis; Sigma Xi; Phi Beta Kappa; Gamma Alpha. Author: Manual on Thermometry with Emphasis on Thermocouple Techniques, 1950. Contrb. to: Phys. Rev.; Trans. of the Amer. Soc. of Mechanical Engrs. Special Int.: Temperature Measurement.



BAKER, Harry J., Divisional Dir., Psychol. Clinic, Detroit Public Schls., 453 Stimson Ave., Detroit, Mich. **CLINICAL PSYCHOLOGY.**

BAKER, Herbert Koepf. **SPEECH AND HEARING.**

BAKER, Houston Richard, Development Chemical Engr. in Glass Technology, Corning Glass Works,



158 East Third St., Corning, N. Y. **GLASS TECHNOLOGY.** b. Joliet, Ill., Jan. 3, 1908. s. Percy Albert and Hannah Mabel (Seiter) B. Edn.: B.S., Ch.E., Purdue Univ., 1932. m. Sarah Margaret Grossman, Aug. 18, 1934. c.: Katherine Persis; Annabel Genevieve; Houston Richard, Jr.; Sarah Margaret; Winton Albert. Exp.: Analytical Chemist, Works Control Lab., General Electric Co., Pittsfield, Mass., 1933-37; Chem. Engr., developed a superior Calrod electric insulation, *ibid.*, 1937-43; Glass Technol. in glass composition, melting, and processing; Development Chem. Engr. with silica refractory, silica coatings on glass, glass frosting, glass leaching, chemical reclaim, and stream pollution prevention, Corning Glass Works, Corning, N. Y., 1943—. Mem.: Amer. Inst. Chem. Engrs.; Amer. Chem. Soc.; Amer. Ceramic Soc.; Soc. Glass Technol.; A.A.A.S.; Electrochem. Soc.; Natl. Geograph. Soc.; Amer. Forestry Assn.; Corning Rsch. Club of Sigma Xi; N. Y. State mem. nesium Oxide Compounds for Calrod Type Read Heat Electrical Insulation; Glass Tech. Chem. Engrng.; Mixing of Dry Solids for Glass Batches; Silica Refractory for Glass Tanks; Crystal Glass for Purity from Color.

BAKER, Ida M., Assoc. Prof. of Math., Western Reserve Univ., Cleveland, Ohio. **MATHEMATICS.**

BAKER, John Clark, 436 N. Myrtle Ave., Monrovia, Calif.

BAKER, Judd Oral, Officer-in-Chg., Structural Mechanics Div., David W. Taylor Model Basin, U. S. N., Carderock, Md. **ELECTRONICS AND ACOUSTICS.**

BAKER, Kenneth Frank, Univ. of Calif., Los Angeles, Calif.

BAKER, Kenneth Hammond, Dir. of Rsch., Natl. Assn. of Broadcasters, 1771 N St., N. W., Washington, D. C. **RADIO RESEARCH.**

BAKER, Philip S., Hd. Chemist, Stable Isotopes Rsch. and Production Div., Oak Ridge National Lab., Oak Ridge, Tennessee. **INORGANIC AND ANALYTICAL CHEMISTRY.** b. November 30, 1916, Minneapolis, Minn. s. Ross Allen and Helen (Porter) B. Edn.: A.B., DePauw Univ., 1938; M.A., Univ. of Ark., 1939; Ph.D., Univ. of Ill., 1943. m. Marilyn Jarvis of Elmhurst, Ill., Mar. 11, 1944. d. Bertha W. and A. Eugene Jarvis. c.: Ross Jarvis; Jean Carol. Exp.: Lab. Asst., Dow Chem. Co., Midland, Mich., 1935-36; Leaching Asst., DePauw Univ., Greencastle, Ind., 1936-38; Teaching Asst., Univ. of Ill., Urbana, Ill., 1940-43; Rsch. Chem., Pan Amer. Ref. Corp., Tex. City, Tex., 1943-45; Rsch. Asst., Inst. of Paper Chem., Appleton, Wis., 1945-46; Asst. Prof., Univ. of Vt., Burlington, Vt., 1946-48; Assoc. Prof., Bradley Univ., Peoria, Ill., 1948-52; Hd. Chemist, Stable Isotopes Rsch. and Prod. Div., Oak Ridge Natl. Lab., Oak Ridge, Tenn., 1952—. Mem.: Amer. Chem. Soc.; A.A.A.S.; A.A.U.P.; Sigma Xi; Phi Lambda Upsilon; Alpha Chi Sigma; Omicron Delta Kappa; Sigma Phi Epsilon. Contrb. to: Chem. Jours. Ph.D. Dissertation: Determination of Complex Formation by a Volume-change Method. Travel: Europe. Hobbies: Glass Blowing; Boy Scouts. Listed in: A.M.S. Special Int.: Metals.

BAKER, Raymond F., Chf. Geologist, The Tex. Co., 135 E. 42nd St., N. Y., N. Y. **PETROLEUM GEOLOGY.**

BAKER, Robert Horace, Prof. of Astron., Univ. of Ill., Urbana, Ill. **ASTRONOMY.**

BAKER, Roger Denio, Prof. of Pathol., Med. Coll. of Ala., Birmingham, Ala. **PATHOLOGY.**

BAKER, Stanley Ludwig, Vice-Pres., Chem. Div., Spertl Foods, Inc., 816 Clinton St., Hoboken, N. J. **CHEMISTRY.**

BAKER, Woolford Bales, Prof. of Biol., Emory Univ., Atlanta, Ga. **CYTOLOGY, PROTISTOLOGY.**

BAKEWELL, Charles Montague, Sheldon Clark Prof. Emer. of Philos., Yale Univ., 437 Humphrey St., New Haven, Conn. **HISTORY OF PHILOSOPHY, SCIENCE.**

BAKHMETEFF, Boris A., Prof. of Civil Engrng., Columbia Univ., N. Y., N. Y. **FLUID MECHANICS.**

BAKKE, Arthur Lawrence, Rsch. Prof., 701 Ash Avenue, Ames, Iowa. **PLANT PHYSIOLOGY.** b. Horace, North Dak., June 26, 1886. s. Martin and Annette (Sundt) B. Edn.: B.S., Iowa State Coll., 1909; M.S., *ibid.*, 1911; Ph.D., Univ. of Chicago, 1917. m. Josephine Arnaquist of New Richmond, Wis., Aug. 25, 1929. d. Nels; Catharine Arnaquist. (Dec.) m. 2nd, Jeanette Donhowe Henderson of S. Pasadena, Calif., 1952. Exp.: Instr. in Sci., Elgin Acad., 1909-10; Instr. in Bot., Ia. State Coll., 1910-11; Asst. Prof., *ibid.*, 1912-17; Assoc. Prof., *ibid.*, 1918-24; Prof., Rsch. Prof., *ibid.*, 1925—. Hon. Pos.: Fellow Amer. Assn. Adv. Sci.; Fellow Ia. Acad. of Sci.; Chmn. Rsch. Comm., North Central Weed Control Conference. Mem.: Sigma Xi; Phi Kappa Phi; Gamma Sigma Delta; Amer. Soc. Plant Physiology; Botanical Soc. of Amer.; Amer. Soc. of Agronomy; Gamma Alpha. Contrb. to: Phytopathology; Botanical Gazette; Jour. of Ecol.; Amer. Jour. of Bot.; Ia. Agri. Exptl. Sta.; Ph.D. Dissertation: Determination of Wilting. Travel: Scandinavian countries; Northern Europe; Bermuda; Mex. Listed in: A.M.S.; Who's Who. Special Int.: Weed Control.

BAKKE, Arthur Lawrence, Rsch. Prof., Iowa Agri. Expt. Station, Botany Hall, Iowa State Coll., Ames, Iowa. **PLANT PHYSIOLOGY.**

BAKKEN, Henry H., Assoc. Prof. of Agri. Econ., 309 Agri. Hall, Univ. of Wis., Madison 6, Wis. **MARKETING, THEORY AND ORGANIZATION.** b. Arena, Wis., Mar. 24, 1896. s. Halvor and Molla (Nelson) B. Edn.: B.A., Univ. of Wis., 1922; M.A., Univ. of Wis., 1924; Soc. Sci. Rsch. Fel. Harvard Univ., 1929-30. m. Clara K. Grimstad of Mt. Horeb, Wis., Sept. 2, 1922. d. Carl and Gulia

A. Grimstad. c.: Hugh R. (Dec.), James F., David C., and Haakon R. Exp.: Asst. Dept. of Agri. Econ., Univ. of Wis., 1923-24; Asst. Prof., *ibid.*, 1924-32; Assoc. Prof. *ibid.*, 1932—; Prin. Economist, O.P.A., 1943-44; Price Chf., Allied Control Comm., F.E.A., Rome, 1944-45; Attache, London and Oslo Embassies, 1945-46; Ec. Consultant to G.H.Q., SCAP-Tokyo, Japan, 1946-47; Assoc. Prof., Univ. of Wis., 1947—. Mem.: Am. Econ. Assn.; Royal Ec. Soc.; Amer. Farm Ec. Assn.; Canadian Agri. Econ. Soc.; Western Farm Econ. Assn.; Ygdrasil Lit. Soc.; Acacia; Mason; Shrine Club. Author: Econ. of Cooperative Marketing, 1937; Cooperation to the Finnish, 1939; Pioneers in Dak. Territory, 1943; Theory of Markets and Marketing. Travel: Europe; Africa; Japan. Hobbies: Fishing; Motor Boating; Bowling; Golf; Photography. Listed in: W. W. in the Midwest; W. W. in the World; Amer. Scholars. Special Int.: Theory of Markets and Marketing; Cooperation in the U. S. and Abroad, History of Pioneering in N. Dak. Territory.

BAKIS, Edward, Prof. of Psychology, Sterling Coll., Sterling, Kans. **PSYCHOLOGY**. b. Parnu, Estonia, May 21, 1900. s. Edward Julius and Elise (Kaukit) B. Edn.: M.Ph., Estonian State Univ., Tartu, Estonia, 1934. m. Linda Luiga, Feb. 6, 1932. c. Raimo; Marju; Urve. Exp.: Student Asst., Psychological and Psychotechnical Inst., Estonian State Univ.; Junior Instr., *ibid.*; Senior Instr., *ibid.*, 1923-44; Lectr. in Industrial Psychology, *ibid.*, 1938-40; Lecturer in Psychology, Baltic Univ. in Exile, Pinneberg near Hamburg, Germany, 1946-48; Prof. of Psychol., Head of Dept., Sterling Coll., Sterling, Kans., 1950—.



Mem.: Kans. Psychological Assn.; Kans. Acad. of Sci.; A.A.A.S.; Chi Sigma Theta. Contrb. to: Scholar; Transactions of the Kans. Acad. of Sci.; Estonian Scientific Review; Flight and Resettlement. Spec. Int.: Experimental Psychology; Psychology of Refugees.

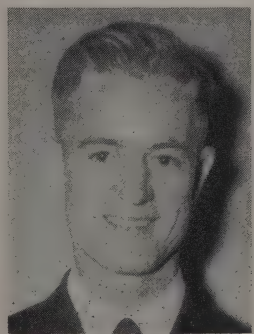
BALCH, Francis Noyes, retired, 130 Prince St., Jamaica Plain, Mass. **PALEONTOLOGY**.

BALDERSTON, Mark, Prof. of Physics, Lafayette Coll., Easton, Pa. **ELECTRONICS**.

BALDES, Edward James, Prof. of Biophysics, Mayo Clinic and Foundation Med. Edn. and Rsch., 427 Fifth Ave., S. W., Rochester, Minn. **BIO-PHYSICS**.

BALDINGER, Lawrence Henry, Dean, Coll. of Sci. and Prof. of Chem., Univ. of Notre Dame, Notre Dame, Ind. **CHEMISTRY**.

BALDRIDGE, Henry David, Jr., Organic Chemist, Hd. New Prod. Dept., Callery Chem. Co., Callery, Pa. **ORGANIC CHEMISTRY**.



b. St. Louis, Mo., Oct. 17, 1924. s. Henry David, Sr. and Virginia (Hall) B. Edn.: B.S., Southwestern at Memphis, 1944; Ph.D., Univ. of Calif., 1950. m. Margaret Collins, Nov. 10, 1944. Exp.: Prof. of Chem., Carson-Newman Coll., Jefferson City, Tenn., 1950; Research Chemist, Naval Med. Rsch. Inst., Bethesda, Md., 1950-52; Sr. Organic Chemist, Schenley Labs., Inc., Lawrenceburg, Ind., 1952-53. Mem.: Amer. Chem. Soc.; Philos. Soc. of Wash.; Sigma Xi; Omicron Delta Kappa; Chi Beta Phi. Contrb. to: Jour. Amer. Chem. Soc.; Sci. War

Record; Ensign, U. S. Navy, Malariologist, 1944-46; Lt., U. S. Navy, Rsch. Chemist, 1950-52. Gen. Int.: Isolation and Structural Investigation of Physiologically Active Substances of Plant Origin. Special Int.: Chemical Investigation of Medicinal Plants; Native Medicines; Customary Remedies.

BALDUF, Walter Valentine, Prof. of Entomol., Univ. of Ill., Urbana, Ill. **ENTOMOLOGY**.

BALDWIN, Ernest Joy, Prof. of Chem. and Dean, Coll. of Liberal Arts, Idaho State Coll., Pocatello, Idaho. **PHYSICAL CHEMISTRY**. b. Hewins, Kans., Dec. 24, 1890. s. Winifred (Crawford) B. Edn.: B.S., Univ. of Kans., 1915; M.S., *ibid.*, 1916; Ph.D., Stanford Univ., 1931. m. Madge Kring on Sept. 4, 1915. c.: Donald; Barbara; JoAnn. Exp.: Asst. in Chem., Univ. of Kans., 1915-16; Instr. in Phys. Chem., Univ. of S. Dak., 1916-18; Food and Drug Chemist, State of S. Dak., 1917; Asst. Prof. of Chem., Univ. of Idaho, 1918-27; Prof. of Chem., Idaho State Coll., Pocatello, Idaho, 1927—; Dean, Coll. of Liberal Arts, *ibid.*, 1947—.



Mem.: Amer. Chem. Soc.; A.A.A.S.; Sigma Xi; Alpha Xi Sigma; Phi Lambda Upsilon. Author: Principles of Inorganic and Analytical Chem., 1941. Contrb. to: Jour. Amer. Chem. Soc.; Jour. Industrial and Engrng. Chem. Special Int.: Photochem.

BALDWIN, Francis Marsh, Prof. and Chmn., Biol. Div., Univ. of Southern Calif., 5015 Angeles Vista Blvd., Los Angeles, Calif. **PHYSIOLOGY**.

BALDWIN, Gordon C., Archeologist, 7283 N. 35th St., Omaha 12, Nebr. **ARCHEOLOGY**. b. Portland, Ore., June 5, 1908. s. John A. and Pearl E. (Gibbs) B. Edn.: A.B., Univ. of Ariz., 1933; M.A., *ibid.*, 1934; Ph.D., Univ. of Southern Calif., 1941. m. Pauline M. Fariss, May 25, 1935. c. Patricia Jane and Marjorie Louise. Exp.: Instr., Univ. of Ariz., Tucson, Ariz., 1934-37; Asst. Curator, Ariz. State Museum, Tucson, Ariz., 1936-40; Archeologist, Natl. Park Service, Boulder City, Nev., 1940-48; Archeologist, Natl. Park Service, Region 2, Omaha, Nebr., 1948-53; Instr., Univ. of Omaha, 1953—. Hon. Pos.: Assoc., Museum of Northern Ariz., 1943-49; Mem. of Advisory Board, Palm Springs Desert Museum, 1947-49. Mem.: Soc. of Sigma Xi; Amer. Anthropological Soc.; Soc. for Amer. Archaeol.; Plains Archeol. Soc.; Tree Ring Soc.; Theta Chi. Contrb. to: Amer. Anthropol.; Amer. Antiquity; Tree Ring Bull.; Southwestern Lore; Southwestern Jour. of Anthropol.; The Masterkey; The Kiva; The Plateau; Sociol. and Soc. Rsch. Special Int.: Southwestern Archaeol. and Plains Archaeol.

BALDWIN, Henry Ives, Rsch. Forester, N. H. Forestry and Recreation Commn., Rm. 401, State House Annex, Concord, N. H. **FORESTRY**.

BALDWIN, Ira Lawrence, Dean and Dir., Coll. of Agri., Univ. of Wis., Madison, Wis. **BACTERIOLOGY**.

BALDWIN, Mark, Rt. 3, Albany, Ga.

BALDWIN, Wesley M., P. O. Box 41, Northfield, Mass.

BALES, Paul D., Rsch. Staff, Biophysics Section, Med. Div., Edgewood Arsenal, Md. **PHYSICS**.

BALFOUR, Donald C., 427 Sixth Ave., S. W., Rochester, Minn.

BALFOUR, Marshall Coulter, Regional Dir. Far East, Internatl. Health Div., Rockefeller Foundation, 49 W. 49th St., N. Y., N. Y. **PUBLIC HEALTH**.

BALINKIN, Isay A., Assoc. Prof. of Exptl. Physics, Univ. of Cincinnati, Cincinnati, Ohio. PHYSICS.

BALK, Christina Lochman, 9 Wright Place, South Hadley, Mass. GEOLOGY.

BALK, Robert, Prof., Dept. of Geol., Univ. of Chicago, Chicago, Ill. STRUCTURAL GEOLOGY.

BALL, Albert, Prof. Emer., Cooper Union, R. F. D. 1, Columbia, N. J. PHYSICS.

BALL, Carleton Roy, retired, 3814 Jocelyn St., N. W., Washington, D. C. AGRONOMY.

BALL, Colin, Rutgers Univ., Food Tech. Dept., New Brunswick, N. J. HEAT STERILIZATION OF FOODS.

BALL, Eric Glendinning, Prof. of Biol. Chem., and Chmn., Div. of Med. Sci., Harvard Med. Schl., 25 Shattuck St., Boston, Mass. BIOCHEMISTRY. b. Coventry, England, July 12, 1904. s. Rev. C. Sturges and Nellie (Glendinning) B. Edn.: S.B., Haverford Coll., 1925; A.M., *ibid.*, 1926; Ph.D., Univ. of Pa., 1930. Hon. Deg.: D.Sc., Haverford Coll., 1949. m. Grace Snaveley, Sept. 10, 1927. Exp.: Asst., Schl. of Med., Univ. of Pa., 1926-28; Natl. Rsch. Fellow, Johns Hopkins Med. Schl., 1929-30; Instr. in Physiol. Chem., *ibid.*, 1930-33; Internat. Physiol. Congress Fellow, Rome, 1932; Assoc. in Physiol. Chem., Johns Hopkins Med. Schl., 1933-40; Cuggenheim Memorial Foundation Fellow, Institut für Zell physiologie, Berlin-Dahlem, 1937-38; Asst. Prof. of Biol. Chem., Harvard Med. Schl., Boston, Mass., 1940-41; Eli Lilly Prize, 1940; Assoc. Prof. of Biol. Chem., Harvard Med. Schl., 1941-46; Prof. of Biol. Chem., *ibid.*, 1946—; Chmn., Div. of Med. Sci., *ibid.*, 1952—. Hon. Pos.: Consultant, Eli Lilly Co.; Editorial Bd., Biochemical Preparations; Biochem. Subcom., Chemical-Biol. Coordination Center, Natl. Rsch. Council. Mem.: Amer. Soc. Biol. Chemists; Amer. Chem. Soc.; Amer. Acad. Arts and Sci.; Biochem. Soc. of Great Britain; Natl. Acad. of Sci.; Sigma Xi; A.A.A.S.; Soc. Gen. Physiologists; Alpha Omega Alpha. Contrb. to: Jour. Biol. Chem.; Proc. Natl. Acad. Sci.; Amer. Jour. Physiol.; Biol. Bull.; Jour. Amer. Chem. Soc.; etc. War Record: Secy., Biochem. Panel, Bd. for Coordination of Malarial Studies, Wash., 1944-46; Cruziero do Sol, Order of the Southern Cross, Brazil; Certificate of Merit, 1948. Special Int.: Biological Oxidations; Enzymes.

BALL, Ernest, Asst. Prof. Botany, Univ. of N. C., Raleigh, N. C. MORPHOLOGY, ANATOMY ANGIOSPERMS.

BALL, Gordon Harold, Prof. of Zool., Univ. of Calif., 405 Hilgard Ave., Los Angeles, Calif. PROTOZOOLOGY, PARASITOLOGY.

BALL, J. S., U. S. Bureau of Mines, Laramie, Wyo. SULPHUR CHEMISTRY.

BALL, John Rice, Visiting Prof. of Geol., Univ. of Kansas City, Kansas City, Mo. PALEONTOLOGY.

BALL, Josephine, Asst. Prof., Hartford Jr. Coll. and Psychologist, Inst. Living, 200 Retreat Ave., Hartford, Conn. PHYSIOLOGICAL PSYCHOLOGY.

BALL, Stanley Crittenden, Prof. of Biol., Curator of Zool., Peabody Museum of Natural History, Yale Univ., New Haven, Conn. ORNITHOLOGY AND ECOLOGY, ZOOGEOGRAPHY. b. Shelburne Falls, Mass., Nov. 19, 1885. s. Wilfred S. and Cora Eugenia (Crittenden) B. Edn.: Ph.B., Yale Univ., 1911; Ph.D., *ibid.*, 1915. m. Augusta Lehman, April 6, 1912. c.: Lehman Crittenden, (dec.). Exp.: Draftsman, Marine Biological Lab., Carnegie Inst., Tortugas, Fla., 1913-14; Asst. Curator Zoology, Peabody Museum, Yale Univ., New Haven, Conn., 1915-16; Instr., Mass. Agri. Coll., Amherst, Mass., 1916-18; Prof. of Biol., Springfield Coll., Springfield, Mass., 1918-21; Curator, Bishop Museum, Honolulu, Hawaii, 1921-26; Curator, Peabody Museum, Yale Univ., New Haven, Conn., 1927—; Asst. Prof., *ibid.*, 1927-33; Assoc. Prof., *ibid.*, 1933—. Mem.: A.A.A.S.; A.S.Z.; Amer. Ornith. Union; Conn. Acad. Arts and Sci.; Ecol. Soc. Amer. Contrb. to: Carnegie Inst. of Wash.; Jour. Morphology; Bishop Museum; Acad. Nat. Sci. Phila.; Bull.

Peabody Museum, Yale. Spec. Int.: Relation of Light to Calls of Birds. Zoogeography of Gaspé Peninsula; Bird Migration in Gaspé; Jungle-Fowls of Pacific Islands.

BALLARD, Charles W., Dean and Prof. of Pharmacol., Columbia Univ. Coll. of Pharmacy, 115 W. 68th St., N. Y., N. Y. PHARMACOGNOSY.

BALLARD, Stanley Sumner, Prof. of Physics and Chmn., Dept. of Phys., Tufts Coll., Medford 55, Mass. PHYSICS. b. Los Angeles, Calif., Oct. 1, 1908. s. John Hudson and Myrtle (Stanley) B. Edn.: A.B., Pomona Coll., 1928; M.A., Univ. of Calif., Berkeley, 1932; Ph.D., Univ. of Calif., Berkeley, 1934. m. Mary Elizabeth Miller of Oakland, Calif., Sept. 13, 1935; d. Washington J. and Mary McKee Miller; c.: Mary Susan Elizabeth, John Stanley. Exp.: Asst. in Physics, Dartmouth Coll., 1928-30; Teaching Fellow in Physics, Univ. of Calif., Berkeley, 1930-34, Rsch. Fellow, 1934-35; Instr. in Physics, Univ. of Hawaii, 1935-37, Asst. Prof. of Physics, 1937-41; Rsch. Assoc. in Geophysics, Hawaii National Park, 1936-41; Consultant in Spectroscopy, Exp. Station of the Hawaiian Sugar Planters' Assn., 1937-40; Collaborator in Soil Chemistry, Hawaii Agri. Exp. Sta., 1939-41; Prof. of Physics and Dept. Chmn., Tufts Coll., 1946—; Prof. of Physics, Univ. of Calif., Berkeley, summer, 1949; Consulting Physicist, Polaroid Corporation and Baird Associates, Inc., Cambridge, Mass., 1946; Consulting Physicist, The Rand Corporation, Santa Monica, Calif., 1952—. Hon. Pos.: Secretary for Local Sections, Optical Soc. of Amer., 1947-53; Vice-Pres., International Comm. of Optics, 1948—; Mem., U. S. A. National Committee of the International Union of Pure and Applied Physics, 1949—; Assoc. Editor, Journal of the Optical Soc. of Amer., 1950—. Mem.: Phi Beta Kappa; Sigma Xi; Gamma Alpha; Sigma Pi Sigma; Sigma Alpha Epsilon. Fellow; Amer. Phys. Soc., A.A.A.S.; Phys. Soc. of London; Mem.: Optical Soc. of Amer.; Amer. Assn. of Physics Tchrs.; Netherlands Physical Soc.; Amer. Soc. for Engng. Edn.; Hawaiian Acad. of Sci.; Amer. Assn. of Univ. Prof.; Amer. Geophysical Union; Armed Forces—Natl. Rsch. Coun. Vision Com. Contrb. to: Ency. Britannica, various journs. of pure and applied physics, agri. and geophysics. Ph.D. Dissertation: The Determination of the Nuclear Mechanical Moment of Columbium through a Study of Its Hyperfine Structure. War Record: Lieut. Commander, and Commander, U.S.N.R., 1941-46; Officer-in-Charge of research and development in optics and infra-red instruments, Bureau of Ordnance, Navy Dept.; Officer-in-Charge of Radiometry Section of Technical Staff, Joint Task Force One, 1946 (Atom Bomb Tests at Bikini). Travel: England; France; Holland; Germany; Spain. Special Int.: Optical and Infrared Instrumentation; Crystal Physics.

BALLARD, William S., Sr. Pathologist, Fruit Diseases, U. S. D. A., 137 Cornell Ave., Fresno, Calif. PLANT PATHOLOGY.

BALLARD, William Whitney, Prof. of Zool., Dartmouth Coll., Hanover, N. H. EMBRYOLOGY.

BALLEISEN, Charles Edward, Supvr., Mechanical Lab., Southwest Rsch. Inst., 8500 Culebra Rd., San Antonio 6, Tex. KINEMATIC SYNTHESIS AND INDUSTRIAL APPLICATIONS. b. October 2, 1911, Philadelphia, Pa. s. Herman J. and Caroline P. (Kessler) B. Edn.: B.S. in M.E., Drexel Inst. of Tech., 1933; M.S. in M.E., M.I.T., 1934. m. Martha Wiley of Oxford, Miss., Sept. 14, 1940. d. Dan and Beulah Wiley. Exp.: Rsch. Engr., Aberdeen Proving Ground, 1936-39; Ordnance Engr., Ord. Dept., U. S. Army, Washington, D. C., 1939-42; Assoc. Prof. of Mech. Engr., Purdue Univ., 1946-48; Supvr., Mech. Lab., Southwest Rsch. Inst., San Antonio, Tex., 1949—. Ed.: Machine Design Clearing House Bull., A.S.E.E., 1947-48; Franklin Inst. of Pa.; A.S.E.E.; A.S.M.E.; Tex. Acad. of Sci. Fellow; Amer. Ordnance Assn.; Tau Beta Pi; Sigma Xi. Author: Principles of Firearms, 1945. Contrb. to: Ordnance; Machine Design; Popular Astron.; Product Engrng.; Tex. Jour. Sci. War Record: Officer in Charge, Machine Gun Development Branch, Ordnance Dept., U. S. A., 1942-46; C.I.O.S., Investigator of German Small Arms Lab. Travel: Bahama Isl.; Cuba; Mexico; Canada; France; Germany; Austria; England; Curacao; Turkey; Transjordan; Egypt. Hobbies: Astron.; Lang. Listed in: A.M.S.; Who's

Who in the South and Southwest. Special Int.: Rsch. and Development Programs for Small Industries.

BALLON, Harry C., 726 Drummond Medical Bldg., 1414 Drummond St., Montreal, Que., Can.

BALLOU, Donald Henry, Assoc. Prof. of Math., Middlebury Coll., 27 Weybridge St., Middlebury, Vt.



MATHEMATICS. b. Chester, Vt., Mar. 28, 1908. s. Henry L. and Carrie (Hubbard) B. Edn.: B.A., Yale, 1928; M.A., Harvard, 1931; Ph.D., *ibid.*, 1934. m. Dorothy Pollard of Baltimore, Vt., Sept. 14, 1933. d. Mr. and Mrs. Walter E. Pollard. c.: Donald Pollard. Exp.: Lawrenceville Schl., Lawrenceville, N. J., 1928-29; Hampton Inst., Hampton, Va., 1929-30; Harvard Univ., Instr., 1933-34; Ga. Schl. of Tech., Instr., 1934-35; Asst. Prof., 1935-42; Middlebury Coll., Asst.

Prof., 1942-47; Assoc. Prof., 1947—. Mem.: Amer. Math. Soc.; Math. Assn. of Amer.; Phi Beta Kappa; Phi Kappa Phi. Co-author: Plane and Spherical Trigonometry, 1943; Analytic Geometry, 1943. Ph.D. Dissertation: A Class of Completely Monotonic Functions. Listed in: Amer. Men of Sci. Special Int.: Laplace Integrals; Root of Polynomials.

BALLS, Arnold Kent, Dept. of Chem., Purdue Univ., W. Lafayette, Ind. **BIOCHEMISTRY.**

BALSBAUGH, Jayson Clair, Consult. Engr. and Lectr., Asst. Prof. of Electric Power Production and Distribution, Mass. Inst. of Tech., Cambridge, Mass.; 35 Old Colony Road, Wellesley Hills, Mass. **CONSULTING ENGINEER AND TEACHING.** b. Jan. 8, 1902, Hershey, Pa. s. S. Snively and Margaret (Duncan) B. Edn.: B.S., Pa. St. Coll., 1921; S.M., M.I.T., 1924. m. Elizabeth Rogers Brookline, Mass., 1930; d. Allen H. and Sara D. Rogers; c.: Sydney, Allen. Exp.: Gen. Elec. Co., 1921-22; Stone and Webster, 1924; Jackson and Moreland, Engrs., 1925-28; Univ. of Calif., 1927-28; Mass. Inst. of Tech., 1922-27, 1928; Asst. Prof., Mass. Inst. of Tech., 1928—; Consulting Engr.; Rsch., Natl. Elec. Light Assn. and Assn. of Edison Illum. Co., 1928-32, 1935—; Rsch. for Indus. Companies. Mem.: Amer. Inst. of Elec. Engrs.; Electrochem. Soc.; Soc. for Promotion of Engr. Edn.; A.A.A.S.; Alpha Tau Omega; Tau Beta Pi; Sigma Xi; Phi Kappa Phi; Eta Kappa Nu; Fellow, A.I.E.E. Contrb. to: Trans. A.I.E.E.; Jour. Indus. and Engrng. Chem.; Jour. Franklin Inst. Listed in: Who's Who in Engrng.; A.M.S.

BAMFORD, Ronald, Prof. and Hd., Dept. Botany, Univ. of Md., College Park, Md. **BOTANY.**

BANCROFT, Edith, 83 Hamilton St., Hamilton, N. Y. **PLANT MORPHOLOGY.**

BANCROFT, George Herbert, Dev. Engr., Vacuum Equipment Div., Distillation Products, Inc., 755 Ridge Rd., Rochester, N. Y. **PHYSICS.**

BANCROFT, George Russell, retired, 436 Gainsboro Rd., Drexel Hill, Pa. **BIOCHEMISTRY.**

BANCROFT, Huldah, Prof. of Biostatistics, 662 Homestead Avenue, New Orleans 20, La. **BIOSTATISTICS.** b. Norvell, Mich. February 16, 1893. s. Charles Palmer and Eva E. (Palmer) B. Edn.: A.B., Univ. of Mich., 1915; M.A., Columbia Univ., 1928; Ph.D., Western Reserve Univ., 1943. Exp.: Y. W. C. A. Secretary, Univ. of Mich., 1915-21; High Schl. Tchr., Math., Ann Arbor, Mich., 1921-24; Instr. Biometrics Western Res. Univ., 1939-45; Asst. Prof. Biometrics W.R.U., 1945-47; Assoc. Prof. Biostatistics, Tulane Univ., Schl. of Med., 1947-49; Prof. of Biostatistics, *ibid.*, 1949—. Mem.: Phi Beta Kappa; Sigma Xi; Delta Omega; Amer. Pub. H. Assn.; Amer. Statist. Assn.; Biometrics So. Contrb. to: Amer. Jour. Pub. Health;

Int. Jour. Leprosy; Amer. Jour. Trop. Med.; Heart Jour., Ph.D. Dissertation: Statistical Measures of Aggregation of Disease. Gen. Int.: Asst. Ed.-Intern. Jour. of Leprosy since 1945; Statis. Definitions New Gould Med. Dictionary. Hobbies: Gardening and Home. Listed in: Who's Who in Amer.

BANCROFT, Merle Fowler, P. O. Box 190, Wolfville, N. S., Can.

BANCROFT, Wilder Dwight, 7 East Ave., Ithaca, N. Y.

BANG, Haakon, Dean, Schl. of Pharmacy, State Coll. of Wash., Pullman, Wash. **PHARMACEUTICAL CHEMISTRY.** b.



Devils Lake, N. Dak., June 3, 1905. s. Peter J. and Gudlaug (Kylo) B. Edn.: B.S., Ph.C., State Coll. of Wash., 1927; M.S., *ibid.*, 1931; Ph.D., Purdue Univ., 1942. m. Lucile F. Dauner, June 10, 1946. Exp.: Pharmacist, Owl Drug, Cheney, Wash., 1927-28; Pharmacist, Owl Drug Co., Spokane, Wash., 1928-29; Acting Instr., State Coll. of Wash., 1931-32; Asst. Mgr., Owl Drug, Spokane, Wash., 1932; Instr., State Coll. of Wash., 1932-37; Asst.

Prof. of Pharmacy, *ibid.*, 1937-42; Assoc. Prof., *ibid.*, 1942-47; Prof., *ibid.*, 1948-50; Dean and Prof. of Pharmacy, Univ. of Ariz., 1950-52; Dean and Prof. of Pharmacy, State Coll. of Wash., Pullman, Wash., 1952—. Mem.: Amer. Pharmaceutical Assn.; A.A.A.S.; A.A.U.P.; Mason; Kappa Psi; Rho Chi; Phi Sigma; Phi Kappa Phi; Phi Lambda Upsilon; Pi Tau Iota; Sigma Xi; C. of C.; Kiwanis. Contrb. to: Jour. Organic Chem.; Jour. Amer. Pharm. Assn.; Amer. Jour. Pharm. Edn. Special Int.: Rsch. on Iodination of Organic Compounds and on Radiographic Opagues.

BANGHAM, Ralph Vandervort, Prof. and Hd., Dept. of Biol., Coll. of Wooster, Wooster, Ohio. **ECOLOGY AND LIFE HISTORIES OF PARASITES OF FRESH WATER FISH.**

BANGHAM, Walter Nicholas, Consultant in Agri., 33 Marshall Ridge Rd., New Canaan, Conn. **GENETICS, TROPICAL AGRICULTURE.**

BANGSON, John Stuver, Prof. of Biol., Berea Coll., Berea, Ky. **GENETICS.**

BANKS, George Bernard, Prof. of Physical Sci., Niagara Univ., Niagara Univ., N. Y. **PHYSICS.**

BANKS, Nathan, Hd. Curator of Insects Emer., Museum Comparative Zool., Harvard Univ., 103 Norfolk St., Holliston, Mass. **ENTOMOLOGY.**

BANNON, Henry J., Scientific Dir., Grove Labs., Inc., 2630 Pine St., St. Louis, Mo. **CHEMISTRY, PHARMACOLOGY.**

BANTA, Henry Eugene, Physicist, Independent Exploration Co., Houston, Tex. **PHYSICS.**

BANTON, Huston J., 46 Linnet St., West Roxbury, Mass.

BARACH, Joseph Hayem, Med. Dir., Univ. Clinics, Univ. of Pittsburgh, Pittsburgh, Pa.

BARANKIN, Edward William, Assoc. Prof. of Math., Univ. of Calif., Berkeley, Calif. **PURE AND APPLIED MATH., THEORY OF BEHAVIOR.** b. Dec. 18, 1920, Phila., Pa. s. Myer and Esther (Grossman) B. Edn.: A.B., Princeton Univ., 1941; M.A., Univ. of Calif., 1942; Ph.D., *ibid.*, 1946. m. Claire Chertcoff of Phila., Pa., June 22, 1941. d. Joseph and Esther Chertcoff. c.: Joseph Paul; Barry Alexander. Exp.: Asst. Physicist, Natl. Defense Rsch. Coun., Palmer Phys. Lab., Princeton, N. J., summer 1941; Teaching Asst., Math., Univ. of Calif., Berkeley, 1941-42; Physicist, Man-

hattan Project, Berkeley, Calif. and Oak Ridge, Tenn., 1942-45; Instr., Engr., Sci. and Mgt., W. T. ESMWT, Coun., Berk. and San Francisco; Rsch. Asst., Statistical Lab., Dept. of Math., Univ. of Calif., 1945; Teaching Assoc. in Math., 1945-46; Asst. to Prof., Hermann Weyl, Inst. for Advanced Study, Princeton, 1946-47; Instr. in Math., Univ. of Calif., Berkeley, 1947-48; Asst. Prof. Math., 1948-52; Assoc. Prof. Math., 1952—; Consultant to U.S.A.F. and Natl. Bur. of Standards, Wash., D. C. and Los Angeles, Calif., 1950—. Mem.: Phi Beta Kappa; Sigma Xi; A.M.S.; Inst. of Math. Statistics; Econ. Soc. Author: Quantitative theory of human behavior; many papers. Ph.D. Dissertation: On Characteristic Values of Linear Transformations. War Record: See above. Hobbies: Tennis; Reading. Listed in: Amer. Men of Sci. Special Int.: Linear Transformations, Probability, Statistics, Game Theory, Theory of Behavior.

BARBER, Ira Garnett, Mfg. Engr., Western Electric Co., 5467 W. Haddon Ave., Chicago, Ill. PHYSICS.

BARBOUR, Ian Graeme, Chmn., Dept. of Physics, Kalamazoo Coll., Kalamazoo, Mich. COSMIC RAYS,

PHYSICS. b. Peking, China, Oct. 5, 1923. s.: George B. and Dorothy (Dickinson) B. Edn.: B.A., Swarthmore Coll., 1943; M.A., Duke Univ., 1946; Ph.D., Univ. of Chicago, 1949. m. Deane Kern, Nov. 29, 1947. c.: John Robert; Blair Winn. Exp.: Rsch. Assoc., Duke Univ. Hosp., 1946; DuPont Fellow, Univ. of Chicago, 1948; Asst. Prof. of Physics, Kalamazoo Coll., Kalamazoo, Mich., 1949-51; Assoc. Prof. of Physics, *ibid.*, 1951-53; Chmn., Dept. of Physics, *ibid.*, 1951—; Ford Faculty Fellowship, 1953-54. Mem.: Amer. Physical Soc.; A.A.P.T.; Phi Beta Kappa; Sigma Xi. Contrb. to: Physical Rev.; Amer. Jour. Physics; Rev. Scientific Instruments; Christian Century. Special Int.: Cosmic Rays; Tchng. of Physics.

BARCLAY, Earle H., Mill Mgr., Kupfer Bros. Co., Northbridge, Mass. CHEMISTRY, PHYSICS.

BARD, Philip, 710 N. Washington St., Baltimore 5, Md.

BARDWELL, Dwight Cooley, Lab. Dir., Central Rsch. Lab., Allied Chem. and Dye Corp., Morristown, N. J. CHEMISTRY.

BARDY, Joseph, Instr. in Biol., Olney H. S., 323 S. 20th St., Philadelphia 3, Pa. BIOLOGY, EDUCATIONAL PSYCHOLOGY.

BARE, Clarence O., Entomologist, Stored Tobacco Insect Lab., U. S. D. A., 7 North Blvd., Apt. 12, P. O. Box 7062, Richmond, Va. ENTOMOLOGY.

BAREIS, Grace M., Asst. Prof. Emer., Ohio State Univ., 164 13th Ave., Columbus, Ohio. MATHEMATICS.

BARREUTHER, Charles A., Mem., Physics Dept. Staff, Drexel Inst. of Tech., 5533 Greenway Ave., Philadelphia, Pa. PHYSICS.

BARGHOORN, Elso S., Assoc. Prof. of Bot., Curator of Paleobot., Dept. of Biology and Botanical Museum, Harvard Univ., Boston, Mass. b. N. Y. City, June 30, 1915. s. Elizabeth Brust B. Edn.: A.B., Miami Univ. (Oxford, Ohio); M.A., Harvard Univ.; Ph.D., *ibid.* m. Margaret MacLeod, Cambridge, Mass., Aug. 16, 1941. d. Malcolm and Florence MacLeod, divorced, 1950. c.: Jonathan Elso; Steven Frederick. Exp.: Tchng. Fellow, Harvard Univ., 1938-41; Instr., Amherst Coll., 1941-44; Asst. Prof., *ibid.*, 1945-46; Scientific Consultant, Office of Scientific Rsch. and Develop., Wash., D. C., 1944-45; Asst. Prof., Harvard Univ., 1946-49; Assoc. Prof., *ibid.*, 1949—. Mem.: A.A.A.S.; Geol. Soc. of Amer.; Bot. Soc. of Amer.; Amer. Acad. of Arts,

Sci.; N. Y. Acad. Sciences; Soc. of Ec. Paleontologists; Soc. Ec. Geol.; Int. Soc. of Plant Morph.; Sigma Xi. Ph.D. Dissertation: The Ontogenetic Development and Phylogenetic Specialization of Rays in the Xylem of Dicotyledons. War Record: Field Service Consultant, O.S.R.D. Travel: Central Amer.; South Amer.; Cuba; Cent. and West. Europe. Gen. Int.: Rsch. on Geologic History and Evolution, Plants. Hobbies: Photography. Listed in: Who Knows—and What; A.M.S.; W. W. A.

BARGEN, J. Arnold, Prof. of Med., Mayo Foundation, Univ. of Minn., Mayo Clinic, Rochester, Minn.



GASTROENTEROLOGY. b. Mountain Lake, Minn., Oct. 25, 1894. s. Jacob I. and Anna J. B. Edn.: B.S., Univ. of Chicago, 1918; M.D., Rush Med. Coll., 1921; M.S., Univ. of Minn., 1927. m. Ruth Catherine Burns of Chicago, Aug. 27, 1921. d. Wm. J. Burns. c.: Robert, Teresa Ann, Loretta Mae, Cornelia Marie. Exp.: John J. Barlow Fellow in Med., Chicago, 1922-23; Instr. in Med., Mayo Foundation, 1923—; Asst. Prof., 1930-37; Assoc. Prof., 1937-45; Prof., 1945—. Mem.:

Pres. Amer. Gastroenterological Assn.; Minn. State Bd. of Med. Examiners; Mat. Acad. of Med.; Amer. Coll. of Phys.; Cen. Soc. for Clin. Rsch.; Phi Chi; Kiwanis. Author: 160 scientific articles and 3 books. War Record: Reserve Corps, 1918. Travel: Europe; S. Amer. Hobby: Golf. Listed in: World Who's Who; Who's Who in Amer.; Internatl. Blue book. Special Int.: Intestinal Diseases.

BARISH, Norman N., Assoc. Prof. of Mgmt. Engrng. and Secy. of Coll. of Engrng., N. Y. Univ., 167-15 81st Ave., Jamaica, L. I., N. Y. INDUSTRIAL ENGINEERING. b. N. Y. C., July 29, 1920. s. Meyer and Sayde (Spiro) B. Edn.: B.S., City Coll. of N. Y., 1940; B.S.E., Univ. of Mich., 1943; M.S. in M.E., Univ. of Pa., 1945. m. Esther Florence Braverman, Oct. 11, 1947. c. Michael Edward; Jean Ellen. Exp.: Statistical Business and Econ. Analyst for U. S. Govt. 1940-42; Indus. Engrng. Supvr., Radio Corp. of Amer., N. Y. C., 1943-45; Mgmt. Engrng. Consultant in Private Practice, N. Y. C., 1945—; Instr. in Indus. Engrng., Newark Coll. of Engrng., Newark, N. J., 1946-47; Asst. Prof. of Admin. Engrng., N. Y. Univ., N. Y. C., 1947-50; Assoc. Prof. of Mgmt. Engrng., *ibid.*, 1950—; Statistical Officer of Coll. of Engrng., *ibid.*, 1947-48; Secy. of Coll., *ibid.*, 1948—. Mem.: Amer. Soc. of Mech. Engrs.; Soc. for Adv. of Mgmt.; Amer. Inst. of Indus. Engrs.; Amer. Soc. for Quality Control; Natl. Assn. of Cost Accts.; Amer. Soc. for Engrng. Edn.; Amer. Statistical Assn.; Amer. Mgmt. Assn.; Phi Beta Kappa; Tau Beta Pi; Alpha Pi Mu. Author: Systems Analysis for Effective Admin. Contrb. to: Jour. of Engrng. Edn.; Controller; N.A.C.A. Bull.; Mill and Factory; Factory Mgmt. and Maintenance. Special Int.: Systems and Procedures; Engrng. and Econ. Analysis; Forecasting; Managerial Control.

BARKER, Elmer Eugene, Landscape Architect. 9 Ten Broeck Pl., Albany 10, N. Y. LANDSCAPE ARCHITECTURE. b. Crown Pt., N. Y., Dec. 31, 1886. s. Elmer J. and Harriet (Griggs) B. Edn.: A.B., Cornell Univ., 1910; Ph.D., *ibid.*, 1914; M.L.A., Harvard Univ., 1925. m. Edna Louise Snyder of Wash., D. C., Sept. 4, 1916. d. William and Marie Snyder. c.: Stephen Middleton; Mary Louise; Robert Tayloe; Thomas Griggs; Eugene Gilbert. Exp.: Asst. Prof. of Plant Breeding, Cornell Univ., 1914-19; Plant Breeder and Chf. Agronomist, Insular Agri. Expt. Sta., Puerto Rico, 1919-21; Assoc. Prof. Botany, Univ. of Ga., 1922-23; Landscape Arch., Westchester Co. (N.Y.) Park Commission, 1925-28; Landscape Arch., N. Y. State Dept. of Public Works, 1928—. Also during 1941-45 in Wash., D. C. with Fed. Government as landscape arch. and as Cartographic Engr.; Rsch. Asst., Mass. Dept. of Agri., 1922-25. Mem.: Sigma Xi; Adirondack Mt. Club. Author: The Food Supply

of New England. Contbr. to: N. Y. Hist.; N. Country Life; N. Y. Times Mag.; Nature; The Living Wilderness. Ph.D. Dissertation: Heredity Studies in the Morning Glory. Hobbies: Local Hist., Genealogy, Mountain Climbing, Skiing. Listed in: Internatl. Bluebook; Who's Who in the East; A.M.S. Special Int.: Post-glacial Physiol. of the Crown Point, N. Y. Region; Local Hist. of Crown Point.

BARKER, Ernest Franklin, Prof. and Chmn., Dept. of Physics, Univ. of Mich., Ann Arbor, Mich. **ATOMIC AND MOLECULAR STRUCTURE.**

BARKER, H. Albert, 3048 Life Sci. Bldg., Univ. of Calif., Berkeley, Calif. **BACTERIOLOGY.**

BARKER, Joseph Warren, Pres., Research Corp., 405 Lexington Ave., N. Y., N. Y. **ENGINEERING.**

BARKER, Paul Shirmer, Assoc. Prof. of Internal Med., Univ. of Mich., Ann Arbor, Mich. **INTERNAL MEDICINE.**

BARKER, Prince Patanilla, Chf., Acute Neuropsychiatry Services, Veterans Admin. Hosp., Tuskegee, Ala. **NEURO-PSYCHIATRY.**

BARLETT, Helen Blair, Petrographer, Ceramic Rsch., A. C. Spark Plug Div., General Motors, Flint, Mich. **CHEMISTRY, PHYSICS.**

BARNARD, Chester I., Pres., N. J. Bell Telephone Co., 540 Broad St., Newark, N. J. **SOCIOLOGY.**

BARNES, Alfred Osgood, Mgr. and Partner, S. O. Barnes and Son, Gardena, Calif. **PHARMACY.**

BARNES, Alfred Osgood, Pres. and Gen. Mgr., Barnes and Son, Inc., Vice-Pres. and Treas., Barnes Lab., Inc., Owner Barnes Emulsion Co., 17234 S. Main St., Gardena, Calif. **PHARMACEUTICAL CHEMISTRY, ANIMAL PARASITOLOGY, MANUFACTURING PHARMACEUTICALS.** b. Nashville, Tenn., Dec. 18, 1893. s. Sewall Osgood and Martha LeVange (Mitchell) B. Edn.: Ph.C., Univ. of Southern Calif., 1921; B.S., *ibid.*, 1922. m. Anna Temple, June 24, 1922. c.: Caroline; Joan; Martha. Exp.: Pres. and Gen. Mgr., Barnes and Son, Inc., Vice-Pres. and

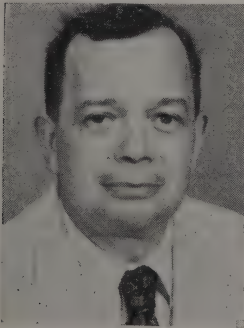


Treas., Barnes Lab., Inc., Owner Barnes Emulsion Co., Gardena, Calif. Hon. Pos.: Mem., Los Angeles Chamber of Commerce Drug Com. Mem.: Fellow, A.A.A.S.; Fellow, Amer. Coll. Pharmacists; Amer. Chem. Soc.; Amer. Pharmaceutical Assn.; Inst. Food Technologists; Nutritional Forum; Mason; Phi Delta Chi. War Record: Sgt. Artillery, World War I.

BARNES, Earl Elmer, Assoc. Agronomist, Ohio Agri. Expt. Station, Wooster, Ohio.

BARNES, George Carroll, Prof. of Elect. Engr., Va. Poly. Inst., Box 231, Blacksburg, Va. **POWER SYSTEMS CONTROLS.**

b. Mar. 2, 1903, Martinsburg, W. Va. s. George Corbin and Mary Chenoweth Barnes. Edn.: B.S.E.E., W. Va. Univ., 1930; E.E., *ibid.*, 1933; M.S.E.E., Va. Poly. Inst., 1946. m. Gaynal Ballard of Mt. Hope, W. Va., June 15, 1929. d. Mr. and Mrs. J. V. Ballard. c.: George Carroll. Exp.: Elect. Test., Westinghouse Elect. Corp., 1930-31; Ry. Engr., *ibid.*, 1931-32; Welder, Ames Baldwin Wyoming Tool Co., 1932-33; Sta. Operator, Standard Oil Co.; N. J., 1933-34; Jr. Engr., W. Va. Engr. Co., 1934-37;



Sr. Consultant, *ibid.*, 1937-44; Assoc. Prof., V.-P.I., 1944-48; Prof., *ibid.*, 1948—. Mem.: A.I.E.E.; A.A.U.P.; N.S.P.E.; A.S.E.E.; Tau Beta Pi; Eta Kappa Nu; Sigma Xi; Va. Soc. Prof. Engr.; Hon. Pos.: Univ. Club of V.P.I.; Lions; Elks. Contbr. to: Assoc. Ed., Mechanization; Coal Age. Gen. Int.: Authority on Mining, Electrical Problems. Hobbies: Violin; Fly Fishing. Listed in: Who's Who in Engr.; A.M.S.; Who's Who in South and Southwest; Internatl. Blue Book. Special Int.: Servo-Machines.

BARNES, Garnett Freeman, Prof. of Physics, Miss. Coll., Clinton, Miss. **PHYSICS.**

BARNES, George Eric, Prof. of Hydraulic and Sanitary Engr.; Hd. Dept. of Civil Engr. and Engr. Mech., Case Inst. of Tech., Cleveland 6, Ohio. **ENGINEERING.** b. April 17, 1898, Wash., D. C. s. Raymond Friend and Mattie (Van Slyck) B. Edn.: S.B. in C.E., Mass. Inst. of Tech., 1923; Hon. C.E., Case Inst. of Tech., 1935. m. Mary Magdalene O'Hara of Catasaqua, Pa., Sept. 23, 1920. d. Martin F. and Delia (Heston) O'H. c.: Mary Loretta; Dorothy Vera; Janet Isabel. Exp.: Instr. to Assoc. Prof. of Civil Engr., Univ. of Fla., 1923-29; Designing Engr., Fuller and McClintock, N. Y., 1929-31; Designing Engr., N. Y. City Dept. of Sanitation, 1931-33; Present Position, 1933—. Consultant. Mem.: Pres., Cleveland Sect., A.S.C.E.; Pres., Cleveland Soc. of Prof. Engr.; A.I.C.E.; A.S. M.E.; A.A.E.E.; A.T.O.; Sigma Xi; Tau Beta Pi; Sigma Tau. Contbr. to: Engr. Jours. War Record: 1st World War, 2nd Lt., C.A.R.C. Travel: Consulting Assignments in Nicaragua, Honduras, Argentina. Gen. Int.: Conducted Hydraulic Model Studies on Important Dams; Consultant to Many Governmental Agencies and to a Number of Industries on Water Supply, Sanitation, and Trade Waste Disposal. Listed in: W.W.A.; Who's Who in Engrng.

BARNES, Harry Elmer, Cooperstown, N. Y. **HISTORY OF SCIENCE; HISTORY OF THOUGHT;**



PENENOLOGY; SOCIAL SCIENCE. b. June 15, 1889, Auburn, N. Y. s. Wm. Henry and Lula C. (Short) B. Edn.: Completed Course in Civil Engr., Internatl. Correspondence Sch'l., 1908; Student, Syracuse Univ., 1909-13; A.B. (summa cum laude), 1913, A.M., *ibid.*, 1914; Grad. Student, Hist. and Sociol., Columbia Univ., 1915-16; Ph.D., 1918; Rsch., Harvard Univ., 1916-17; Univ. Fellow, Columbia, 1915-16; Cutting Traveling Fellow, Columbia, 1916-17. m. (first) Grace Stone, June 8, 1915; c.: Robert Henry; (2nd) Jean Hutchison of Wilkes-Barre, Pa., Jan. 26, 1935; d. Ruth Gates and Thomas Weir Hutchison. Exp.: Instr. in Sociol. and Econ., Syracuse Univ., 1913-15; Lectr. Hist., Colum. Univ. and Barnard Coll., 1917-18; Assoc. Prof. Hist., Clark Univ., 1918-19; Prof., Hist., New Schl. for Soc. Rsch., 1919-20; Prof., Hist. of Thought and Culture, Clark Univ., 1920-23; Prof. Hist. Sociol., Smith Coll., 1923-30; Prof. of Soc. and Econ. Inst., Amherst Coll., 1923-25; Lectr. in Hist. and Sociol., New Schl. for Soc. Rsch., 1923-37; Lectr. in Edn., Tchrs. Coll., Columbia Univ., 1937-38; Visiting Prof. of Sociol., Temple Univ., 1946; Univ. of Colo., 1948-49; Ind. Univ., 1951; Prof., Univs. of Calif., Mont., Wis., Cornell, Ore., Ky.; Colo. Coll. of Edn. (summer sessions); Editorial Dept., Scripps-Howard Newspapers, 1929-40. Hon. Pos.: Vice-Pres., A.A.A.S., 1928; Representative of Sociol. on Joint Ed. Adv. Bd. of Eds. of Encyclopedia of the Soc. Sci.; Mem. Yearbook Commission, Dept. of Superintendence N.E.A., 1937. Mem.: Amer. Hist. Assn.; Amer. Sociol. Soc., etc.; Phi Beta Kappa; Pi Gamma Mu; Alpha Pi Zeta; Beta Epsilon; Editor: Hist. of Pol. Theories (with C. E. Merriam) 1924; Hist. and Prospects Soc. Sci., 1925; Manual Univ. Hist., 1925; Intro. to Sociology (with Jerome Davis), 1927; Hist. Civ. (with C. K. Ogden), 1928ff.; Studies in Amer. Investments Abroad (6 Vols.), 1928-1935; Illustr. World. Hist.

(with J. A. Hammerton), 1935; Human Comedy (with J. H. Robinson), 1936. Contbr. to: Over 200 Articles to Lit. Jours. and to Ency. Brit., Ency. Amer., etc. Ph.D. Dissertation: Hist. of the Penal and Correctional Institutions of New Jersey. War Record: Statistician in War Dept., 1918; Hd. Consultant, Prison Industries Branch, War Production Bd., 1943-44. Consultant and Historian, Smaller War Plants Corporation, 1945-46. Lectures at Univs. of Munich and Berlin, 1926; Addressed Royal Hungarian Soc. of For. Affairs in Gold Room of Parliament Bldg., Budapest, 1927; Visited Europe, 1926, 1927 (summers); Interviewed most of then-living Diplomats who participated in diplomacy bringing about World War I in 1914 (published results in N. Y. Times Current Hist. Magazine, July, 1928). Gen. Int.: Chief Investigator and Ed., N. J. Prison Inquiry Comm., 1917; Pa. Comm. to Investigate Prison Systems, 1918; Consult. and Hist., Fed. Bur. of Prisons, 1948; Dir. of Studies in Amer. Investments Abroad; etc. Special Int.: Hist. of Sci. and Thought; Development and Integration of Soc. Sci.; Penology.

BARNES, Howard T., Physics Bldg., McGill Univ., Montreal, Que., Can. PHYSICS.

BARNES, James, Tech. Advisor, Franklin Inst., Parkway and 20th St., Philadelphia, Pa. PHYSICS.

BARNES, Kenneth Boyd, Prof. and Hd. Dept. of Chem., Heidelberg Coll., Tiffin, Ohio. INORGANIC CHEMISTRY.

BARNES, LeRoy Leshner, Assoc. Prof. of Biophysics, Cornell Univ., Ithaca, N. Y. BIOPHYSICS.

BARNES, Milford Edwin, Prof. and Hd., Dept. Hygiene and Preventive Med., Univ. of Iowa, Iowa City, Iowa. PREVENTIVE MEDICINE.

BARNES, Thomas Cunliffe, Assoc. Prof. of Physiol., Hahnemann Med. Coll. and Hosp., Philadelphia, Pa. PHYSIOLOGY.

BARNES, William Carroll, Supt., S. C. Truck Expt. Station, P. O. Box 337, Charleston, S. C. VEGETABLE CROPS, PHYSIOLOGY-BREEDING.

BARNETT, George DeForest, Prof. of Med., Stanford Univ. Schl. of Med., San Francisco, Calif. INTERNAL MEDICINE.

BARNETT, Homer Garner, Assoc. Prof. of Anthrop., Univ. of Ore., Eugene, Ore. ETHNOLOGY.

BARNETT, Robert John, Prof. Emer. Horticulture, Kans. State Coll., Manhattan, Kans. POMOLOGY.

BARNETTE, Newton Hall, Hd. of Elec. Engrng. Dept., Univ. of Ark., Fayetteville, Ark. ELECTRICAL ENGINEERING b. Magnolia, Ark., July 18, 1917. s. Andrew L. and Eunice (Newton) B.

Edn.: B.S., La. Poly. Inst., 1941; M.S., Va. Poly. Inst., 1946. m. Ella Mae McMahon, Sept. 1, 1937. c. Jon Hall; Lynne; Andra. Exp.: Jr. Engr., U. S. Army and Navy Civil Service, 1941-42; Asst. Prof. of Elec. Engrng., La. Poly. Inst., 1942-44; Engr., U. S. Army Civil Service, Ft. Belvoir, Va., 1944-45; Instructor and Grad. Student, Va. Poly. Inst., Blacksburg, Va., 1945-46; Hd. of Engrng.

and Math. Dept., Univ. of Tenn., Martin Branch, 1946-48; Assoc. Prof. of Elec. Engrng., Univ. of Ark., Fayetteville, Ark., 1948-49; Instr. and Grad. Student, Cornell Univ., Ithaca, N. Y., 1949-50; Prof. Elec. Engrng., Univ. of Ark., Fayetteville, Ark., 1950-51; Hd. of Elec. Engrng. Dept., ibid., 1951—. Hon. Pos.: Chmn. Northwest Ark. Subsect. of Amer. Inst. of Elec. Engrs., 1952-53. Mem.: Amer. Inst. of Elec. Engrs.; Tau Beta Pi; Phi Kappa Phi. Special Int.: Elec. Power Systems; Alternating Current Machinery; Servomechanisms.

BARNEY, Ida, Rsch. Assoc., Yale Univ. Observatory, 110 Linden St., New Haven 11, Conn. ASTRONOMY.

BARNHART, John Hendley, Bibliographer Emer., N. Y. Botanical Garden, N. Y., N. Y. BOTANICAL BIBLIOGRAPHY.

BARNWELL, George W., Assoc. Prof., Stevens Inst. Tech., Hoboken, N. J. ENGINEERING.

BAROL, Alfred, Dir., Wyeth Inst. Applied Biochem., Philadelphia, Pa. PHARMACEUTICAL CHEMISTRY.

BARON, Bertha, Asst. Prof., Div. Pharmacognosy, Univ. of Tenn., Memphis, Tenn. PHARMACOGNOSY.

BARON, S., Univ. of Chicago, Chicago, Ill. BIOCHEMISTRY AND ENZYMES.

BARONE, John A., Asst. Prof. of Chem., Fairfield Univ., Fairfield, Conn. ORGANIC, PHYSICAL AND INDUSTRIAL CHEMISTRY. b. Dunkirk, N. Y., Aug. 30, 1924. s. John and Josephine (Audino) B.

Edn.: B.A., Univ. of Buffalo, 1944; M.S., Purdue Univ., 1948; Ph.D., ibid., 1950. m. Rose Marie Pace, Aug. 23, 1947. Exp.: Grad. Asst., Purdue Univ., 1947-48; Rsch. Fellow, ibid., 1948-50; Instr., Fairfield Univ., Fairfield, Conn., 1950-51; Asst. Prof., ibid., 1951—. Mem.: Amer. Chem. Soc.; A. A. A. S.; Phi Beta Kappa; Sigma Xi; Phi Lambda Upsilon.

War Record: U. S. Army, 1944-46. Special Int.: Organic Halogen and Silicon Chem.

BARR, Arril Sylvester, Prof. of Edn., Univ. of Wis., Madison, Wis. EDUCATIONAL SUPERVISION.

BARR, David Preswick, Prof. of Med., Cornell Univ. Med. Coll., 525 E. 68th St., N. Y., N. Y.

BARRE, Henry John, Prof. and Hd., Agri. Engrng. Dept., Purdue Univ., Lafayette, Ind. ENGINEERING, AGRICULTURE.

BARRE, Henry Walter, Hd. Pathologist in Chg. Div. Cotton and Other Fiber Crops and Diseases, Bureau Plant Indus., Soils and Agri. Engrng., Plant Indus. Station, Beltsville, Md. PLANT PATHOLOGY.

BARRETT, Charles S. METALLURGY.

BARRON, Moses, Prog. Emer., Internal Med. Univ. Minn. Med. Schl., 2715 East Lake of Isles Blvd., Minneapolis, Minn. INTERNAL MEDICINE AND PATHOLOGY. b. Russia, Nov. 8, 1883. s. Jacob and Pauline (Jacobs) B. Edn.: B.S., Univ. of Minn. Med. Schl., 1910; M.D., ibid., 1911. Hon. Deg.: Prof. Emer. in Med., 1932. m. Leah Filgelman, June 26, 1919. c.: Louis; David; Jesse; Antoinette. Exp.: Instr. Pathol., Univ. of Minn., Minneapolis, Minn., 1912-16; Asst. Prof., Pathol., ibid., 1916-21; Asst. Prof., Med., ibid., 1921-26; Assoc. Prof. of Med., ibid., 1926-33; Prof. of Med., ibid., 1933-52; Prof. Emer., ibid., 1952—. Mem.: A.M.A.; Amer. Coll. of Physicians; Central Soc. for Clin. Rsch.; Minn. Acad. of Med.; Minn. Soc. Internal Med.; Minn. Heart Assn.; Minn. Pathol. Soc.; Minn. State Soc.; Henn. Co. Med. Soc.; Amer. Diabetes Assn.; Twin Cities Diabetes Assn.; Amer. Bd. Internal Med.; Alpha Omega Alpha; Sigma Xi; Citizens League of Greater Minn. Contbr. to: Jour. A.M.A.; Jour. Cancer Rsch.; Jour. Lab. and Clin. Med.; Arch. Internal Med.; Surg. Gynec. and Obst.; Amer. Jour. Med. Sci.; Arch. of Surg.; Urol. and Cutan. Review; Minn. Med.; Jour.-Lancet. War Record: Lt., Army of the U. S. 1917; Capt., ibid., 1918; Major, ibid., 1918-19. Special Int.: Pathol., Internal Med.

BARRETT, Elliott Pierce, Dir., Rsch. and Development, Baugh Companies, 4400 Centre Ave., Pittsburgh, Pa. **CHEMISTRY, PHYSICS.**

BARRETT, James Theophilus, Prof. of Plant Pathology, 107 Hilgard Hall, Univ. of Calif., Berkeley, Calif. **MYCOLOGY.**

BARRETT, Leslie Park, Chg. Geologist, Jones and Laughlin Steel Corp., 1612 Shady Ave., Pittsburgh, Pa. **IRON ORE GEOLOGY.**

BARRINGER, Lawrence E., 23 Front St., Schenectady 5, N. Y. **CERAMICS.**

BARRON, E. S. Guzman, Assoc. Prof. of Biochem., Dept. Med., Univ. of Chicago, Chicago, Ill. **BIO-CHEMISTRY.**

BARRON, Moses, Prof. of Med., Univ. of Minn., Minneapolis, Minn. **INTERNAL MEDICINE.**

BARROW, W. L., Sperry Gyroscope Co., Great Neck, N. Y. **ENGINEERING.**

BARRY, John Griffiths, Staff Mem., Lincoln Lab., Mass. Inst. of Tech., Cambridge 39, Mass. **ELECTRONIC ENGINEERING.**



b. Apr. 9, 1915, Albany, N. Y. s. John Knight Munro and Mermie Lillian (Griffiths) B. Edn.: B.S. in E.E., Geo. Wash. Univ., 1935 (with distinction); M. S., E.E., Univ. of Pa., 1936; Ph.D., ibid., 1938. m. Florence Marie Steele of Lansdowne, Pa., June 26, 1943. d. Mr. and Mrs. E. P. Steele. c.: John Steele; Thomas Wm.; Florence Elizabeth. Exp.: Resch. Asst., Bartol Resch. Resch. Foundation, Swarthmore, Pa., 1938-40; Instr. in Elec.

Engrng., Princeton Univ., 1940-43; Asst. Prof. Elect. Engrng., ibid., 1943-46; On Leave as Chief Engrn., Barker and Williamson, Inc., Upper Darby, Pa., 1945; Assoc. Prof. Elec. Engrng., Case Inst. of Tech., 1946-47; Adjunct Prof. Elec. Engrng., N. Y. Univ., 1948; Project Engrn., Consulting Engrn., Hd. Electronics Development, Fairchild Guided Missiles Div., Fairchild Engine and Airplane Corp., 1947-52; Staff Mem., Lincoln Lab., Mass. Inst. of Tech., Cambridge, Mass., 1952—. Mem.: A.I.E.E.; Inst. of Radio Engrn.; Amer. Phys. Soc.; A.A.A.S.; A.S.E.E.; Sigma Xi. Contrb. to: Jour. of Franklin Inst., Phys. Rev., Rev. of Sci. Instruments; Bull. of A.S.T.M. Ph.D. Dissertation: Some Effects of Variable Excitation on Synchronous Motor Oscillation. Travel: U. S.; Canal Zone. Hobby: Amateur Photog. Listed in: A.M.S.; Who's Who in Engrng.; Who Knows— and What.

BARROWS, Florence Louise, Asst. Prof. of Botany, Wheaton Coll., Norton, Mass. **BOTANY.**

BARRY, Herbert, Jr., 330 Dartmouth St., Boston, Mass. **MEDICAL SCIENCES.**

BARSKY, George, Pres., Barsky and Strauss, Inc., 202 E. 44th St., N. Y., N. Y. **CHEMICAL ENGINEERING.**

BARSS, Alden Forrest, Prof. and Hd., Dept. of Horticulture, Univ. of British Columbia, Vancouver, B. C., Can. **HORTICULTURE AND PLANT SCIENCE.**

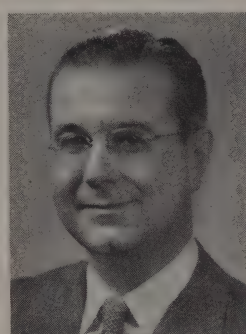
BARSS, Howard Phillips, Exp. Station Administrator, Office Expt. Stas., U. S. D. A., 32 Philadelphia Ave., Takoma Park, Md. **PLANT PATHOLOGY.**

BARTELL, Floyd Earl, Prof. of Chem., Univ. of Mich., Ann Arbor, Mich. **CHEMISTRY.**

BARTELMEZ, George William, Carnegie Institution of Wash., Wolfe and Madison Sts., Baltimore, Md.

BARTELS, Henry Arthur, Rm. 607, 57 W. 57th St., N. Y., N. Y. **MEDICAL SCIENCES.**

BARTHEL, Christopher Ernest, Jr., Asst. Dir., Armour Rsch. Foundation, Ill. Inst. of Tech., 85 W.



33rd St., Chicago 16, Ill. **PHYSICS.** b. Gonzales, La., July 13, 1911. s. Christopher Ernest and Hazel Alosia (Babin) B. Edn.: B.S., La. State Univ., 1932; M.S., ibid., 1933; Ph.D., Iowa State Coll., 1940. m. Mable Bowdon, Mar. 30, 1934. c. Julia Marie; Christopher Ernest, III. Exp.: Instr., Washington and Lee Univ., Lexington, Va., 1933-38; Tehng. Fellow, Iowa State Coll., Ames, Iowa, 1938-40; Instr., ibid., 1940-41; Physicist, U. S. Naval Ordnance Lab., U. S. Naval

Gun Factory, Washington, D. C., Mem. of 3-Man Bldg. Comm. to Develop Plans for 16 Million Dollar Permanent Naval Ordnance Lab., In Chg. of Magnetic Model Sect. of the Lab., 1941-44; Personnel Advisor and Dir. of Personnel, ibid., Responsible for Dev. of Personnel Policies and a Personnel Organization for a Permanent Lab. with Proposed Staff of Over 2,000 Persons, 1944-46; Physicist, U. S. Naval Ordnance Lab., White Oak, Silver Spring 19, Md., 1946-47; Asst. Chmn., Physics Rsch., Armour Rsch. Foundation, Ill. Inst. of Tech., Chicago, Ill., 1947-48; Chmn., Physics Rsch., ibid., 1948-50; Asst. Dir., ibid., 1950-53; Dir. State Industrial Rsch. Inst., Rangoon, Burma, 1953—. Hon. Pos.: Community Coun. for the Northbrook Area, Pres., 1952; Pres., Northbrook Board of Library Directors, 1951—; Pres., Chicago Tech. Council, 1952-53; Mem., Board of Directors, National Electronics Conference, 1949—; Chmn., Proceedings Comm., ibid., 1950-52; Chmn. of Board, ibid., 1952-53. Mem.: A.A.A.S.; Amer. Phys. Soc.; Amer. Soc. for Engrng Edn.; Pres., Chicago Tech. Coun.; Panel of Electronics Comm. of the Rsch. and Dev. Bd. of Natl. Milit. Establishment; Mem. Bd. of Dir. and Chmn., Proc. Comm., Natl. Electronics Conf.; Optical Soc. of Amer.; Optical Soc. of Chicago; Photographic Engrs. of Chicago; Physics Club of Chicago, Delegate to Chicago Tech. Coun.; Tech. Reserve of Naval Ordnance Lab.; Washington Phil. Soc.; Mu Sigma Rho, La. State Univ. Hon. Scholastic Frat.; Phi Kappa Phi; Pi Mu Epsilon; Scabbard and Blade; Sigma Chi; Sigma Pi Sigma; Sigma Xi; Tau Beta Pi; Cook Co. Pub. Health Council; Community Council for Northbrook Area; Northbrook Civic Assn. Contrb. to: Jour. of Applied Physics; Optical Soc. of Amer.; Proc. of Inst. of Radio Engrs.; Sci-En-Tech. News. Gen. Int.: Scholarship, La. State Univ., 1930-32; Fellowship, ibid., 1932-33; Fellowship, Iowa State Coll., 1938-40; Distinguished Civilian Service Award, U. S. Navy, 1946. Special Int.: Gen. Physics, Optics, Electronics, Rsch. Admin. and Scientific Personnel Admin.

BARTHOLOMEW, Elbert Thomas, Hd., Div. Plant Physiol. and Prof. Plant Physiol., Univ. of Calif., Riverside, Calif. **PLANT PHYSIOLOGY.**

BARTHOLOMEW, George Anderson, Fellow, Mellon Inst., 5514 Wilkins Ave., Pittsburgh 17, Pa. **CHEMICAL ENGINEERING, FLOW PROCESSES, FILTRATION, BLAST FURNACE SLAG TECHNOLOGY.** b. Pittsburgh, Pennsylvania, June 21, 1924. s. Tracy and Sarah (Anderson) B. Edn.: A.B., Haverford Coll., 1946; B.S., Univ. of Pittsburgh, 1947; M.S., ibid., 1948. m. Nancy Large, July 26, 1947. c.: Susan; Tracy, II. Exp.: Rsch. and Development Div., Pittsburgh Consolidation Coal Co., 1948-50; Fellow, Mellon Inst., Pittsburgh, Pa., 1950—. Mem.: A.A.A.S.; A.I.Ch.E.; American Ceramic Soc.; Sigma Tau; Phi Lambda Upsilon; Sigma Beta Sigma; F. & A.M. War Record; Corporal, U. S. Army Infantry, 1943-46. Special Int.: Low Temperature Coal Carbonization; Fluid-solids Separations; Blast Furnace Slag Utilization.

BARTLETT, Boyd Wheeler, Prof. and Hd., Dept. of Electricity, U. S. Military Acad., West Point, N. Y. **PHYSICS AND ELECTRICAL ENGINEERING.**

BARTLETT, Charles Joseph, Emer. Prof. of Pathol., Yale Univ., 183 Bishop St., New Haven, Conn. **PATHOLOGY AND BACTERIOLOGY.**

BARTLETT, Edward Payson, Sr. Rsch. Assoc., E. I. du Pont de Nemours and Co., Inc., 806 Berkeley Rd., Wilmington, Del. **CHEMISTRY.**

BARTLETT, Harley Harris, Prof. and Chmn., Dept. of Botany, Univ. of Mich., Ann Arbor, Mich. **BOTANY.**

BARTLETT, Harriett M., Exec. Secy., Joint Com., Tchng. Social and Environmental Factors in Med., 49 Fruit St., Boston, Mass. **MEDICAL SOCIAL WORK.**

BARTLETT, Paul Doughty, Erving Prof. of Chem. Harvard Univ., 12 Oxford St., Cambridge 38, Mass.

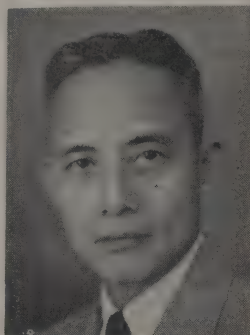


KINETICS AND MECHANISM OF ORGANIC REACTIONS; STEREOCHEMISTRY; POLYMERIZATION. b. Ann Arbor, Mich., Aug. 14, 1907. s. George Miller and Mary Louise (Doughty) B. Edn.: A.B. Amherst Coll., 1928; A.M., Harvard Coll., 1929; Ph.D., Harvard Univ., 1931. Hon. Deg.: Sc.D., Amherst Coll., 1953. m. Mary Lula Court, June 24, 1931. c.: Joanna Court; Geoffrey McSwain; Sarah Webster. Exp.: George Fisher Baker Lectr., Cornell, Ithaca, N.Y.

New York, 1949; Visiting Prof., Univ. of Calif., Los Angeles, Calif., 1950; Harrison Howe Lecturer, Univ. of Rochester, N. Y., 1952; Egar Fahs Smith Lectr., Univ. of Pa., Philadelphia, Pa., 1952; Natl. Rsch. Fellow in Chem., Rockefeller Inst., Rochester, Minn., 1931-32; Instr., Univ. of Minn., Minneapolis, Minn., 1932-34; Asst. Prof., Harvard Univ., Cambridge, Mass., 1937-40; Assoc. Prof., ibid., 1940-46; Prof., ibid., 1946—. Hon. Pos.: Chmn., Dept. of Chem., Harvard Univ., 1950-53; Assoc. Ed., Jour. Amer. Chem. Soc.; Chmn., Organic Div. of Amer. Chem. Soc.; Amer. Chem. Soc. Award in Pure Chem., 1938. Mem.: Natl. Acad. of Sci.; Amer. Acad. of Arts and Sci.; Amer. Chem. Soc.; Phi Beta Kappa; Sigma Xi. Contrb. to: Jour. Amer. Chem. Soc.; Jour. Biol. Chem.; Jour. Organic Chem.; Jour. Polymer Sci.; Record of Chem. Progress; Jour. Chem. Edn.; Disc. Faraday Soc.; Bull. Soc. Chim. de France. Special Int.: Stereochem., Kinetics and Mechanism of Organic Reactions, Polymerization, Walden Inversion, Molecular Rearrangements, Paraffin Alkylation, Highly Branched Compounds; Free Radicals.

BARTLEY, Samuel Howard, Prof. of Psychol., Mich. State Coll., E. Lansing, Mich. **VISION AND FATIGUE.** b. Pittsburgh, Pa., June 19, 1901. s. Edward G. and Mary Agnes (Byers) B. Edn.: M.A., Kans. Univ., 1928; Ph.D., ibid., 1931. m. Leola Bevis, June, 1938. c.: S. Howard, Jr.; Jeanne A. and Katherine Joyce. Exp.: Instr. in Psychol., Univ. of Kans., Lawrence, Kans., 1928-31; Rsch. Assoc., Wash. Univ., Med. Schl., St. Louis, Mo., 1931-42; Prof. of Rsch. in Visual Sci., Dartmouth Eye Inst., Hanover, N. H., 1942-47; Prof. of Psychol., Mich. State Coll., E. Lansing, Mich., 1947—. Mem.: Amer. Psychol. Assn.; Amer. Psychol. Soc.; Optical Soc. of Amer.; Sigma Xi; Phi Sigma; Amer. Acad. of Optometry. Author: Vision, A Study of Its Basis, 1941; Fatigue and Impairment in Man, 1947; Beginning Experimental Psychol., 1951. Contrb. to: Amer. Jour. of Optometry; Mich. Optometrist; Jour. of the Optical Soc. of Amer.; Amer. Jour. of Psychol.; Jour. of Exptl. Psychol.; Biol. Symposium; Sci. Psychol. Monographs; Jour. of Neurophysiol.; British Jour. of Psychol. Gen. Int.: One of the First in This Country to Study the Electrophysiol. of the Brain. Special Int.: Visual Perception; Neurophysiol. of the Optic Pathway; Fatigue.

BARTOLOME, Candido C., Phy. Dir., Univ. of P. I., Diliman, Quezon City, P. I. **PHYSICAL EDUCATION.** b. Sept. 20, 1899. Tanay, Rizal, s. Esteban and Candida (Concepcion) B. Edn.: B.S.E., U. P., 1923; M.A., ibid., 1926; B.P.E., Springfield Coll., 1929; M.P.E., ibid., 1929. m. Asuncion Gomez, May, 1924. d. Jose and Maria Gomez, Pasig, Rizal. c.: Lydia; Achilles; Hector; Hermes; Diogenes. Exp.: Stud. Asst., 1921-22; Asst., Phy. Edn., 1922-24; Asst. Phy. Dir., 1924-27; Hd., Dept. Phys. Edn., Univ. of P. I., 1929-30; Acting Phys. Dir., ibid., 1930-32; Hd. Dept., ibid., 1932-37; Phys. Dir., ibid., 1937-40; Assoc. Prof. Phys. Edn., 1940-47; Prof. and Phys. Dir., 1947—. Mem.: P. I. Acad. Soc. Sci.; Coll. of Phys. Edn. Assn.; Phi Kappa Phi; Amer. Assn. Hlth., Phys. Edn. and Recreation; Lions Club. Author: Calisthenics and Marching Tactics, 1940, and others. Contrb. to: Filipino Athlete; Soc. Sci. Rev.; P. I. Jour. of Edn. Travel: U. S.; Japan; Europe; Egypt; Athens; Can.; Switzerland. Hobbies: Tennis; Swimming; Reading. Listed in: Who's Who in Philippines. Special Int.: Administration and Swimming.



1932-37; Phys. Dir., ibid., 1937-40; Assoc. Prof. Phys. Edn., 1940-47; Prof. and Phys. Dir., 1947—. Mem.: P. I. Acad. Soc. Sci.; Coll. of Phys. Edn. Assn.; Phi Kappa Phi; Amer. Assn. Hlth., Phys. Edn. and Recreation; Lions Club. Author: Calisthenics and Marching Tactics, 1940, and others. Contrb. to: Filipino Athlete; Soc. Sci. Rev.; P. I. Jour. of Edn. Travel: U. S.; Japan; Europe; Egypt; Athens; Can.; Switzerland. Hobbies: Tennis; Swimming; Reading. Listed in: Who's Who in Philippines. Special Int.: Administration and Swimming.

BARTON, G. E., 227 Pine St., Millville, N. J. **CERAMICS.**

BARTON, George Samuel Horace, Deputy Minister, Dominion Dept. Agri., Confederation Bldg., Ottawa, Ont., Can. **AGRICULTURE.**

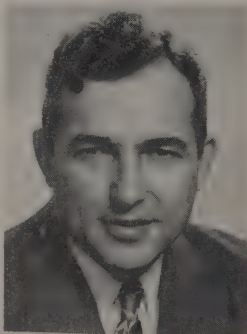
BARTON, Henry A., Dir., Amer. Inst. Physics, 57 E. 55th St., N. Y., N. Y. **PHYSICS.**

BARTON, John S., Chf., Paper Products Development Section, Central Rsch. Dept., Crown-Zellerbach Corp., 414 Riverside Avenue, Camas, Washington. **CELLULOSE AND LIGNIN CHEM.; PLASTICS.** b. Boise, Idaho, Mar. 23, 1918. s. Everett H. and Loraine (Selby) B. Edn.: B.S., Univ. of Wash., 1940; M.S., Inst. of Paper Chem., 1942; Ph.D., ibid., 1947. m. Irene Brooks, Dec. 5, 1942. c.: Katherine L.; John S., Jr.; Lawrence B. Exp.: Chf., Paper Products Development Section, Central Rsch. Dept., Crown-Zellerbach Corp., 1948—. Mem.: Amer. Chem. Soc.; Tech. Assn. of the Pulp and Paper Indus.; Sigma Xi; Phi Lambda Upsilon. Contrb. to: Jour. Amer. Chem. Soc.; TAPPI; Pulp and Paper. War Record: U. S. Navy, Electronics Officer with Submarine Repair Unit in Pacific Area. Special Int.: Cellulose and Lignin Chem.; Application of Synthetic Resins and Plastics.

BARTON, Lela Viola, Plant Physiologist, Boyce Thompson Inst. Plant Rsch., Yonkers, N. Y. **SEED PHYSIOLOGY.**

BARTON, Samuel Goodwin, retired, 33 N. 61st St., Philadelphia 39, Pa. **ASTRONOMY.**

BARTON, Thomas Frank, Professor of Geog., 1951—, and Editor of the Jour. of Geog., Ind. Univ., Bloomington, Ind. **GEOGRAPHY.** b. Cornell, Ind., Dec. 3, 1905. s. Frank Douglas and Martha (Gambin) B. Edn.: B.Ed., Ill. State Normal Univ., 1930; Ph.M., Univ. of Wis., 1931; Ph.D., Univ. of Neb., 1935. m. Erselia Marie Antoinette Monticello of Kenosha, Wis., Sept. 26, 1931. c.: Thomas Frank Monticello, Jr. Hon. Pos.: Natl. Coun. of Geog.; Sec., 1941-45; 2nd Vice-Pres., 1946; 1st Vice-Pres., 1947; Pres., 1948; Sec., Internatl. Geographical Union Comm.



on the Tchng. of Geography. Mem.: A.A.A.S.;

Sigma Xi; Amer. Geographical Soc.; Ind. Acad. of Sci. Editor, Barton Land Surface Series of Maps. Author: Living in Ill., 1941, and Co-author of Several Others. War Record: Ground Instr. in Meteorol. Civilian Pilot Trng. Prog. Hobbies: Fishing; Landscaping. Listed in: Who Knows— and What; A.M.S.; Young Men in Amer.; W.W.A. Special Int.: Urban Planning; Conservation Physical Geography.

BARTON, Vola Price, Prof. of Physics and Chmn. Dept., Goucher Coll., Baltimore 18, Md. PHYSICS.

BARTOW, Edward, Emeritus Prof., Chemistry and Chemical Engineering, State Univ. of Iowa, Iowa City, Iowa. CHEMISTRY AND CHEMICAL ENGINEERING. b. January 12, 1870, Glenham, N. Y. s. Chas. Edward and Sarah Jane (Scofield) B. Edn.: B.A., Williams Coll., 1892; M.S., Ph.D., Goettingen, 1895. Hon. Deg.: D.Sc., Williams Coll., 1923. m. Alice Abbott of Rochester, N. H., Sept. 3, 1895; d. John James and Mary Augusta Hall Abbott. c.: Virginia. Exp.: Asst., Williams Coll., 1892-94; Instr., ibid., 1895-97; Instr. in Chem., 1897-99, Assoc. Prof., 1899-1905, Univ. of Kans.; Prof. of Chem., Kans. City Med. Coll., 1902-05; Assoc. Prof., 1905-06, Prof. Sanit. Chem., 1906-20, Univ. of Ill.; Prof., Hd., Dept. of Chem. and Chem. Engrng., Univ. of Ia., 1920-40; Prof. Emer., 1940—; On Leave, 1940-41, as Resch. Consultant, Johns Manville Corp.; Dir., Ill. St. Water Survey, 1905-17; Chf. Water Survey Div., Dept. of Registration and Edn., Ill., 1917-20. Hon. Pos.: Mem. Comm. on Coal Mine Exp., Kans., 1905; Comm. on Standards of Water for Interstate Carriers, 1913, 1922; Mem. and Secy. Lake Mich. Water Comm., 1908-09; Asst. Ed., Chem. Abs., 1911—; V.-Pres., U.S.A., 1934-38; Internatl. Chem. Union; Delegate, World Eng. Conf., Japan, 1929. Mem.: A.A.A.S. A.I.Ch.E.; Amer. Soc. C.E.; A.S.T.M.; Franklin Inst.; Soc. Chem. Ind. (Gt. Britan); Soc. Chem. Ind. (France); A.W.W.A.; Amer. Assn. Univ. Prof.; A.S.E.E.; Kans. Academy, Pres., 1904; Ill. Acad.; Ia. Acad., Pres., 1935; Theta Delta Chi; Alpha Chi Sigma; Phi Beta Kappa; Phi Beta Kappa Associates; Sigma Xi; Tau Beta Pi; Phi Lambda Upsilon; Rotary; Chamber of Commerce; Univ. Club of Chicago; Chicago Chemists; New York Chemists; Triangle, Iowa City; etc. Contrb. to: Jour. Amer. Chem. Soc.; Ind. and Engr. Chem.; Jour. of Am. Water Works Assn.; Trans. A. I. Ch. E. Title of Ph.D. Dissertation: Neue Aus m-Isocymol Abgeleitete Verbindungen. War Record: Maj., Lt. Col., Sanitary Corps, A.E.F.; Medaille d'Honneur, des Epidemies, d'Argent. Travel: European Countries, Japan, China, Philippines, Singapore, Java, Australia, and New Zealand. Achievements of Gen. Int.: Pres. A.W.W.A., 1923; Pres. Am. Chem. Soc., 1936; Participation in Internatl. Union of Chem., Internatl. Congress of Pure and Applied Chem. Recreation and Hobby: Stamp Collecting. Listed in: W. W. in Am.; A. M. S.; W. W. in Eng.; Internatl. W. W.; Chemical W. W. Special Int.: Water purification and sewage and trade waste disposal.

BARTOW, Virginia, Asst. Prof. of Chem., Univ. of Ill., Urbana, Ill. CHEMISTRY.

BARTRAM, Edwin Bunting, Bushkill, Pike Co., Pa. BRYOLOGY.

BARTSCH, Paul, Assoc., Smithsonian Inst., "Lebanon," Gunston Hall Rd., Lorton, Va. MALACOL-OGY.

BARTUNEK, Paul Franklin, Assoc. Prof. of Physics, Colo. Schl. of Mines, Golden, Colo. GENERAL PHYSICS.

BARWICK, Arthur R., Prof. and Hd. of Dept. of Geol., Howard Univ., Wash., D. C. GEOLOGY. b. N. Y., N. Y., Mar. 9, 1896. c. Arthur and Dorothea C. (Bollerman) B. Edn.: B.Sc., Coll. of the City of N. Y., 1917; M.Sc., N. Y. Univ., 1922; Ph.D., ibid., 1926. m. Leah Catlin, June 6, 1932 (dec.). c.: Virginia M.; Atwood S. 2nd m. Thelma Collier, Feb. 5, 1945. c.: Stepson Earl Pate. Exp.: Chf. Chemist, Secaw Chem. Co., Irvington, N. J., 1919-21; Instr. in Chem., Coll. of the City of N. Y., 1921-23; Instr. in Geol., N. Y. Univ., 1923-29; Assoc. Prof. and Hd., Dept. of Geol., Catholic Univ., 1929-41; Hd. Dept. Geol., Howard Univ., Washington, D. C., 1946—. Mem.: Geol. Soc. Amer.; Amer.

Inst. Mining and Metallurgical Engrs.; A.A.A.S.; Geol. Soc.; A.A.U.P.; F.&A.M.; Boy Scouts of Amer. War Record: U. S. Army, Chem. Warfare Service, Sgt., 1917-19. Special Int.: Paleontology; Econ. Geol.; Mineralogy.

BASCOM, William Russel, Assoc. Prof., Dept. of Anthropol., Northwestern Univ., Evanston, Ill. CULTURAL ANTHROPOLOGY.

BASINGER, Almon Jay, Assoc., Expt. Station, Univ. of Calif. Citrus Expt. Station, Riverside, Calif. ENTOMOLOGY.

BASTIN, Edson Sunderland, Emer. Prof. of Econ. Geol., Univ. of Chicago, 205 Bryant Ave., Ithaca, N. Y. ECONOMIC GEOLOGY.

BASTRESS, Alfred Willis, Dean of Instrn. and Prof. of Chem., Wilkes Coll., Wilkes-Barre, Pa. CHEMISTRY. b. Pittsburgh, Pa., July 29, 1900. s. Rollin C. and Clara (Mildrum) B. Edn.: B.S., Penn State Coll., 1922; M.S., ibid., 1927; Ph.D., Yale Univ., 1935. m. Ann Sproule, Feb. 5, 1924. Exp.: Instr., Amer. Univ. of Beirut, Syria, 1922-25; Prof. of Chem., Univ. of Alaska, College, Alaska, 1928-43; Dir. of Quinine Labs., Foreign Economic Admin., Ecuador, 1943-45; Assoc. Prof. of Glass Tech., Penn State Coll., State Coll., Pa., 1945-48; Prof. of Chem., Wilkes Coll., Wilkes-Barre, Pa., 1948—. Mem.: Amer. Chem. Soc.; Sigma Tau; Phi Lambda Upsilon; Sigma Xi.

BATCHELDER, Charles Foster, retired, Peterborough, N. H. ORNITHOLOGY.

BATCHELOR, Leon Dexter, Prof. of Horticulture and Horticulturist, Expt. Station, Univ. of Calif., Riverside, Calif. HORTICULTURE.

BATEMAN, Alan M., Dept. of Geol. Yale Univ., New Haven, Conn. GEOLOGY.

BATEMAN, John Henry, Prof. of Civil Engrng., Coll. of Engrng., La. State Univ., Baton Rouge 3, La. CIVIL ENGINEERING MATERIALS OF CONSTRUCTION. b. March 20, 1892, Huron Co., Mich. s. Eli and Grace (McMillan) B. Edn.: B.S., Univ. of Mich., 1915; C.E., ibid., 1922. m. Marie Theresa Hoheisel of Ann Arbor, Mich., 1915. c.: Mrs. G. R. Ferguson. Exp.: Mich. State Hwywy Dept., 1915-24; Prof. of Highway Engrng., La. State Univ., 1925-29; Engrng., Barrow-Agee Labs., Memphis, Tenn., 1929-30; Consultant, Mich. Comm. on Highway Finance, 1930-31; Engr., Mgr., Berrien Co., Mich., Rd. Comm., 1932-36; Prof. of Civil Engrng., La. State Univ., and Consulting Engr., 1936—. Mem.: Amer. Soc. Civil Engrs.; Amer. Concrete Inst.; Highway Rsch. Bd. (Assoc.); Amer. Roadbuilders Assn.; Sigma Xi; Tau Beta Pi; Gamma Alpha; Rotary. Author Highway Engrng. John Wiley & Sons, New York, 5th ed., 1948; Materials of Construction, Pitman Pub. Corp., New York, 1950; Strength of Materials; Numerous Articles and Reports. Listed in: A.M.S.; Who's Who; Who's Who in Engrng.; Who's Who in Western Hemisphere; Who's Who in Transportation; Who's Who in Commerce and Industry; Who's Who in Mich.; Who's Who in La. Special Int.: Concrete Highway Engrng.

BATEMAN, Richard M., 716 E. North St., Kokomo, Ind. EDUCATION.

BATES, Charles Carpenter, Deputy Dir., Div. of Oceanography, U. S. Navy Hydrographic Office, Washington 25, D. C. OCEANOGRAPHY AND METEOROLOGY. b. Harrison, Ill., Nov. 4, 1918. s. Carl A. and Vera Elizabeth (Carpenter) B. Edn.: B.A., DePauw Univ., 1939; M.A., Univ. of Calif., L. A., 1944; Ph.D., Tex. A. and M. Coll., 1953. m. Pauline Barta, July 11, 1942. c.: Nancy Anne and Priscilla Jane. Exp.: Jr. Geophysicist, Carter Oil Co., Tulsa, Okla., 1939-41; Special Asst. to Pres., Amer. Meteorol. Soc., Chicago, Ill., 1945-46; Oceanographic Tech., Woods Hole Oceanographic Inst., Woods Hole, Mass., 1946; Partner, Bates and Glenn, Wash., D. C., 1946-47; Consultant and Wash. Rep., A. H. Glenn and Assoc., New Orleans, La., 1948-52; Tech. Asst. to Chf., Div. of Oceanography, U. S. Navy Hydrographic Office, Washington, D. C., Hd., ibid., 1949-52; Deputy Dir., Div. of Oceanography, 1952—. Mem.: Sigma Xi; Amer. Assn. of Petro-

leum Geol.; Amer. Soc. of Limnol. and Oceanography. Contrb. to: Bull. Amer. Assn. of Petroleum Geol.; Trans. Amer. Geophys. Union; The Milit. Engr. Special Int.: Surface Geol. of Coral Atolls; Arctic Ice; Delta Formation; Wave and Surf Forecasting.

BATES, Robert Lee, Prof. of Psychol. and Philos. Va. Military Inst., Lexington, Va. **PSYCHOLOGY**.

BATES, Stuart Jeffery, Prof. of Physical Chem., Calif. Inst. Tech., Pasadena, Calif. **PHYSICAL CHEMISTRY**.

BATESON, Gregory, Amer. Museum of Natural History, N. Y., N. Y. **ANTHROPOLOGY**.

BATH, Jean Darlene, Jr. Rsch. Botanist, Div. of Botany, Univ. of Calif., Los Angeles 24, Calif. **BOTANY; PHYSICAL BIOLOGY; PROTOPLASM; ULTRASTRUCTURE**. b. Hamilton, Ia., Nov. 30, 1912.



d. Merle Alexander and Clea Wilma (Schnack) B. Edn.: B.A., Univ. of Calif. at Los Angeles, 1934; M.A., ibid., 1936; Ph.D., ibid., 1947. Exp.: Tehng. Asst., Univ. of Calif., 1934-35; Ext. Botany, ibid., 1935-36; Rsch. Asst., Botany, ibid., 1936-38; Rsch. Asst., ibid., 1938-39; Rsch. Asst., ibid., 1939-42; Asst. and Tehng. Asst. Plant Physiol., ibid., 1942-44; Rsch.

Asst., Botany, ibid., 1944-51; Jr. Rsch. Botanist, ibid., 1951—. Mem.: A.A.A.S.; Amer. Soc. Plant Physiologists; Western Soc. of Naturalists; Sigma Xi; Sierra Club; U. S. Figure Skating Assn. Contrb. to: Protoplasm; Amer. Jour. Botany; Jour. Chem. Phys.; Jour. Amer. Chem. Soc. Spec. Int.: X-Ray Diffraction of Biol. Materials; Infra-red Absorption of Biol. Materials; Molecular Structure of Protoplasm; Electron Microscope Studies of Protoplasm at the Micellar Level and at the Molecular-Micellar Border Line; Electrical Aspects of Protoplasm on the Molecular Level.

BATSON, Oscar Vivian, Prof. of Anatomy, Grad. Sch. of Med., Univ. of Pa., Philadelphia, Pa. **ANATOMY**.

BATT, Henry Thomas, Prof. and Hd., Dept. of Physiol., Ont. Veterinary Coll., Guelph, Ont., Can. **PHYSIOLOGY**.

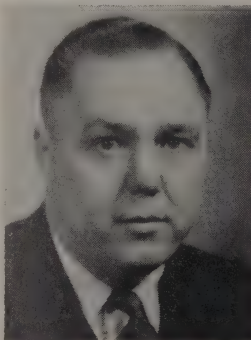
BATTLE, Helen Irene, Prof. of Zool., Univ. of Western Ont., Ont., Can. **EXPERIMENTAL EMBRYOLOGY**.

BAUDER, Frederick William, Assoc. Prof. of Chem., Newark Coll. of Engrng., Newark, N. J. **PROTECTIVE COATINGS; CORROSION**. b. Newark, N. J., July 24, 1897. s. John F. and Anna M. (Boehm) B. Edn.: B.S., Worcester Poly. Inst., 1920; M.S., Stevens Inst. of Technol., 1925. m. Florence Mehne, June 24, 1922. c.: Stephanie Ann. Exp.: Plant Chemist, Cooper Chem. Co., 1920-26; Supvr., Rug Printing Div., Congoleum-Nairn Co., 1926-27; Mgr., Holdt Paint Co., 1928-29; Instr. in Chem., Newark Coll. of Engrng., Newark, N. J., 1929-41; Asst. Prof. of Chem., ibid., 1941-48; Assoc. Prof. of Chem., ibid., 1948—. Owner, Bauder Products, Protective Coatings, 1930—. Hon. Pos.: Supvr. of Courses and Conferences on Protective Coatings; Dir., Mullaly Memorial Coatings Lab., Newark Coll. of Engrng. Mem.: Fellow, Amer. Inst. of Chemists; Amer. Chem. Soc.; Amer. Soc. for Engrng. Edn.: Phi Sigma Kappa; Omicron Delta Kappa. Contrb. to: Federation of Paint and Varnish Production Clubs; Analytical Procedures; Water, Fuel and Gas Analysis; etc. War Record: U. S., Navy Reserve, 1918. Special Int.: Protective Coatings; Corrosion Metallurgy; Consultant on Protective Coatings and Water Treatment.

BAUDISCH, Oskar, Rsch. Dir., Saratoga Spa, Saratoga Springs Authority, 44 5th Ave., Saratoga Springs, N. Y. **BIOCHEMISTRY**.

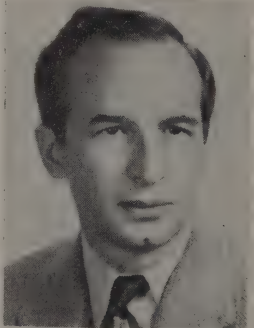
BAUER, Charles Wilfred, Prof. of Chem., 107 Lowell Rd., Wellesley Hills 82, Mass. **BIOCHEMISTRY AND PHARMACEUTICAL CHEMISTRY**. b. June 6, 1899, Hastings, Neb. s. Conrad A. and Kathryn (Stroh) B. Edn.: Ph.G. and Ph.C., Valparaiso Univ., 1921; B.S., Creighton Univ., 1927; M.A., ibid., 1929; Ph.D., State Univ. of Ia., 1937; m. Ruth Litton of Ashton, Ida., Aug. 31, 1931. d. Mr. and Mrs. J. A. Litton. c.: Mary Alice. Exp.: Chem., Utah-Idaho Sugar Co., Sugar City, Ida., 1921-22; Chem., U. S. Steel Co., Gary, Ind., 1922-23; Prof. of Chem., Creighton Univ., Omaha, Neb., 1924-37; Prof. and Chmn., Chem., Mass. Coll. of Pharm., Boston, 1937—. Rsch. Consult., United Rexall Drug Co., 1942-45. Mem.: Fel., A.A.A.S.; Amer. Pharm. Assn.; Amer. Assn. Coll. of Pharm.; A.C.S.; N. Eng. Chem. Tchrs.; N. Eastern Sect., A.C.S.; Phi Delta Chi; Phi Lambda Upsilon; Sigma Xi; Rho Chi; Mason; Wellesley Congregational Club, Pres., 1948-50. Contrb. to: Sci. Jour. Ph.D. Dissertation: The In-Vitro Effect of Epinephrine on the Activity of Liverglycogenase. Travel: Med. Expeditions to Alaskan Eskimos; Can.; Mex.; N. Amer. Hobbies: Gardening; Trout Fishing. Listed in: Who's Who in Neb.; Who's Who in Mass.; A.M.S.; Who's Who in Internat. Blue Book; Chem. Who's Who. Special Int.: Enzymes; Preparation of Enteric Coatings.

BAUER, Edwin Theodore, Prof. of Sociol., Morning-side Coll., Sioux City, Iowa. **SOCIOLOGY**. b. West Chester, Iowa, Mar. 29, 1907. s. Earnest Frederick and Ethel (Hopkinson) B. Edn.: A.B., Iowa Wesleyan Coll., 1929; B.D., Garrett Biblical Inst., 1933; A.M., Drake Univ., 1935; Ph.D., State Univ. of Iowa, 1949. m. Isabelle Olive Thompson, June 10, 1928. c.: Marjorie Kathleen; Margaret Isabelle. Exp.: Minister, Methodist Church, Stockport, Iowa, 1930-33; Minister, Easton Place Methodist Church, Des Moines, Iowa, 1933-36; Minister, Fifth Ave., Methodist Church, Council Bluffs, Iowa, 1936-37; Chaplain, U. S. Navy, 1937-45; Minister, Gatchel Methodist, Des Moines, Iowa, 1945-46; Prof. of Sociol., Iowa Wesleyan Coll., Mount Pleasant, Iowa, 1947-49; Prof., Morningside Coll., Sioux City, Iowa, 1949—. Mem.: Amer. Sociological Soc.; Midwest Soc. Sociol.; Pi Gamma Mu; Alpha Kappa Delta; Family Service, Inc. War Record, U. S. Navy, World War II. Special Int.: Marriage and the Family.



BAUER, John Trexler, Pathologist, Burlington County Hosp., Mount Holly, N. J. **PATHOLOGY**.

BAUER, Raymond A., Lectr. in Social Psychol. and Co-Dir. of Rsch.; Harvard Project on the Soviet Social System, Harvard Univ., 112 Lexington Ave., Cambridge, Mass. **SOCIAL PSYCHOLOGY, AND SOVIET STUDIES**. b. Chicago, Ill., Sept. 7, 1916. s. William H. and Anna (Diedrich) B. Edn.: B.S., Northwestern, 1943; M.A., Harvard, 1948; Ph.D., ibid., 1950. m. Alice H., 1941. c.: Linda C. Exp.: Lectr. in Soc. Psychol. and Co-Dir. of Rsch., Harvard Project on the Soviet Social System, Harvard Univ., Cambridge, Mass., 1950—. Mem.: Amer. Psychological Assn.; Soc.



for the Psychological Study of Soc. Issues; Amer. Assn. for Pub. Opinion Rsch. Author: The New Man in Soviet Psychology, 1952. Contrb. to: Internat. Jour. of Opinion and Attitude Rsch.; Public Opinion Quarterly; Jour. of Abnormal and Social

Psychol. Special Int.: Public Opinion Rsch., Sociology of the Professions, Psychological and Sociological Aspects of Soviet Soc.

BAUER, Frederick Charles, Prof. of Soil Fertility, Coll. of Agriculture, Univ. of Ill., Urbana, Ill. SOIL SCIENCE. b. May 7, 1886, Blue Mound, Ill. s. Charles R. and Alice Kitty (Wall) B. Edn.: B.S., Agriculture, Univ. of Ill., 1909; M.S., Agronomy, *ibid.*, 1918; Ph.D., Soils, Univ. of Wis., 1920. m. Louise Garrett, Champaign, Ill., August 13, 1913. d. James and Eliza Garrett. c.: Elizabeth; Frederick, Jr.; Shirley; Miriam; David. Exp.: Supervisor Vocational Agri., Boise, Idaho, 1909-11; Dept. of Agron., Univ. of Ill., 1911—. Fellow, Amer. Soc. of Agron.; Soc. of Soil Sci. of Amer. Mem.: A.A.A.S.; Sigma Xi. Contrb. to: Jour. of Amer. Soc. of Agron.; Jour. of Soil Sci.; etc. Ph.D. Dissertation: The Relation of Organic Matter and the Feeding Power of Plants to the Utilization of Rock Phosphate. Travel: U.S.; Europe. Hobbies: Farming and Photography. Special Int.: Soil Mgmt.

BAUER, Simon, H., Prof. of Chem., Cornell Univ., Ithaca, N. Y. CHEMICAL PHYSICS. b. Oct. 12, 1911, Kovno, Lithuania. s. Ben Zion M. and Golda (Betten) B. Edn.: B.S., Univ. of Chicago, 1931; Ph.D., *ibid.*, 1935. m. Mariam Rosoff of N. Y. C., June 25, 1938. d. Dr. M. L. and Mrs. Rebecca Joseloff Roseoff. c.: Frederick Rosoff; Linda Deborah; Ross Meyer. Exp.: Instr. of Chem., People's Jr. Coll., Chicago, 1934-35; Rsch. Fellow, Calif. Inst. Tech., Pasadena, 1935-37; Instr. in Fuel Tech., Pa. State Coll., 1937-39; Instr. in Chem., Cornell Univ., Ithaca, 1939-42; Asst. Prof., *ibid.*, 1942-46; Assoc. Prof., *ibid.*, 1946-50; Prof., *ibid.*, 1950—. Determinations of Molecular Structure by Diffraction and Spectroscopic Techniques. Physical Tools for Chem. Anal., Energy Transfer Processes in Chem. Activation; Tehr. Gen. Chem., Qualitative Anal.; Grad. Courses in Chem. Physics. Mem.: Phi Beta Kappa; Sigma Xi; A.A.A.S.; A.C.S.; Amer. Phys. Soc.; Amer. Cryst. Assn.; Fed. Amer. Sci. Contrb. to: J.A.C.S.; Jour. Chem. Phys.; Rev. Sci. Inst.; Phys. Rev. Travel: Europe; Canada; U. S. Listed in: A. M. S. Special Int.: Molecular Structure; Rates of very fast reactions; boron hydrides.

BAUER, Walter, Physician, Mass. General Hosp., and Assoc. Prof. and Tutor of Med., Harvard Med. Schl., Boston, Mass. INTERNAL MEDICINE.

BAUGH, Ruth Emily, Assoc. Prof., Univ. of Calif., 405 Hilgard Ave., Los Angeles, Calif. GEOGRAPHY.

BAUGHMAN, Imo P., Instr. in Chem., Los Angeles City Coll., 855 N. Vermont Ave., Los Angeles, Calif. GENERAL CHEMISTRY.

BAUMAN, Louis, Asst. Prof. of Clinical Med., Columbia Univ., N. Y., N. Y. MEDICINE.

BAUMANN, Emil J., Chemist, Montefiore Hosp., N. Y., N. Y. BIOCHEMISTRY.

BAUMBERGER, James Percy, Prof. of Physiol., Stanford Univ., Calif. PHYSIOLOGY.

BAUMEISTER, Theodore, Stevens Prof. of Mech. Engrng., Columbia Univ., N. Y. 27, N. Y. POWER ENGINEERING.

BAUMGARTNER, William J., Univ. of Kans., Lawrence, Kans. ZOOLOGY.

BAUSCH, Carl Louis, Vice-Pres. in Chg. of Rsch. and Engrng., Bausch and Lomb Optical Co., Rochester, N. Y. OPTICAL INSTRUMENTS.

BAXTER, Gregory Paul, Theodore William Richards Prof. of Chem. Engr., Harvard Univ., 59 Francis Ave., Cambridge 38, Mass. INORGANIC AND ANALYTICAL CHEMISTRY. b. Somerville, Mass., Mar. 3, 1876. s. George Lewis and Ida Florence (Paul) B. Edn.: A.B., Harvard Coll., 1896; A.M., Harvard Univ., 1897; Ph.D., *ibid.*, 1899. Hon. Deg.: Sc.D., Univ. of Mich. m. Amy Bailey Sylvester, June 2, 1906. c.: Elizabeth. Exp.: Asst. in Chem., Harvard, 1895-97; Instr. in Chem., *ibid.*, 1897-99; Instr. in Chem., Haverford, 1899-1900; Asst. Prof. of Chem., Swarthmore Coll., 1900-02; Instr. in Chem., Harvard, 1902-05; Asst. Prof., *ibid.*, 1905-

15; Prof. of Chem., *ibid.*, 1915-25; Theodore William Richards Prof. of Chem., *ibid.*, 1925-44; Emer., *ibid.*, 1944—. Hon. Pos.: Chem. Internatl. Comm. on Atomic Weights, 1931-47. Mem.: Natl. Acad. Sci.; Amer. Acad. Arts and Sci.; Phi Beta Kappa; Sigma Xi. Author: Investigations on Atomic Weights, Carnegie Inst., 1910. Contrb. to: Jour. Amer. Chem. Soc.; Proc. Amer. Acad. Arts and Sci. Special Int.: Analytical and Inorganic Chem., especially Atomic Weights.

BAXTER, Mildred Frances, Psychologist, Bd. of Edn., 9732 Logan Court, Cleveland, Ohio. PSYCHOLOGY.

BAY, J. Christian, John Crerar Library, 86 E. Randolph St., Chicago, Ill. BOTANY.

BAYFIELD, Edward Geoffrey, Dir., Products Control and Rsch., Standard Milling Co., 309 W. Jackson Blvd., Chicago, Ill. CEREAL CHEMISTRY, FLOUR MILLING.

BAYLEY, Nancy, Rsch. Assoc., Inst. of Child Welfare and Lectr. in Psychol., Univ. of Calif., 2739 Bancroft Way, Berkeley, Calif. PSYCHOLOGY AND CHILD DEVELOPMENT. b. Sept. 28, 1899, The Dalles, Ore. d. F. W. and Prudence (Cooper) B. Edn.: B.S., Univ. of Wash., 1922; M.S., *ibid.*, 1924; Ph.D., Univ. of Ia., 1926. m. John R. Reid, 1929. Exp.: Tehng. Fellow in Psychol., Univ. of Wash., 1922-24; Grad. Asst. in Psychol., Univ. of Ia., 1924-26; Instr. in Psychol., Univ. of Wyo., 1926-28; Rsch. Assoc., Inst. of Child Welfare, Univ. of Calif., 1928; Rsch. Assoc. in Psychol., Stanford Univ., 1939-40, and 1950-51; Acting Assoc. Prof. of Psychol., Stanford Univ., Summer 1946. Mem.: Sigma Xi; Amer. Psychol. Assn.; Soc. for Rsch. in Child Development; Amer. Ednl. Rsch. Assn. Contrb. to: Jour. of Genetic Psychol.; Psychol. Monographs; Genetic Psychol. Monog.; Biometrika; Readings in Psychol.; Human Biol.; Mental Hygiene in Modern Edn. Author: Calif. First Year Mental Scale; Calif. Infant Scale of Motor Development; Studies in Development of Young Children; etc. Ph.D. Dissertation: A Study of Fear by the Psychogal. Tech. Gen. Int. Citation by Amer. Ednl. Rsch. Assn. for Rsch. in Mental Growth During the First Three Years, 1933. Listed in: A. M. S. Special Int.: The Development of Intelligence and factors related to it. Skeletal Maturation and its Relation to Growth in Size. Body Build and its Relation to Rate on Maturing and to Personality.

BAYLEY, Paul Leverne, Prof. of Physics, Lehigh Univ., Bethlehem, Pa. SPECTROSCOPY.

BAYNE-JONES, Stanhope, N. Y. Hosp., Cornell Med. Center, 525 E. 68th St., N. Y., N. Y. MEDICAL SCIENCES.

BAZEMORE, Alva Walker, Research Chemist, 347 Academy Terrace, Linden, N. J. ORGANIC CHEMISTRY. b. Butler, Ga., October 3, 1920. s. Clarence Walker and Bertha (Salzer) B. Edn.: B.S., Univ. of Ga., 1941; M.A., Univ. of N. C., 1943; Ph.D., *ibid.*, 1948. Exp.: Research Asst., Tenn. Eastman Corp., 1942; Graduate Asst., Univ. of N. C., 1941-43; Va. Smelting Co., Fellow, *ibid.*, 1943-44, 1946-47; Research Chemist (Organic), Merck and Co., Inc., 1947—. Mem.: Phi Beta Kappa; Phi Kappa Phi; Sigma Xi; Amer. Chem. Soc.; Alpha Chi Sigma. Ph.D. Dissertation: The Sulfonation of the Di-Tertiary-Butyl Naphthalenes. War Record: Electronic Technician, U.S.N.R., 1944-46. Travel: Hawaii; China; Canada; Mexico; Central Amer. Hobbies: Participation Sports; Music; Bridge. Listed in: A. M. S.; Chem. Who's Who. Special Int.: Surface Active Agents; Synthetic Medicinals; Vitamins and Hormones.

BAZZONI, Charles B., Chf. Geophysicist, Sun Oil Co., Philadelphia, Pa. PHYSICS.

BEACH, Frank A., Sterling Prof. of Psychol., Yale Univ., New Haven, Conn. PSYCHOBIOLOGY. b. Emporia, Kans., Mar. 13, 1911. s. Frank A. and Bertha (Robinson) B. Edn.: B.S., Kans. State Tehr. Coll., 1932; M.A., *ibid.*, 1934; Ph.D., Univ. of Chicago, 1940. m. Anna Beth Odenweller, 1936. c.: Frank; Susan. Exp.: Asst. in Neuropsychol., Harvard Univ., Cambridge, Mass., 1935-36; Asst. Curator of Exptl. Biol., Amer. Museum of Natural

Hist., N. Y., N. Y., 1936-41; Assoc. *Ibid.*, 1941-42; Curator and Chmn. of the Dept. of Animal Behavior, *ibid.*, 1942-46; Prof. of Psychol., Yale Univ., New Haven, Conn., 1946-51; Sterling Prof., 1951—. Mem.: Amer. Psychological Assoc.; Eastern Psychol. Assoc.; A.A.A.S.; National Acad. of Sci.; N. Y. Zoological Soc.; Soc. of Experimental Psychologists; Sigma Xi; Amer. Soc. of Naturalists; Soc. of Mammalogists. Author: *Hormones and Behavior*, 1948; *Patterns of Sexual Behavior*, 1952. Conthb. *Jour. Comp. Psychol.*; *Jour. Genet. Psychol.*; *Sci.*; *Endocrinol.*; *Psychol. Bull.*; *Psychosomatic Med.*; *Jour. Exp. Zool.*; *Psychol. Rev.*; *Amer. Naturak.*; *Behavior*, *Jour. Mammal.*; *Amer. Psychol.* Special Int.: Study of the Role of the Nervous System and of the Endocrine Glands in Behavior, Particularly Maternal and Sexual Behavior.

BEADLE, George Wells, Calif. Inst. of Tech., Pasadena, Calif.

BEACH, Hugh Hamilton, Asst. Mgr.-Chg. of Exploration, Texaco Exploration Co., 237 7th Ave., W., Calgary, Alberta, Can. GEOLOGY. b. Gleichen, Alberta, Can., Apr. 29, 1909. s. Thomas Harry and Gertrude Gesner (Hamilton) B. Edn.: B.Sc. Univ. of Alberta, 1932; M.Sc., *ibid.*, 1934; Ph.D., Yale Univ., 1940. m. Lucille Allen, Nov. 12, 1944. c.: Diana Lee; Susan Elizabeth. Exp.: Geol. Survey of Canada, 1935-42; Exploration Dept., McColl-Fontenac Oil Co., Ltd., Calgary, 1942-51; Asst. Mgr.-Chg. of Exploration, Texaco Exploration Co., Calgary, Alberta, Can., 1951—. Mem.: A.A.P.G.; Assn. of Professional Engrs. of Alberta; Assn. of Professional Engrs. of B. C.; Fellow, Geol. Assn. of Can.; Alberta Soc. of Petroleum Geologists; Natl. Advisory Council of Rsch. in Geol. Sci.; Sigma Psi; Delta Kappa Epsilon. Conthb. to: *Geol. Survey of Can. Special Int.*: Structural Geol. of the Canadian Cordillera.

BEACHAM, Woodard Davis, Prof. of Clinical Gynecology and Obstetrics, Tulane Univ. Schl. of Med., 1202 National Bank of Commerce Bldg., New Orleans 12, La. OBSTETRICS; GYNECOLOGY. b. McComb, Miss., Apr. 10, 1911. s. Woodard Davis and Ida (Felder) B. Edn.: B.A., Univ. of Miss., 1932; B.S., *ibid.*, 1933; M.D., Tulane Univ. of La., 1935. Exp.: Student Asst. in Biol., Univ. of Miss., Oxford, Miss., 1939-31; Asst. in Urology, La. State Univ. Schl. of Med., 1940-41; Instr. in Gynecology and Obstetrics, Tulane Univ. Schl. of Med., New Orleans, La., 1941-44; Asst. Prof. of Clin. Gynecology and Obstetrics, *ibid.*, 1944-47; Assoc. Prof. of Clin. Gynecology and Obstetrics, *ibid.*, 1947-49; Prof., *ibid.*, 1949—. Fellow: Amer. Acad. of Obstetrics and Gynecology; Amer. Gynecological Soc.; Amer. Assn. of Obstetricians, Gynecologists, and Abdominal Surgeons; Amer. Coll. of Surgeons; Fellow, A.M.A.; A.A.A.S.; Alpha Omega Alpha; Sigma Xi; Phi Chi; Beta Theta Pi; etc. Conthb. to: *New Orleans M. & S. Jour.*; *Clinics*; *Obst. and Gynec. Survey*; *J.A.M.A.*; *Urol. and Cutan. Rev.*; *Med. Radiog. and Photog.*; *Ginecologia Y Obstetricia De Mexico*; *West. Jour. Surg.*; *Obst. and Gynec.*; *South. M. Jour.*; *Jour. Mo. M. A.*; *Miss. Doctor*; *Mod. Med.*; *Amer. Jour. Obstetrics and Gynecology*.

BEAKLEY, George Carroll, Jr., Assoc. Prof. of Mech. Engrng., Tarleton State Coll., Tarleton, Sta. Tex. MECHANICAL ENGINEERING, ARCHITECTURAL ENGINEERING. b. Marble Falls, Tex., February 3, 1922. s. George Carroll and Tesselia (Poage) B. Edn.: B.S., Tex. Tech. Coll., 1947; M.S., Univ. of Tex., 1952. m. Oletta Zeh, Aug. 4, 1944. c.: George Carroll, III; William Don; Martha Ann. Exp.: Assoc. Prof. of Mech. Engrng., Tarleton State Coll., Tarleton Sta., Tex., 1947—. Hon. Pos.: Chmn., Audio-Visual Comm. Mem.: Tex. Soc. of Prof. Engrs.; Amer. Soc. for Engrng. Edn.; Amer. Assn.



grs.; Amer. Soc. for Engrng. Edn.; Amer. Assn.

of Physics Tehrs.; Natl. Soc. of Prof. Engrs.; Kappa Mu Epsilon. Co-Author: *Elem. Problems in Engrng.*, with Leach, 1952; *Workbook of Slide Rule and Elem. Problems in Engrng.*, with Leach, 1952; *The Slide Rule*, with Leach, 1953 (Macmillan). Conthb. to: *The Jr. Coll. Jour.* War Record; 1st Lt., U. S. Army Infantry, 1943-46. Gen. Int.: Milit. Govt. Engr. While in Japan, Asst. Comdr. of Sendai Army Coll., Sendai, Japan, Helped Organize this Coll. Special Int.: Grad. Rsch. in Audio-Visual Field as Related to Tehng. of Engrng. Subjects; Registered Professional Engr.

BEAL, George Denton, Dir. of Rsch., Mellon Inst. of Industrial Rsch., 4400 Fifth Ave., Pittsburgh 13, Pa. b. Scio, Ohio, Aug. 12, 1887. Edn.: Ph.C., Scio Coll. of Pharm., 1906; Pharm.D., *ibid.*, 1907; Ph.B., Scio Coll., 1908; A.M., Columbia Univ., 1910; Ph.D., *ibid.*, 1911. Hon. Deg.: Pharm.M., Philadelphia Coll. of Pharm., 1933; Sc.D., Mt. Union Coll., 1933; Sc.D., Rutgers, 1943. m. Edith Downs, July 3, 1912. c.: George Denton, Jr.; Marjorie Downs. Exp.: Instr. in Chem., Univ. of Ill., Urbana, Ill., 1911-14; Assoc. in Chem., *ibid.*, 1914-18; Asst. Prof. of Chem., *ibid.*, 1918-20; Assoc. Prof. of Analytical and Food Chem., *ibid.*, 1920-24; Prof. of Analytical and Food Chem., *ibid.*, 1924-26; Asst. Dir., Mellon Inst. of Industrial Rsch., 1926-51; Dir. Rsch., 1951—. Hon. Pos.: Mem., Bd. of Trustees, Mt. Union Coll., 1936—; Mem., Bd. of Trustees, Philadelphia Coll. of Pharm. and Sci., 1936—; Dir., Amer. Druggists' Fire Ins. Co., Cincinnati, Ohio. Mem.: Amer. Pharmaceutical Assn.; Amer. Coun. on Pharmaceutical Edn.; Amer. Chem. Soc.; A.A.A.S.; Amer. Public Health Assn.; Amer. Soc. for Testing Materials; Pa. Chem. Soc.; Pa. Pharmaceutical Assn.; Pa. State C. of C.; Amer. Leather Chemists Assn.; etc.

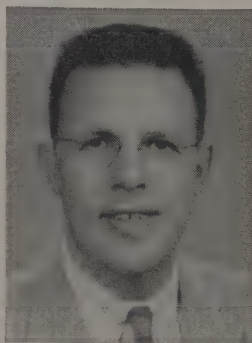
BEAL, John Mann, Prof. of Botany, Univ. of Chicago, Chicago, Ill. GENERAL BOTANY.

BEALE, Frank Swan, Assoc. Prof. Math., Lehigh Univ., Bethlehem, Pa., 316 West Packer Ave., Bethlehem, Pa. ACTUARIAL MATHEMATICS. b. Eastport, Maine, Nov. 28, 1898. s. Frank James Beale and Lavinia (Lank) B. Edn.: B.S., Univ. of Maine, 1921; M.S., Univ. of Maine, 1923; Ph.D., Univ. of Mich., 1931. Exp.: Instr. in Math., Univ. of Maine, 1921-26; Asst. Prof. Math., Hamilton Coll., Clinton, N. Y., 1926-27; Instr., Univ. of Mich., 1927-30; Instr. Math., Lehigh Univ., 1930-35; Asst. Prof., Math., Lehigh Univ., 1935-49; Assoc. Prof., Math., Lehigh Univ., 1949—; on leave of absence with Conn. Gen. Life Ins. Co., Hartford, Conn., 1944-46. Mem.: Amer. Math. Soc.; Amer. Stat. Assn.; Sigma Xi; Tau Beta Pi; Phi Kappa Phi. Author: *Elem. Math. of Finance*, 1942. Conthb. to: *Annals of Math. Statistics*. Ph.D. Dissertation: *Systems of Linear Difference Equations with Polynomial Coefficients*. Hobbies: Boating; Camping; Baseball. Listed in: *Who's Who in the East*; A. M. S. Special Int.: Pension Plans.

BEALS, Ralph Leon, Assoc. Prof. of Anthropol., Univ. of Calif., Los Angeles, Calif. LATIN AMERICAN ETHNOLOGY.

BEAM, James R., Trenton Potteries Co., Plant 1, 309 N. Clinton Ave., Box 141, Trenton, N. J.

BEAMER, Parker R(eynolds), Prof. of Pathol., Ind. Univ. Schl. of Med., Ind. Univ. Med. Center, 1040-



and Fellow, Wash. Univ. Schl. of Med., 1939-43;

Lectr. in Bacteriol., Wash. Univ. Schl. of Dentistry, 1941; Asst. in Pathol., Wash. Univ. Schl. of Med., 1941-44; Asst. Prof. Pathol., *ibid.*, 1946-49; Prof. of Microbiol. and Immunol., Dir. Dept., and Assoc. Prof. Pathol., Bowman Gray Schl. of Med., Wake Forest Coll., 1949-53; Prof. of Pathol., Ind. Univ. Med. Center, Indianapolis, Ind., 1953—; Pres., N. C. Soc. of Bacteriol. Mem.: A.A.P.B.; Soc. of Amer. Bacteriol.; A.S.C.P.; S.E.B.M.; A.P.H.A.; A.A.A.S.; A.M.A.; Sigma Xi; Alpha Omega Alpha; Gamma Alpha; Kiwanis. Contrb. to: Med. and Sci. Jours. Ph.D. Dissertation: Heat Resistance of Certain Yeasts and Non-Spore-Forming Pathogenic Bacteria. War Record: Chief Lab., Army Hosp., 1944-45; Chief of Bacteriol. and Parasitol. Div., Antilles Gen. Med. Lab., 1945-46; Commanding Officer, Ant. Gen. Med. Lab., in Addition Above Duties, 1946; 1st Lt. to Maj., Med. Corps, Army U. S. A., 1944-46. Travel: N. Amer.; British Guiana; Trinidad; French Guiana; Puerto Rico; Caribbean Areas. Gen. Int.: Diplomate of Amer. Bd. of Pathol.; Bronze Tablet for Milit. and Scholastic Excellence, U. of Ill., 1935. Hobbies: Basketball; Ice Skating. Listed in: A. M. S.; Who's Who in South and Southwest; Who Knows and What; Dir. of Med. Specialists; Who's Important in Med. Special Int.: Pub. Health Bacteriol.; Heat Resistance of Pathogenic Microorganisms; Clostridium botulinum Food Poisoning; Chemotherapy in Salmonella and Shigella Infections; Pathogenic Staphylococci; Mycotic Infections; Microbiology and Pathol. of Miscellaneous Infectious Diseases; Med. Edn.

BEAMS, Harold William, Prof. of Zool., State Univ. of Iowa, Iowa City, Iowa. **CYTOLOGY.** **CERAMICS.**

BEAMS, Jesse Wakefield, Chmn., Dept. of Phys., Univ. of Va., Charlottesville, Va. **PHYSICS.** b. Belle Plaine, Kans., Dec. 25, 1898. s. Jesse Wakefield and Kathryn (Wylie) B. Edn.: A.B., Fairmont Coll., 1921; M.A., Univ. of Wis., 1922; Ph.D., Univ. of Va., 1925. Hon. Deg.: Sc.D., William and Mary, 1941; Sc.D., Univ. N. C., 1946; Sc.D., Washington and Lee, 1950. m. Maxine Sutherland, June 16, 1931. Exp.: Instr., Math. and Phys., Ala. Poly. Inst., 1922-23; Natl. Rsch. Fellow, Univ. of Va., 1925; Natl. Rsch. Fellow, Yale Univ., 1927; Instr. of Phys., *ibid.*, 1927-28; Assoc. Prof. of Phys., Univ. of Va., 1928-30; Prof. of Phys., *ibid.*, 1930—; Chmn., Phys. Dept., *ibid.*, 1948—. Hon. Pos.: Past Pres., Va. Acad. of Sci. Mem.: Fellow, A.A.A.S.; Amer. Phys. Soc.; Amer. Philos. Soc.; Natl. Acad. Sci.; Va. Acad. Sci.; Sigma Xi; Phi Beta Kappa; Sigma Pi Sigma. War Record: U. S. Army, 1918; Naval Reserve, 1936-51. Special Int.: Electro Optical Effects; Centrifuging; Separation of Isotopes; Discharge in Gases; Rapidly Occurring Phenomena.

BEAN, Haldane Wesley, Asst. Dean Coll. of Agri., Asst. Dir. Agri. Expt. Sta., Asst. Dir. Ext. Service in Agri. and Home Econ.; Assoc. Prof. An. Sci., Univ. of Ill., Urbana, Ill. **STATISTICS; ANIMAL SCIENCE.** b. Mar. 12, 1901, Blue Mound, Ill. s. Wm. Howard and Hattie Imogene (Bethards) B. Edn.: B.S., Univ. of Ill., 1922; M.S., *ibid.*, 1932. m. Sara Agnes Cutler of Urbana, Ill., Apr. 18, 1924. d. Harry A. and Bertie Elwell C. c.: Marjory Ruth (Mrs. John M. McDowell, Jr.), Kathryn Ann; Norma Haldene. Exp.: Sci. Tchr., Blue Mound, Ill., Comm. H. S., 1923-25; Prin., Blue Mound Comm. H. S., 1925-37; Asst. in Animal Husbandry, Univ. of Ill., 1938-44; Asst. Prof. and Asst. Chief, Animal Husbandry, 1942-47; Asst. Prof. Animal Science, 1947-50; Assoc. Prof. Animal Sci., 1950—; Asst. to Dean of Coll. and to Dir. of Agri. Expt. Sta., 1942-50; Asst. Dean Coll. of Agri., Asst. Dir. Agri. Expt. Sta., Asst. Dir. Ext. Service in Agri. and Home Econ., 1950—. Mem.: Amer. Statistical Assn.; Amer. Soc. of Animal Production; Phi Delta Kappa; Gamma Sigma Delta; Sigma Xi; Phi Sigma.

BEAN, John William, Prof. of Physiol., Univ. of Mich. Med. Schl., Ann Arbor, Mich. **PHYSIOLOGY.**

BEAN, Mrs. R. J., Dept. of Histology and Embryology, Dalhousie Univ., Halifax, N. S., Can. **ZOOLOGY.**

BEAN, Ross Smoot, Asst. Biochemist, Western Regional Rsch. Lab., 800 Buchanan St., Albany, Calif. **MINERAL NUTRITION OF PLANTS.**

BEANS, Hal Trueman, Prof. of Chem., Columbia Univ., N. Y., N. Y., **CHEMISTRY.**

BEAR, Firman Edward, Editor, Soil Science, New Brunswick, N. J. **SOILS, AGRICULTURAL CHEMISTRY.**

BEAR, Harry, Dean, Schl. of Dentistry, Med. Coll. of Va., Richmond, Va. **DENTISTRY.**

BEARD, Joseph Willis, Assoc. Prof. of Surgery, Duke Univ. Schl. of Med., Durham, N. C., **STUDIES ON VIRUSES.**

BEARD, Leslie Carrington, Jr., Asst. Dir. of Labs., Socony-Vacuum Oil Co., 26 Broadway, N. Y., N. Y. **PETROLEUM CHEMISTRY.**

BEARD, Raimon Lewis, Asst. Entomologist, Conn. Agri. Expt. Station, New Haven, Conn. **ENTOMOLOGY.**

BEARDEN, Joyce Alvin, Prof. of Physics, Johns Hopkins Univ., 34th and Charles Sts., Baltimore, Md. **PHYSICS.**

BEATON, Lindsay Eugene, Private Physician, 1650 N. Campbell Ave., Tucson, Ariz. **NEUROLOGY AND PSYCHIATRY.** b. Chicago, Ill., Jan. 25, 1911. s. David and Vera (deLipkau) B. Edn.: A.B., Dartmouth Coll., 1932; M.S., Northwestern Univ. Med. Schl., 1940; M.D., *ibid.*, 1939; Internship, Passavant Hospital, Chicago, Ill., 1940. m. Mildred Chapman, Jan. 22, 1946. c.: Kathleen and Jeremy. Exp.: Instr. of Anatomy, Northwestern Univ., Med. Schl., Chicago, Ill., 1937-39; Med. Fellow, Natl. Rsch. Council, *ibid.*, 1941-42; Instr., Neuropsychiatric Schls., Pac. Ocean Areas, 1945; Mem., Med. Staffs, Tucson, Med. Center, St. Mary's Hospital, Pima Co. Gen. Hospital, 1946—. Mem.: Amer. Acad. of Neurol.; Amer. Psychiatric Assn.; A.M.A.; Amer. Coll. of Physicians; West. Assn. of Electroencephalography; Amer. Bd. of Psychiatry and Neurol., Inc.; Amer. Acad. of Forensic Sci.; Beta Theta Pi; Phi Beta Kappa; Sigma Xi; Alpha Omega Alpha; Rotary. Contrb. to: Archives of Neurol. and Psychiatry; Bull. of Menninger Clinic; Surgery, Gynecol. and Obstetrics; Jour. of Neuropsychol.; Anatomical Record; Amer. Jour. of Physiol.; Ariz. Med.; Sci.; Jour. of Anatomy; Quarterly Bull. of Northwestern Univ. Med. Schl.; Stain Tech.; Amer. Jour. of Phys. Anthropol. War Record: U. S. Army Med. Corps, 1942-46. Special Int.: Anatomy and Physiol. of the Hypothalamus; Epilepsy; Multiple Sclerosis and Combat Psychiatry.

BEATTY, Harold Ashton, Asst. Dir. of Chem. Rsch., Ethyl Corp., 1600 W. Eight Mile Rd., Detroit, Mich. **PETROLEUM CHEMISTRY.**

BEAUDRY, Jean R., Assoc. Prof., Institut de Biologie, Université de Montréal, P. Q., Can. **CYTOGENETICS.** b. Verdun, P. Q., Can., Aug. 30, 1917. s. Henri and Rose-Anna (Larivière) B. Edn.: L.S.A., Université de Montréal, 1939; M.Sc., McGill Univ., 1944; Ph.D., Univ. of Wis., 1948. m. Cécile Labbé, July 6, 1944. c.: Jacques. Exp.: Asst. Prof. of Agron., McGill Univ., Montréal, Que., 1948-49; Rsch. Assoc., Univ. of Wis., Madison, Wis., 1949-50; Asst. Prof. of Biol., Université de Montréal, Can., 1950-52; Assoc. Prof., *ibid.*, 1952—. Mem.: Genetics Soc. of Amer.; A.A.A.S.; Soc. for the Study of Evolution; Entomol. Soc. of Can.; Sigma Xi. Contrb. to: Genetics; Annales de l'Acfas. Special Int.: Caryology of Orthoptera.

BEAUMONT, Arthur Bishop, State Conservationist, Soil Conservation Service, U. S. D. A., Mass. State Coll., Amherst, Mass. **AGRONOMY.**

BEAVER, Charles Edwin, Asst. General Sales Mgr., Rsch. Corp., Bound Brook, N. J. **CLEANING OF INDUSTRIAL GASES; ELECTRICAL PRECIPITATION.** b. Allentown, Pa., Mar. 27, 1903. s. Edwin and Lillian (Dickerson) B. Edn.: B.S., Lafayette Coll., 1925; Ch.E., *ibid.*, 1928. m. Aurelie L. Rissmiller, Oct. 12, 1928. c.: Margaret Ann. Exp.: Technical Dept., Rsch. Corp., 1925-26; In Chg., Brass Foundry, Ingersoll Rand Co., 1926-27; In Chg., Copperas Plant, C. K. Williams Co., 1927-28; Sales Engr., Rsch. Corp., 1928-50; Asst. General Sales Mgr., *ibid.*, 1950—. Mem.: Amer. Inst. Chem. Engrs.; A.A.A.S.; Tau Beta Pi; Phi Kappa Tau;

Alpha Chi Sigma; Masons. Contrb. to: Amer. Inst. Chem. Engrs. Special Int.: Cleaning of Industrial Gases; Electrical Precipitation.

BEAVER, David John, Rsch. Dir., Nitro Div., Monsanto Chem. Co., Nitro, W. Va. **ORGANIC CHEMISTRY.**

BEAVER, J. Lynford, Emer. Prof. of Elec. Engrng., Lehigh Univ., Phoenixville, Rt. 2, Pa. **POWER.**

BEAVER, Jacob J., Prof. of Chem., Columbia Univ., N. Y., N. Y. **PHYSICAL CHEMISTRY.**

BEAVER, Paul Chester, Asst. Prof., Dept. of Tropical Med., Tulane Univ. Schl. of Med., New Orleans, La. **PARASITOLOGY.**

BEAVER, Ralph Alexander, Chmn., Dept. of Math., N. Y. State Coll. for Tchrs., Albany, N. Y. **MATHEMATICS.** b. Esopus, N. Y., Dec. 17, 1902. s. John H. and Anna (Secor) B. Edn.: B.S., N. Y. State Coll. for Tchrs. at Albany, 1924; M.A., Columbia Univ., 1928; Ph.D., Cornell Univ., 1932. m. Iona Hunter, Sept. 3, 1928. c.: William; Jeffrey. Exp.: Instr. of Math., N. Y. State Coll. for Tchrs. at Albany, 1925-33; Asst. Prof. of Math., ibid., 1933-45; Prof. of Math., ibid., 1945—; Dir. of Extension Tchng., ibid., 1944—. Mem.: Amer. Math. Soc.; Math. Assn. of Amer.; Kappa Delta Rho; Phi Kappa Phi.

BEAVER, William C., Prof. of Biol. and Hd. Dept., Wittenberg Coll., Springfield, Ohio. **BIOLOGY AND BACTERIOLOGY.**

BECHMANN, C. D., Columbia Univ., New York, N. Y. **BIOCHEMISTRY AND ENZYMES.**

BECHTEL, Albert Reiff, Prof. of Botany, Wabash Coll., Crawfordsville, Ind. **MYCOLOGY, TAXONOMY.**

BECHTOLSHEIM, Lulu, Assoc. Prof. of Math., Univ. of Redlands, Redlands, Calif., 330 Cajon St., Redlands, Calif. **GEOMETRY.** b. N. Y. City, May 27, 1902. d. Otto and Clara (Olshausen) Hofmann. Edn.: 1919-22, Realgymnasium der Schillerschule, Frankfurt/Main, Germany; Degree "Reifezeugnis"; 1922-23, Albert Ludwigs Universitaet Freiburg/Baden, Germany; 1923-26, Universitaet Zuerich, Zuerich, Switzerland; Deg. Ph.D., 1927; Additional Grad. Study; Inst. of Tech., Zuerich, Switzerland; Univ. of Chicago; Univ. of Calif. at Berkeley. m. W. A. Bechtolsheim of Hohenburg, Bavaria, Germany, Nov. 21, 1936. Exp.: Columbia Univ., N. Y. City, 1927-37; Asst. Lectr., Instr., Hunter Coll., N. Y. City, Summer, 1937; Instr., Queens Coll., Flushing, N. Y., 1937-40; Instr., Stanford Univ., Stanford, Calif., Winter, 1944, Summer, 1947; Univ. of Redlands, Redlands, Calif., 1944—. Mem.: Amer. Math. Soc.; Math. Assn. of Amer. Ph.D. Dissertation: Ueber einige spezielle Strahlenkongruenzen, die mit analytischen Funktionen zusammenhaengen. (On certain congruences of lines connected with analytic functions.) Travel: Germany; Switzerland; France; Belgium; Holland; Sweden; Luxembourg; Italy. Hobbies: Mod. Languages; Gardening. Listed in: A.M.S.

BECK, Claude Schaeffer, Prof. of Neuro-Surgery, Western Reserve Univ., Schl. of Med., Cleveland, Ohio. **HEART SURGERY, NEURO-SURGERY.**

BECK, Fred John, Prof. of Electrical Engrng., Dunham Lab. of Elec. Engrng., Yale Univ., New Haven, Conn. **MAGNETISM.** b. N. Y., N. Y., Jan. 4, 1904. s. Fred John and Caroline (Weber) B. Edn.: E.E., Poly. Inst. of Brooklyn, 1925; Ph.D., Yale Univ., 1932. m. Edna Russell, June 4, 1932. c.: Frederic; Phyllis; Richard. Exp.: Graduate Student Training Course, Westinghouse E. & M. Co., East Pittsburgh, Pa., 1925-26; Rsch. Engr., Bell Telephone Labs., New York, New York, 1926-29; Prof. of E. E., Yale Univ., New Haven, Conn., 1929—. Mem.: Amer. Phys. Soc.; Amer. Inst. of Elec. Engrs.; Tau Beta Pi; Sigma Xi. Contrb. to: Phys. Rev.; Jour. Applied Phys. Special Int.: Ferromagnetism; Electromagnetic Theory.

BECK, Jay Vern, Prof. and Chmn., Dept. of Bacteriol., Brigham Young Univ., Provo, Utah. **MICRO-**

BIOLOGY; BIOCHEMISTRY. b. American Fork, Utah, Jan. 15, 1912. s. James Vern and Gladys (Johnson) B. Edn.: A.B., Brigham Young Univ., 1933; M.A., ibid., 1936; Ph.D., Univ. of Calif., 1940. m. Faye Ellison, 1931. c.: Dorthene; Patricia Lynn; Jacqueline; David E.; Bonnie Jane. Exp.: Assoc. Chemist, U. S. Food and Drug Admin., 1939-44; Asst. Prof. of Chem., Univ. of Idaho, Moscow, Idaho, 1944-46; Assoc. Prof. of Bacteriol., Pa. State Coll., State Coll., Pa., 1947-51; Prof. and Chmn., Dept. of Bacteriol., Brigham Young Univ., Provo, Utah, 1951—. Mem.: Sigma Xi; A.A.A.S.; Amer. Chem. Soc.; S.A.B. Author: Lab. Manual for General Bacteriol., 1952. Contrb. to: Jour. Bacteriol.; Jour. Biol. Chem.; Experientia. Gen. Int.: Rsch. Grans from the U.S.P.H.S. Natl. Cancer Inst. 1948—, Special Int.: Bacteriol Metabolism; Nucleic Acids; Anaerobic Bacterial Degradation of Purines.

BECK, Paul A., 205 Transportation Bldg., Urbana, Ill. **PHYSICAL METALLURGY.**

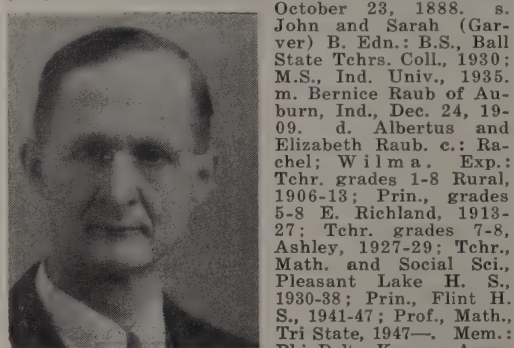
BECK, Samuel Jacob, Hd., Psychol. Lab. Div. Neuropsychiatry, Michael Reese Hosp., 29th St. and Ellis Ave., Chicago, Ill. **PSYCHOLOGY.**

BECK, William Anthony, Prof. of Biophysics, Univ. of Dayton, Dayton 9, Ohio. **ORGANIZATION OF PROTOPLASM, GROWTH, GROWTH PROMOTING SUBSTANCES, HORMONES, PIGMENTS IN PLANTS.**

BECKENBACH, Edwin Ford, Prof. of Math., Univ. of Calif., Los Angeles, Calif. **MATHEMATICAL ANALYSIS.**

BECKER, Arman Edward, Standard Oil Development Co., 26 Broadway, N. Y., N. Y. **PETROLEUM.**

BECKER, Carl, Prof. of Math., Tri State Coll., Angola, Ind. **MATHEMATICS.** b. Corunna, Ind.,



October 23, 1888. s. John and Sarah (Garver) B. Edn.: B.S., Ball State Tchrs. Coll., 1930; M.S., Ind. Univ., 1935. m. Bernice Raub of Auburn, Ind., Dec. 24, 1909. d. Albertus and Elizabeth Raub. c.: Rachel; Wilma. Exp.: Tchr. grades 1-8 Rural, 1906-13; Prin., grades 5-8 E. Richland, 1913-27; Tchr. grades 7-8, Ashley, 1927-29; Tchr., Math. and Social Sci., Pleasant Lake H. S., 1930-38; Prin., Flint H. S., 1941-47; Prof., Math., Tri State, 1947—. Mem.: Phi Delta Kappa; Amer. Soc. for Engrng. Edn.; Mason; Knights of Pythias; C. of C.; Lions Club. Hobbies: Farming; Fishing. Listed in: Who's Who in Midwest. Special Int.: Agricultural Rsch.

BECKER, Elery R., Prof. of Zool., Iowa State Coll., Ames, Iowa. **PARASITOLOGY.**

BECKER, George Grover, Entomologist in Chg. Import and Permit Section, Bureau of Entomol. and Plant Quarantine, U. S. D. A., 209 River St., Hoboken, N. J. **ENTOMOLOGY.**

BECKER, Joseph Adam, Physicist, Bell Telephone Labs., Murray Hill, N. J. **ELECTRON PHYSICS.**

BECKER, Robert Adolph, Asst. Prof. of Physics, Univ. of Ill., Urbana, Ill. **NUCLEAR PHYSICS.**

BECKHAM, Albert Sidney, Psychologist, Chicago Bd. of Edn., 4934 S. Wabash Ave., Chicago, Ill. **CLINICAL PSYCHOLOGY.**

BECKMAN, Harry, Dir., Dept. of Pharmacol., Marquette Univ. Schl. of Med., 561 N. 15th St., Milwaukee, Wis. **PHARMACOLOGY.**

BECKNER, Lucien, Geologist, Louisville Gas and Electric Co. and Curator, Louisville Public Museum, 1204 S. Second St., Louisville, Ky. **PETROLEUM GEOLOGY.**

BECKNELL, Guy Gaillard, Prof. of Phys. and Hon. Mem. of Admin., Univ. of Tampa, Tampa, Fla.



GENERAL MATHEMATICAL PHYSICS. b. Apr. 16, 1878. Milford, Ind. s. Irvin J. and Sarah E. (Zook) B. Edn.: B.S., Northwestern Univ., 1904; M.S., *ibid.*, 1905; Fellow in Phys., 1904-05; Ph.D., Clark Univ., 1911; D.Sc., Univ. of Tampa, 1946. m. Geneva West of Dorchester, Boston, Mass., 1913. d. Jas. H. and Cora L. West. c.: Elizabeth Ann. Exp.: Instr., Phys., Purdue Univ., 1905-08; Rsch. Fellow and Sr. Fellow in Phys., Clark Univ., 1908-11; Prof. of Phys., Mt. Allison Univ., N. B., Canada, 1911-12; Instr. in Phys., Syracuse Univ., 1912-14; Instr. in Phys., Northwestern Univ., 1914-15; Instr., Asst. Prof., and Prof., Univ. of Pittsburgh, 1916-24; Prof. of Phys., Univ. of Tampa, Tampa, Fla., 1931—; Mem. of Founding Faculty, Univ. of Tampa. Mem.: Amer. Math. Soc.; Amer. Phys. Soc.; Fellow, A.A.A.S.; Charter Mem., Fla. Acad. of Sci.; Pres., Fla. Acad. of Sci., 1946; Phi Beta Kappa; Sigma Xi. Contrb. to: Phys. Rev.; Proc. Fla. Acad. of Sci. Ph.D. Dissertation: Demagnetization of Iron and Steel Rods by Torsion, Flexure, and Impact. Hobbies: Elizabethan Lit. and Hist. Rsch. Listed in: A.M.S.

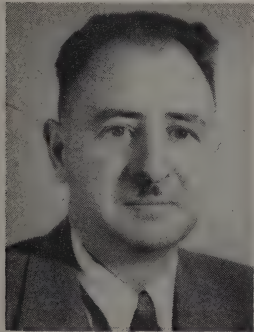
BECKS, Hermann, Prof. of Dental Med. and Chmn. Div., Hooper Foundation, Univ. of Calif., Med. Center, San Francisco, Calif. **HISTOPATHOLOGY AND EXPERIMENTAL BIOLOGY.**

BECKWITH, Angie M., retired, 1760 Euclid St., N. W., Washington, D. C. **BOTANY.**

BEDELL, Frederick, Prof. Emer. Physics, Cornell Univ., 1147 Lura St., Pasadena, Calif. **PHYSICS.**

BEDFORD, Clifford Levi, Instr. and Asst. Horticulturist., Dept. of Horticulture, State Coll. of Wash., Pullman, Wash. **FOOD TECHNOLOGY.**

BEDFORD, James H., Dir. of Placement, Glendale Coll., 518 Solway St., Glendale 6, Calif. **VOCATIONAL GUIDANCE AND OCCUPATIONAL RESEARCH.** b. Pittsfield, Mass., Apr. 20, 1893. s. Hiram J. and Frances (Bryant) B. Edn.: A.B., B.M.T. Valparaiso Univ., 1917; M.A., Univ. of Calif., 1928; Ph.D., Univ. of Southern Calif., 1934. m. Ruby May McLagan, Jan 10, 1921. c.: Doris Vivian; Donald Bryant; Frances Mary; Barbara Beatrice; Norman James. Exp.: Ednl. and Personnel Officer, U. S. Army; Regular Army Officer; Tchr. and Vocational, Counselor, Calif. H. S.; Dir. of Voc. Guidance, John Brown Univ., Siloam Springs, Ark.; Dir. of Placement, Glendale Coll., Glendale, Calif. Hon. Pos.: Pres., Soc. for Occupational Rsch.; Pres., Southern Calif. Vocational Guidance Assn. Mem.: Natl. Advisory Council; Amer. Assn. for Public Information; Edn. and Rsch.; Phi Delta Kappa; Soc. for Occupational Rsch.; Delta Epsilon; Amer. Legion; United Church Brotherhood. Author: Youth and the World's Work, 1938; Occupational Exploration, 1941; The Veteran and His Future Job, 1946; Your Future Job, 1950. Contrb. to: Calif. Jour. of Secondary Edn.; Calif. Indus. Edn. Mag.; Personnel and Guidance Jour. War Record: Enlisted and Commissioned Officer, U. S. Army, W.W.I. Gen. Int.: Mem., Com. on Tchr. Certification, North Central Assn. of Schl. and Coll. Special Int.: Occupational Rsch., Vocational Guidance.



BEEBE, William, Dir., Dept. Tropical Rsch., N. Y. Zoological Soc., 33 W. 67th St., N. Y., N. Y. **ECOLOGY NEOTROPICAL.**

BEEBE-CENTER, J. G., 152 Puritan Rd., Swampscott, Mass. **PSYCHOLOGY.**

BEECH, Frank A., Yale Univ., New Haven, Conn. **PSYCHOLOGY.**

BEECHER, Milton F., 50 Woodland Rd., Holden, Mass. **CERAMICS.**

BEENKEN, May Margaret, Chmn. of Math. Dept., Immaculate Heart Coll., Los Angeles, Calif. **MATHEMATICS.** b. Philadelphia, Pa., October 22, 1901. d. Henry and Sophia (Kirn) B. Edn.: Ed.B., Univ. of Calif. at Los Angeles, 1923; A.M., Univ. of Chicago, 1926; Ph.D., *ibid.*, 1928. Exp.: Teacher, Los Angeles City Schls., 1923-24; Assoc. in Mathematics, Univ. of Calif., 1924-25; Univ. Fellow in Mathematics, Univ. of Chicago, 1926-28; Hd. of Math. Dept., State Tchrs. Coll., Oshkosh, Wis., 1928-47; Dir. of Div. of Preprofessional Edn., *ibid.*, 1944-47; summer session, Univ. of Calif., 1945; Wis. Edn. Assn., Chmn. of Math. Sect.; Sec. and Chmn. of Mathematical Assn. of Amer., Wis. Sect.; Math. Assn. of Amer. Learned Soc.; Amer. Math. Soc.; Fellow of A.A.A.S.; Natl. Coun. of Tchrs. of Math. Frats.; Sigma Xi; Pi Mu Epsilon; Kappa Delta Pi; Soc. Club; Amer. Assn. of Univ. Women. Ph.D. Dissertation: Surfaces in Five-Dimensional Space. War Record: Dir. of Math. at the 96th Coll. Trng. Detachment (Aircrew) Oshkosh State Tchrs. Coll., 1943-44. Listed in: A.M.S.; Amer. Women; Who's Who on the Pacific Coast. Special Int.: Projective Differential Geometry.

BEERS, Charles Dale, Prof. of Zool., Univ. of N. C., Chapel Hill, N. C. **PROTOZOOLOGY.**

BEESKOW, Herbert Charles, Asst. Prof. of Botany and Biol. Sciences, Mich. State Coll., East Lansing, Mich. **BOTANY, PLANT PHYSIOLOGY.**

BEGEMAN, Louis, Emer. Prof. of Physics, 2315 Iowa St., Cedar Falls, Ia. **ELECTRICITY AND ATOMIC SCIENCE.** b. Mar. 1, 1865, Evansville, Ind. s. Henry Begeman and Elizabeth (Schmoll) B. Edn.: B.S., Univ. of Mich., 1889; M.S., *ibid.*, 1907; Ph.D., Univ. of Chicago, 1910. m. Mary Alice Whitworth of Victor, Ia., 1915. d. Henry and Georgiana Whitworth. c.: Myron Louis; Florence. Exp.: Supt. of Schls., Corydon, Ia., 1889-95; Parson's Coll., Fairfield, Ia., 1895-99; Prof. Physics, Ia. State Tchrs. Coll., 1899-1909; Hd. of Dept. of Physics and Chem., Cedar Falls, Ia., 1909-35; Prof. of Physics, *ibid.*, 1935—. Hon. Pos.: Pres. of Ia. Acad. of Sci., 1911-12. Mem.: Ia. Acad. of Sci.; A.A.A.S.; Mason. Author: Principles of Physics, 1912; Everyday Physical Sci., 1920; Lab. Exercises in Physical Sci., 1935. Title of Ph.D. Dissertation: The Charge of the Electron. Travel: Europe; Mexico; Cuba.

BEGEMAN, Myron Louis, Prof. of Mech. Engrng., The Univ. of Texas, Austin, Texas. **MECHANICAL ENGINEERING.** b. September 9, 1893, Corydon, Iowa. s. Louis and Magdelene (Thuman) G. Edn.: B.Me., B.A., Univ. of Mich., 1915; M.S., in Engr., *ibid.*, 1922. m. Hazel L. Flagler, July 15, 1919. d. Mr. and Mrs. I. L. Flagler. c.: Robert Louis and Jean Lucile. Exp.: Asst. Supt. Ransom and Randolph Co., Toledo, Ohio, 1917; Instr. Univ. of Mich. 1921-23, Asst. Prof. Mech. Engr., *ibid.*, 1923-24; Chief Mech. Engr. Carey and Esselstyn, Detroit, 1924-25; Chief Mech. Engr., Miss. Glass, Co., St. Louis, 1925-32; Assoc. Prof. Mech. Engr., Univ. of Tex., 1932-38; Prof. of Mech. Engr., *ibid.*, 1938—. Hon. Pos.: Chmn. of Dept. of Mech. Engr., Univ. of Texas, 1947-49; Mem. Natl. Edn. Comm., A.W.S., 1948—; A.S.T.E., 1949—. Mem.: A.S.M.E.; A.S.M.; A.S.T.E.; A.W.S.; A.A.A.S.; Tex. Acad. Sci.; A.S.E.E.; Tau Beta Pi; Pi Tau Sigma; Sigma Xi; Phi Mu Alpha; Rotary; Mason. Author: Manufacturing Processes, 1942; Revised 1947, 1952; Consulting Edit., Production Handbook, 1946. Contrb. to: Mech. Engr.; The Welding Jour. War Record: Air Corps, 1917; Lt. Col., Ord. Dept., Southwestern Proving Grounds, 1942-44. Travel: Europe, Mex., Panama. Hobbies: Golf. Listed in: Who's Who in Amer.; Who's Who in Engrng.; Who's Who in the Southwest.

BEHLE, William Harroun, Prof. and Chmn., Dept. of General Biol., Univ. of Utah, Salt Lake City 1, Utah. **ORNITHOLOGY**; **VERTEBRATE ZOOLOGY**. b. Salt Lake City, Utah, May 13, 1909. s. Augustus Calvin and Daisy May (Harroun) B. Edn.: A.B., Univ. of Utah, 1932; M.A., *ibid.*, 1933; Ph.D., Univ. of Calif. at Berkeley, 1937. m. Dorothy Davis, July 11, 1934. c.: Howard William; Raymond David. Exp.: Tchng. Fellow in Zool., Univ. of Utah, 1932-33; Rsch. Asst., Museum of Vertebrate Zool., Univ. of Calif., 1933-37; Instr., Univ. of Utah, 1937-41; Asst. Prof., *ibid.*, 1941-46; Assoc. Prof., *ibid.*, 1946-50; Chmn., Dept. General Biol., *ibid.*, 1948—; Prof., *ibid.*, 1950—. Mem.: Soc. Study of Evolution; Wildlife Soc.; Soc. Systematic Zool.; Amer. Ornithologists' Union; Cooper Ornithol. Soc.; Wilson Ornithol. Soc.; Ecological Soc. Amer.; Utah Audubon Soc.; Utah Hist. Soc.; Biol. Soc. of Wash. Author: Distribution and Variation of the Horned Larks (*Otocoris alpestris*) of Western N. Amer., 1942; Birds of Pine Valley Mountain Region, Southwestern Utah, 1943; Biography of Augustus C. Behle, M.D., with an Account of the Early Hist. of St. Mark's Hosp., Salt Lake City, Utah, 1948. Contrb. to: The Condor; The Auk; The Wilson Bull.; Proc. Utah Acad. Sci., Arts, Letters; Great Basin Naturalist; Jour. Mammalogy; Bull. Univ. of Utah; Bird-Banding; Proc. Biol. Soc. of Wash.; Jour. Wash. Acad. Sci. Special Int.: Geographic Variation and Distribution of Birds; Systematic Ornithol.; Birds of Utah.

BEHNEY, Charles Augustus, Assoc. Obstetrics and Gynecology, Univ. of Pa. Med. Schl., 3722 Chestnut St., Philadelphia, Pa. **MEDICINE**.

BEHRE, Charles Henry, Jr., Prof. of Geol., Columbia Univ., N. Y., N. Y. **ECONOMIC GEOLOGY**.

BEHRE, Ellinor H., Prof. of Zool., La. State Univ., Baton Rouge, La. **ZOOLOGY**.

BEHRE, Jeanette Allen, Assoc. Dept. of Biochem., Coll. of Physicians and Surgeons, 630 W. 168th St., N. Y., N. Y. **BIOCHEMISTRY**.

BEHRENS, Otto Karl, Rsch. Chem., Lilly Rsch. Labs., Indianapolis, Ind. **BIOCHEMISTRY**. b. Aug. 22, 1911, Evansville, Ind. s. Otto Behrens and Anna Katharine (Deutsch) B. Edn.: A.B., DePauw Univ., 1932; M.A., Univ. of Ill., 1933; Ph.D., *ibid.*, 1935. m. Effie Joan Roberts of Fort Wayne, Ind., 1935. d. Mr. and Mrs. Thos. D. Roberts. c.: Otto Karl; Effie Joan. Exp.: Rsch. Asst., Geo. Wash. Univ., 1935-37; Asst., Rockefeller Inst. for Med. Rsch., 1937-39; Lalor Fellowship, Univ. of Cambridge, Eng., 1939; Cornell Univ. Med. Coll., 1939-40; Dir., Biochem. Rsch., Lilly Rsch. Labs. Mem.: Phi Beta Kappa; Sigma Xi; Phi Kappa Phi; Phi Eta Sigma; Phi Lambda Upsilon; Amer. Chem. Soc.; Harvey Soc.; N. Y. Acad. of Sci.; Ind. Acad. of Sci.; Soc. Expt. Biol. and Med.; Amer. Soc. Biol. Chemists; Beta Theta Pi; Gamma Alpha. Contrb. to: Jour. Biol. Chem.; Sci.; Cancer Rsch.; Ergeb. Physiol. Biol. Chem. Exp. Pharmacol.; Arch. Biochem.; Jour. Bact. Title of Ph.D. Dissertation: Investigations on a Hitherto Unrecognized Component of Proteins. Listed in: A.M.S.; Who Knows—and What. Special Int.: Antibiotics, Viruses, Enzymes.

BEIJ, K. Hilding. **GEOPHYSICS**.

BEINHART, Ernest George, Sr. Tobacco Technologist, Eastern Reg. Rsch. Lab., U. S. D. A., 705 Wyndmoor Ave., Philadelphia, Pa. **TOBACCO TECHNOLOGY**.

BEKKEDAH, Norman, Sr. Rubber Technologist, National Bureau of Standards, 4825 45th St., N. W., Washington, D. C. **CHEMISTRY**.

BELCHER, Bascom Anthony, Assoc. Agronomist in Chg., U. S. Sugar Plant Field Station, Lakeshore Dr., Canal Point, Fla. **SUGARCANE AGRONOMY**.

BELCHER, Donald Ray, Treas., Amer. Telephone and Telegraph Co., 195 Broadway, N. Y., N. Y. **FINANCE**.

BELIREUS, Otto K., Eli Lilly & Co., Indianapolis, Ind. **BIOLOGICAL CHEMISTRY**.

BELKNAP, Ralph L., Assoc. Prof., Univ. of Mich., Ann Arbor, Mich. **PHYSICAL GEOLOGY AND METEOROLOGY**.

BELL, Alfred Hannam, Geologist and Hd., Oil and Gas Div., Ill. State Geol. Survey, Urbana, Ill. **PETROLEUM GEOLOGY**.

BELL, Eric Temple, Calif. Instr. of Tech., Pasadena, Calif.

BELL, James Edgar, Visiting Prof. of Chem., Rollins Coll., 3438 Vosberg St., Pasadena, Calif. **CHEMISTRY**.

BELL, Raymond Martin, Prof. of Physics, Wash. and Jefferson Coll., Washington, Pa. **PHYSICS**.

BELLAMY, B. C., Lamont, Wyo. **MATHEMATICS**.

BELLER, William Charles, Chf. Engr., Televisor Co., 815 Madison Ave., N. Y., N. Y. **PHYSICS**.

BELLIS, Carroll Joseph, Surgeon, 303 Professional Center Bldg., 125 E. Eighth St., Long Beach 13, Calif. **PHYSIOLOGY**; **SURGERY**. b. Shreveport, La., May 11, 1908. s. Joseph E. and Rose (Bloomer) B. Edn.: B.S., Univ. of Minn., 1930; M.S., Physiology, 1932; Ph.D., *ibid.*, 1934; M.D., *ibid.*, 1936; Ph.D., Surgery, *ibid.*, 1941. m. Mildred Darmody. c.: Joseph; David. Exp.: Fellow in Physiol., Univ. of Minn., 1930-34; Chmn. of Staff, Harbor General Hosp., Los Angeles Co., Sr. Attending Surgeon, Harbor General Hosp., Resident in Surgery, Univ. of Minn., 1937-41; Instr. in Surgery, Univ. of Minn. Med. Schl., 1941; Pres. of Staff, Long Beach General Hosp., Los Angeles, Co., 1952—; Consultant in Surgery, San Pedro Community Hospital, 1948—; Active Staff, St. Mary's Community, and Seaside Memorial Hospitals, Long Beach, Calif. Mem.: Diplomate, Amer. Bd. of Surgery; Fellow, Amer. Coll. of Surgeons; Fellow, Internatl. Acad. of Proctology; Fellow, A.M.A.; A.A.A.S.; Fellow, Internatl. Coll. of Surgeons; Los Angeles Surgical Soc.; Sigma Xi. Contrb. to: Proc. Soc. Exptl. Biol. and Med.; Amer. Jour. Physiol.; Jour. Lab. Clin. Med.; Surgery; etc. War Record: Consultant in Surgery to the Surgeon General, U. S. Army, 1941-45. Special Int.: Plasma Proteins; Blood Coagulation; Respiratory Metabolism; Reaction Time; Muscle Metabolism; Renal Secretion; Venous Circulatory Time; Bowel Obstructions; Physical Factors in Inflammation; Varicose Veins; Skin Temperatures; Blood Sludging; Immediate Ambulation; Pilonidal Cysts.

BELLOWS, Roger Marion, Prof. of Business Admin., Wayne Univ., Detroit, Mich. **BUSINESS AND INDUSTRIAL PSYCHOLOGY**.

BELT, Arthur Elmer, Lectr. in Geol., Grad. Schl., Univ. of Calif., 1893 Wilshire Blvd., Los Angeles, Calif. **UROLOGY**.

BELT, Elmer, Dir., Elmer Belt Urologic Group, 1893 Wilshire Blvd., Los Angeles 57, Calif. **UROLOGY**. b. Chicago, Ill., Apr. 10, 1893. s. Charles Elmer and Minnie (Drier) B. Edn.: B.A., Univ. of Calif. at Berkeley, 1916; M. A., *ibid.*, 1917; M.D., *ibid.*, 1920. Hon. Deg.: LL.D., Pacific Coll. of Law, Los Angeles. m. Mary Ruth Smart, June 9, 1918. c.: Charles Elmer; Bruce Gregory.



Exp.: Assoc. in Urology, Univ. of Calif., San Francisco, Calif., 1920; Resident in Urology, *ibid.*, 1921; Asst. Resident in Gen. Surgery, Peter Bent Brigham Hosp., Boston, Mass., 1922; Dir., Elmer Belt Urologic Group, Los Angeles, Calif., 1922—. Hon. Pos.: Mem., Calif. State Bd. of Public Health, 1940—; Mem., Exec. Group, Citizens Com. of Los Angeles County for Control of Air Pollution; Dir., Calif. Safety Council, Inc., 1953. Mem.: Pres., Pan-Amer. Med. Assn.; Pres., Amer. Eugenics Soc.; Pres., Internatl. Med. Soc.

of Los Angeles; Fellow, Amer. Coll. of Surgeons; Amer. Bd. of Urology; A.M.A.; Amer. Urologic Assn.; Internatl. Med. Museum Assn.; Los Angeles Symposium Soc.; Bd. of Trustees, Los Angeles Co. Med. Assn., 1945-50; Bd. of Dirs., Cancer Rsch. Soc. of Calif.; Assoc., Calif. Inst. of Tech.; Fellow, U. S. Chapter, Internatl. Coll. of Surgeons; Mem., U. S. Com., Inc. of World Med. Assn.; Phi Chi; Lambda Chi Alpha; Sigma Xi; Phi Sigma; Phi Beta Kappa; etc. Contbr. to: Amer. Jour. Physiol.; Jour. A. M. A.; Jour. Urol.; Arch. Surgery; etc. War Record: Pvt. U. S. Army, World War I, Citation of Merit Pneumonia Epidemic of 1918. Gen. Int.: Awarded Italy's Silver Star of Solidarity for Rsch. and Studies Dealing with the Life and Works of Leonardo da Vinci, 1952; Staff or Attending Urologist: Hosp. of the Good Samaritan, Hollywood Presby. Hosp., Cedars of Lebanon Hosp., Queen of Angels, St. John's Hosp., Children's Hosp., Orthopaedic Hosp., Physicians and Surgeons Hosp. Special Int.: Renal Function; Surgical Problems Relating to Urology.

BELTRAN, Enrique, Chf., Protozool. Lab., Instituto de Enfermedades, Tropicales and Prof. Zool., Univ. of Mex., Apartado Postal 1079, D. F., Mex. PROTOZOOLOGY.

BEMISDERFER, Franklin R., Acting Prin., Burnell and Fairmont Jr. High Schls., 2251 Brookway Rd., Cleveland Heights, Cleveland, Ohio. PHYSICAL SCIENCES.

BENBROOK, Edward Antony, Prof. and Hd. Dept., Veterinary Pathol., Iowa State Coll., Ames, Iowa. VETERINARY PATHOLOGY AND PARASITOL-OGY.

BENDA, Clemens Ernst, Dir. of Rsch. and Clinical Psychiatry, Walter E. Fernald State Schl., Waverley, Mass. Instr. Neuropathology, Harvard Med. Schl., Boston, Mass. Home Address: 27 Hopkins Road, Arlington, Mass. NEUROPSYCHIATRY. b. Berlin, Germany, May 30, 1898. s. Carl and Louise (Rhode) B. Edn.: M.D., Univ. of Berlin, 1922. m. Elizabeth Knaack, Mar. 8, 1927. c.: George and Christian. Exp.: Asst. Psychiatrist, Psychiatric Univ. Clinic, Heidelberg, Germany, 1922-23; Asst. Psychiatrist, Cantonal Hosp., Herisau, Switzerland, 1923-24; Psychiatrist, Sanitarium Dr. Binswanger, Kreuzlingen, Switzerland, 1924-28; Neurologist, Hosp. Barnbeck, Hamburg, Germany, 1928-29; Assoc. Neurologist, Red Cross Hosp., Berlin, Germany, 1929-35; Rsch. Fellow in Neuropathol., Harvard Med. Schl., 1936-40; Instr., ibid., 1940—; Rsch. Fellow in Neurol. and Psychiatry, Mass. General Hosp., Boston, Mass., 1936-37; Clinical Dir., Wrentham State Hosp., 1936-47; Dir., Child's Unit, Metropolitan State Hosp., 1947; Dir. of Rsch. and Clinical Psychiatry, W. E. Fernald State Schl., Waverley, Mass., 1947—. Hon. Pos.: Pres., Amer. Assn. of Neuropathologists. Mem.: Amer. Neurol. Assn.; Fellow, Amer. Psychiatric Assn.; Mass. Med. Soc.; Amer. Assn. of Pathologists; A.A.A.S.; Boston Soc. of Psychiatry and Neurol.; Harvard Club of Boston; etc. Author: Mongolism and Cretinism, 2nd edition 1949; Developmental Disorders of Mentation and Cerebral Palsies, 1952. Contbr. to: Arch. of Neurol. and Psychiatry; Amer. Jour. Pathol.; Amer. Jour. Psychiatry; Jour. A.M.A.; Amer. Jour. Mental Deficiency; Internatl. Record of Med.; etc. Gen. Int.: Psychobiol. Rsch. in Disorders of Mentation Like Mongolism, Cerebral Palsies, Schizophrenia; Contributions to Existentialism and Psychodynamic Psychiatry. Special Int.: The Biol. of the Human Mind; The Meaning of Language and Development of Conscience.

BENDER, Carl B., 116 N. Second Ave., New Brunswick, N. J. AGRICULTURE.

BENDER, Harold Herman, Prof. of Indo-Germanic Philology, Princeton Univ., Princeton, N. J. INDO-EUROPEAN PHILOLOGY.

BENDER, Helen Fagan, SPEECH AND HEARING.

BENDER, Howard L., 7 Carteret St., Bloomfield, N. J. CHEMISTRY.

BENDER, Harry A., Assoc. Prof. of Math., Univ. of Rhode Island, Kingston, R. I. MATHEMATICS. b.



Uhrrichsville, Ohio, Oct. 6, 1895. s. John and Minnie (Hite) B. Edn.: A.B., Ohio Univ., 1918; M.A., Univ. of Ill., 1921; Ph.D., ibid., 1923. m. Agnes L. Harris, June, 1919. c.: Roger H.; Robert L.; Richard A. Exp.: Prof. of Math., Muskingum Coll., 1919-20; Asst. in Math., Univ. of Ill., 1920-23; Instr. in Math., ibid., 1923-25; Assoc. in Math., ibid., 1925-28; Asst. Prof. of Math., Univ. of Akron, 1928-36; Assoc. Prof. of Math., ibid., 1936-44; Assoc. Prof. of Math., Univ. of Rhode Island, Kingston, R. I., 1944—. Mem.: Amer. Math. Assn.; Amer. Soc. for Engrng. Edn.; Sigma Xi; Phi Kappa Phi. Author: Engrng. Math., 1941; Coll. Algebra, 1950. Contbr. to: Amer. Jour. Math.; Amer. Math. Monthly; Trans. Annals of Math. War Record: World War I. Special Int.: Pure Math.

BENDER, James F., Dir., Natl. Inst. for Human Relations, 545 5th Ave., N. Y. 17, N. Y. PSYCHOLOGY. b. Dayton, Ohio, Apr. 6, 1905. s.



Fred J. and Bertha (Zimmerman) B. Edn.: B.S., Columbia Univ., 1928; Ph.D., ibid., 1939. m. Anne Parsons, June 25, 1925. Exp.: Dir., Queens Speech and Hearing Serv. Center, N. Y. C., 1938-43; Adj. Prof. of Psychol., Brooklyn Poly. Inst., Brooklyn, N. Y., 1928-42; Dir., Natl. Inst. for Human Relations, N. Y. C., 1942—; Lectr., Columbia Univ., 1950—. Hon. Pos.: Exec. Comm., Columbia Univ., Alumni Federation, 1951—. Mem.: Amer. Psychol. Assn.; Amer. Speech and Hearing Assn.; N. Y. Soc. of Clin. Psychol.; A.A.A.S.; Sigma Chi. Author: Victory Over Fear, 1952; Make Your Business Letters Make Friends, 1952; Tech. of Exec. Leadership, 1951; How to Sleep, 1950; How to Talk Well, 1949; Personality Structure of Stuttering, 1939. Contbr. to: Scientific Monthly; Jour. of Amer. Speech and Hearing Assn. Special Int.: Speech; Semantics; Communication in Business.

BENDER, John Frederick, Prof. of Schl. Admin., Faculty Exchange, Univ. of Okla., Norman, Okla. EDUCATION.

BENDER, Maurice, Asst. Prof. of Biol., Rutgers Univ., Coll. of Pharmacy, Newark, N. J. BIO-CHEMISTRY, TOXICOLOGY, NUTRITION.

BENDER, Raymond Clayton, Rsch. Chemist, Norwich Pharmaceutical Co., Norwich, N. Y. NUTRITION, BIOCHEMISTRY.

BENEDEK, Tibor, 1706 E. 56th St., Chicago, Ill. DERMATOLOGY, SYPHILOLOGY.

BENEDETTI-PICHLER, Queens Coll., New York, N. Y. MICROCHEMISTRY.

BENEDICT, Harry C. H., Metallurgical Engr., Calumet and Hecla Consolidated Copper Co., Calumet, Mich. METALLURGY.

BENEDICT, Manson, Dept. of Chem. Engrng., Mass. Inst. of Tech., Cambridge, Mass. CHEMICAL ENGINEERING—GASEOUS DIFFUSION.

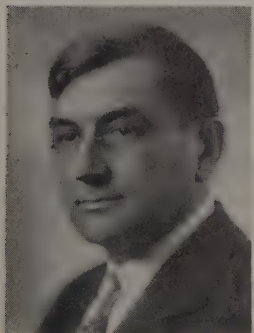
BENEDEK, Tibor, Asst. Clinical Prof. of Dermatol. and Syphilology, Stritch



Schl. of Med., Loyola Univ., 25 E. Washington Street, Chicago 2, Ill. **DERMATOLOGY, MEDICAL MYCOLOGY AND BACTERIOLOGY.** b. Nagykoros, Hungary, May 8, 1892. s. Andreas and Flora (Venetianer) B. Edn.: M.D. Med. Faculty, Univ. of Budapest, 1919, M.D. Med. Faculty, Univ. of Leipzig, Germany, 1922. m. Therese Friedmann, 1919. c.: Thomas; Judith. Exp.: Clinical Asst. in Dermatol. Dept. and Instr. Med. Mycology in Chg. of Lab. for Mycological Rsch., Northwestern Univ., 19-

36-46; Attending Dermatologist, The Catherine Booth Hosp. and Clinics, The Salvation Army Med. Center and St. Catherine's Hosp.; Asst. Clinical Prof. of Dermatol. and Syphilology, Stritch Schl. of Med., Loyola Univ., Chicago, Ill.; Editor, Mycopathologia and Mycologia Applicata. Hon. Pos.: Hon. Mem., Association des Diplomes de Microbiologie, Nancy, France. Mem.: Fellow, A.A.A.S.; Amer. Acad. Dermatol. and Syphilography; Fellow, A.M.A.; Soc. Investigative Dermatol.; Mycological Soc. Amer. Contrb. to: Mycopathologia; Jour. Tropical Med.; Mycologia; Chronica Botanica; Jour. Investigative Dermatol.; etc. War Record: Major to Lt. Col., M. C., U. S. Army, World War II, 1943-46. Special Int.: Dermatology, Medical Mycology and Bacteriol.

BENEDICT, Ralph Curtiss, Prof., Biol. Dept., Brooklyn Coll., Brooklyn 10, N. Y.; 2214 Beverly Rd., Brooklyn 26, N. Y.



BOTANY; FERNS; HISTORY OF SCIENCE; SCIENCE EDUCATION. b. Syracuse, New York, June 14, 1883. s. Abel Carter and Lizzie Miranda (Parmelee) B. Edn.: Ph.B., Syracuse, 1906; Ph.D., Columbia Univ., 1911. m. Edna Diack Austin of Brooklyn, Sept. 2, 1911. d. Rich. S. Austin and Mary E. Diack. c.: Ruth Austin (Mrs. B. H. Davis); Kathryn Parmelee (Mrs. R. M. Eastman); Richard Austin; Albert Carter. Exp.: N. Y. Bot. Garden, 1906-11;

Fordham Univ., 1908-09; New York Univ., 1908-10; New York City High Schools, 1912-31; Brooklyn Coll., 1931-; Director, Brooklyn Coll. Farm Labor Project, 1942-44; Brooklyn Botanical Garden, Resident Investigator, 1915 to date; Founder and Editor, Amer. Fern Jour., 1910 (Editor to date). Mem.: A.A.A.S. (Fellow); Hist. of Sci. Soc.; Torrey Bot. Club; Pres. Amer. Fern Soc.; Amer. Assn. Univ. Prof.; Amer. Biol. Tchrs. Assn.; N. Y. Assn. Biol. Tchrs. Author: Rsch. and Popular Articles, 1907 to date; H. S. Biol., 1938, with Knox, W. W., and Stone, G. S.; Life Sci., 1941, *ibid.*; Maravilhas da Biologia (Rio de Janeiro), 1949, *ibid.*; Brooklyn Bridge to Morrisville, 1944. Contrb. to: Amer. Jour. Bot.; Bull. Torrey Bot. Club; Sci.; Schl. Sci. and Math.; Jour. Hered.; Gen.; Schl. and Soc.; Amer. Fern Jour. Ph.D. Dissertation: Genera of the Fern Tribe, Vittariae. Gen. Int.: Utilization of Students as Emergency Farm Labor, World Wars I and II; Promotion of Program for Conservation of Native Plants. Hobbies: Log Cabin Tools and Crafts, especially Carpentry and Cooking. Listed in Who's Who in Amer.; Who Knows—and What; M.S. Special Int.: Ferns; Taxonomy; Sci. Edn.

BENEDICT, William Lemuel, Hd. Section of Ophthalmology, Mayo Clinic, Rochester, Minn. **OPHTHALMOLOGY.**

BENFIELD, A. E., Visiting Lectr. in Engrng., Sciences and Applied Physics, Harvard Univ., Westford Rd., R. F. D., Concord Mass. **PHYSICS.**

BENFORD, Frank, Rsch. Assoc., Rsch. Lab., General Electric Co., 1643 Rugby Rd., Schenectady, N. Y. **OPTICS.**

BENGSTON, Nels A., Emer. Prof. of Geography and Dean of Jr. Div., Univ. of Nebr., Lincoln 8, Nebr. **ECONOMIC GEOGRAPHY.**

BENHAM, Rhoda W., Assoc. Prof. of Dermatology, Columbia Univ., N. Y., N. Y.

BENIOFF, Hugo, Calif. Inst. of Tech., Pasadena, Calif. **GEOPHYSICS AND SEISMOLOGY.**

BENJAMIN, H. A., Amer. Can Co. Rsch. Lab., Maywood, Ill. **HEAT STERILIZATION OF FOODS.**

BENJAMIN, John Allison, Jr., Asst. Prof. of Urol. Surgery, Univ. of Rochester, Schl. of Med. and Dentistry, Rochester, N. Y. **UROLOGY.** b. Salmon Idaho, June 10, 1906. s. John Allison and Martha (Eichwald) B. Edn.: A.B., Univ. of Calif. at Los Angeles, 1930; M.D., Johns Hopkins Univ., 1934. m. Mae McElman, 1942. c.: Suzanne; Linda; John, III and Sallie. Mem.: Amer. Urol. Assn.; A.A.A.S.; Amer. Assn. of Hist. of Med.; Amer. Med. Assn.; Acad. of Med.; Amer. Soc. for Study of Sterility; Rochester Acad. of Sci.; Hist. of Sci. Soc. Contrb. to: Jour. of Urol.; Surgery; Bull. Hist. of Med.; Jour. Hist. of Med.; Sci.; N. Y. State Med. Jour. Special Int.: Endocrinol., Urinary Calculi Anatomy, Congenital Malformations in Urinary Tract and Hypospadias. Radioactive P³² and Au¹⁹⁸ in Relation to Stones and Neoplasms; Hist. of Med.

BENJAMIN, Julien Emil, Assoc. Prof. of Med., Univ. of Cincinnati Med. Coll., Cincinnati, Ohio. **INTERNAL MEDICINE.**

BENNER, Raymond C., Consulting Engr., 460 College Ave., Niagara Falls, N. Y. **ENGINEERING.**

BENNER, Thomas Eliot, Prof. of Coll. Edn., Univ. of Ill., 812 Delaware Ave., Urbana, Ill. **EDUCATIONAL ADMINISTRATION.**

BENNER, Walter M., Rsch. Assoc., Acad. Natural Sciences, 5636 Loretta Ave., Philadelphia, Pa. **BOTANY.**

BENNETT, A. Lee, Gladding, McBean and Co., 2901 Los Feliz Blvd., Los Angeles 39, Calif. **CERAMICS.**

BENNETT, Albert Arnold, Prof. of Math., Brown Univ., Providence, R. I. **MATH., BALLISTICS.** b. June 2, 1888, Yokohama, Japan. s. Albert Arnold and Mela Isabelle (Barrows) B. Edn.: A.B., 1910, A.M., 1910, Sc.M., 1911, Brown Univ., Ph.D., Princeton, 1915; Study, Univ. of Göttingen, Paris, Bologna and Chicago. m. Velma McAfee Ely of Corsicana, Tex., June 17, 1922. d. A. Cicero and Margaret McAfee. c.: Ray Aubrey; Richard (dec); Choloris Ely Intelehouse Stifler; James Sidney Ely; Betsy Bennett; Miller Davis. Exp.: Instr., Brown Univ., 1910-11; Instr., Princeton Univ., 1914-16; Adj. Prof., Univ. of Tex., 1916-21; Assoc. Prof., 1921-25; Prof. and Hd. Dept., Lehigh Univ., 1925-28; Prof., Brown Univ., 1927-; U. S. Army, 1917-19; R.O.T.C., Capt., C.A.R.C., Capt. O.R.C., Civ. Expert Ord. Dept., 1919-21, 1942, '46-; U. S. Army, Maj., Ord., 1942-46; Lt. Col., 1946-49; Engrn. G. E. Co., 1925-29; Ed., Coll. Math., Prentice Hall, 1939-; Mem.: Phi Beta Kappa; Sigma Xi; A.M.S.; Amer. Acad. Arts Sci.; Amer. Assn. Adv. Sci.; M.A.A.; Natl. Council Tchrs. Math.; Asst. Tchrs. Math. N. E.; A.A.U.P.; A.S.E.E.; I.M.S.; Standards Comm., A.M.E., Corp. R. I. Schl. Dis.; Delta Upsilon; etc. Author: Tables for Exterior Ballistics, 1922; Introd. to Ballistics, 1922; Formal Logic (with C. A. Baylis), 1939. Contrb. to: Math. Jour. Ph.D. Dissertation: An Algebraic Treatment of Closure. War Record: (See above); Victory Medals 1 and 2; Pacific Ribbon; Civilian Citation by Army; Army Citation. Travel: Europe; England; Japan; N. Amer. Listed in: W.W.; W. W. in the East; W. W. and What; Poggendorff; A.M.S.; W. W. in Engrng.; Providence Blue Book.

Special Int.: Statistics, Logic, Modern Algebra, Numerical Methods.

BENNETT, Arthur Lawrence, Prof. of Physiol. and Pharmacol., Univ. of Nebr. Coll. of Med., 42nd and Dewey St., Omaha, Nebr. **PHYSIOLOGY**.

BENNETT, Bailey, Prin. Chemist, Resin-Rubber Div., Battelle Memorial Inst., 505 King Ave., Columbus 1, Ohio. **ORGANIC CHEMISTRY; ELASTOMERS**. b. Waynesfield, Ohio, Nov. 27, 1916. a. Stephen A. and Clara (Bailey) B. Edn.: B.Sc., Ohio State Univ., 1947; M.Sc., *ibid.*, 1948. m. Marjorie Hewitt, Sept. 21, 1946. c.: Barbara; Karl. Exp.: Rsch. Asst., Owens-Corning Fiberglas Corp., Newark, Ohio, 1944-45; Rsch. Asst. and Rsch. Fellow, Ohio State Univ. Rsch. Foundation, Columbus, Ohio, 1945-48; Rsch. Assoc., *ibid.*, 1949-51; Prin. Chemist, Resin-Rubber Div., Battelle Memorial Inst., Columbus, Ohio, 1952—. Mem.: Amer. Chem. Soc.; A.A.A.S.; Sigma Xi; Scientific Rsch. Soc. of Amer.; Southern Ohio Rubber Group. Contrb. to: India Rubber World; Rubber Age; Rubber Age and Synthetics. Special Int.: Synthesis of Organo-Silicon Compounds and Polynitro Biphenyls; Emulsion Polymerization of Synthetic Elastomers; Rubber Latex and Foam Rubber.

BENNETT, Carlyle Wilson, Sr. Pathologist, Div. Sugar Plants, U. S. D. A., Box 31, Riverside, Calif. **PLANT PATHOLOGY**.

BENNETT, Clarence Edwin, Prof. and Hd., Dept. of Physics, Univ. of Maine, Orono, Maine. **PHYSICS**.

BENNETT, Donald Menzies, Prof. of Phys.; Hd. Engrng. Phys., Speed Sci. Schl., Univ. of Louisville, Louisville 8, Ky. **PHYSICS; X-RAYS AND RADIO-ACTIVITY**. b. Nov. 24, 1897, Milwaukee, Wis.; s. Wm. Chase and Jean Louise (Menzies) B. Edn.: B.A., Univ. of Wis., 1921; M.A., *ibid.*, 1922; Ph.D., *ibid.*, 1926. m. Irene Schubring of Madison, Wis., 1922; d. Christian and Amelia Schubring; c.: Robert Menzies. Exp.: Asst. in Phys., Univ. of Wis., 1920-22, 1924-26; Instr. in Phys., Univ. of Colo., 1922-24; Asst. Prof. of Phys., Univ. of Louisville, 1926-29; Assoc. Prof., 1929-43; Prof., 1943—; Tech. Aide to Dir., Radiation Lab., M.I.T., 1943; Rsch. Participant, Oak Ridge Inst. of Nuclear Studies, Summer, 1950. Exec. Comm., A.A.P. T., 1946-50. Mem.: Amer. Phys. Soc.; A.A.A.S.; Amer. Acoustical Soc.; A.S.E.E.; A.A.U.P.; A.A.P. T.; Ky. Acad. of Sci.; Ky. Assn. Phys. Tchrs.; Phi Beta Kappa; Sigma Tau; Phi Mu Alpha; Sigma Xi; Phi Kappa Tau. Author: Fundamentals of Phys., 1936. Ph.D. Dissertation: X-Ray K Absorption Limit of Calcium Halides. War Record: S.A.T.C., Univ. of Wis., 1918. Hobbies: Photography; Music. Listed in: Who's Who in Engrng.; A.M.S.; Who Knows—and What. Special Int.: Musical Acoustics.

BENNETT, Dwight G., 204 Ceramics Bldg., Univ. of Ill., Urbana, Ill. **CERAMICS**.

BENNETT, Frederick William, Assoc. Prof. of Dairying, Univ. of Ga., Athens, Ga. **DAIRY BACTERIOLOGY; MILK SANITATION; DAIRY MANUFACTURES**. b. Apr. 13, 1900, Commerce, Ga. s. Chas. Lester and Evie Mildred (Nix) B. Edn.: B.S.A., Univ. of Ga., 1919; M.S. Iowa State Coll., 1932; Ph.D., *ibid.*, 1950. m. Lillian Mae Cate of Aetahns, Ga., Dec. 21, 1921. d. Mr. and Mrs. Geo. W. Cate. c.: Robert Lester; Bonnie Jean (Mrs. R. W. Jeter). Exp.: Assoc. Prof. of Dairy Husb., Univ. of Ga., 1920—; Emergency Agril. Asst., Agril. Adjustment Admin., 1934; Extension Dairyman, Ga. Agri. Ext. Service, 1935; Butter and Cheese Grader, U.S.D.A., part-time, 1941—. Mem.: Bapt. Ch.; Y.M.C.A.; Alpha Zeta; Lambda Gamma Delta; Phi Kappa Phi; A.D.S.A.; A.A.A.S.; A.A.U.P.; Ga. Acad. of Sci., Fellow; Ga. Edn. Assn. Contrb. to: Jour. of Dairy Sci.; So. Dairy Prod. Jour. Ph.D. Dissertation: Action of Certain Virucidal Agents on Lactic Streptococcus Bacteriophage. War. Record: Pvt., S.A.T.C., U. S. Army, 1918. Listed in: A.M.S. Special Int.: Dairy Sanitation, Lactic Streptococcus Bacteriophage, Coliform Bacteria in Dairy Products, Bacteriology of Bovine Mastitis.

BENNETT, George Kettner, Pres., Psychol. Corp., 522 Fifth Ave., N. Y., N. Y. **PSYCHOLOGY**. b.

N. Y., N. Y., Feb. 26, 1904. s. Walter Taylor and Henriette (Kettner) B. Edn.: A.B., Yale Univ., 1928; Ph.D., *ibid.*, 1935. m. Helen Ann (Swan) B. c.: George Kettner; Deborah Swan. Exp.: Dir., Test Div. of the Psychol. Corp., N. Y., N. Y., 1936-44; Vice-Pres. and Mem., Bd. of Dirs., *ibid.*, 1944-47; Pres., *ibid.*, 1947—. Hon. Pos.: Fellow, Amer. Psychol. Assn.; Diplomate in Industrial Psychol., Amer. Bd. of Examiners in Professional Psychol. Mem.: N. Y. State Assn. for Applied Psychology; Natl. Com. on the Aging of the Natl. Social Welfare Assembly; State Assn. for Applied Psychol.; Sigma Xi. Contrb. to: Jour. Applied Psychol.; Personnel Psychol.; Jour. Exptl. Edn.; Personnel Jour.; Jour. Ednl. Psychol.; Educational and Psychol. Measurement. Special Int.: Gerontology; Psychometrics.

BENNETT, Granville Allison, Prof. of Pathol. and Hd. of Dept., Univ. of Ill., Coll. of Med., Chicago, Ill. **PATHOLOGY**.

BENNETT, Harry, Technical Dir., 26 Court St., Brooklyn, N. Y. **SYNTHETIC ORGANIC CHEM-**



ICALS. b. N. Y., N. Y., May 28, 1895. s. Louis and Esther (Cohen) B. Edn.: B.Sc., N. Y. Univ., 1917. m. Rose Michaels, Feb. 6, 1925. c.: Marilyn Shirley; Helene Friedman. Exp.: Anderson Chem. Co.; E. I. du Pont de Nemours; Arcadia Chem. Corp.; Glyco Products Co., Inc. Hon. Pos.: Councilor, N. Y. C. Chapter, Amer. Inst. Chemists. Mem.: Amer. Chem. Soc.; Amer. Inst. Chemists; Soc. Chem. Indus.; Amer. Assn. Tex. Chemists and Colorists; A.A.A.S.; Amer. Soc. Testing Materials; Armed Forces Chem. Assn.; Amer. Oil Chem. Soc.; Inst. Food Technologists; N. Y. Acad. Sci. Author: Chem. Formulary; Practical Everyday Chem.; Chemical Specialties; etc. Special Int.: Emulsions, Synthetic Waxes, Surface-active Agents.

BENNETT, Hugh Hammond, Chf., Soil Conservation Service, U. S. D. A., R.F.D. 2, Falls Church, Va. **SOIL EROSION, CONSERVATION**.

BENNETT, James Percy, Prof. of Plant Physiol., Univ. of Calif., Berkeley, Calif. **PLANT PHYSIOLOGY**.

BENNETT, Merrill Kelley, Dean, Schl. of Social Sciences, Exec. Dir., Food Rsch. Inst., Stanford Univ., Stanford, Calif. **ECONOMICS**.

BENNETT, William O., Jr., Watch Engr., Bulova Watch Co., 58-27 Francis Lewis Blvd., Bayside, L. I., N. Y. **ENGINEERING, PHYSICS**.

BENNINGHOF, Cloyd Lawrence, Assoc. Prof. of Biol., Western Md. Coll., Westminster, Md. **ZOOLOGY**.

BENNION, Milton, Dean Emer., Schl. of Edn., Univ. of Utah, 2391 Seventh East, Salt Lake City, Utah. **ETHICS, SOCIAL EDUCATION**.

BENNITT, Rudolf, William Rucker Prof. of Zool., Univ. of Mo., Columbia, Mo. **FIELD ZOOLOGY**.

BENSON, Charles Emile, Prof. Emer., N. Y. Univ., 180 Walnut St., Montclair, N. J. **PSYCHOLOGY**.

BENSON, Henry Kreitzer, Prof. Emer., Chem. Engrng., Univ. of Wash., Seattle, Wash. **PULP AND PAPER, WOOD UTILIZATION, CHEMURGIC UTILIZATION OF FARM AND FOREST PRODUCTS**.

BENSON, Lyman, Prof. of Botany, Pomona Coll., Claremont, Calif. **PLANT CLASSIFICATION**.

BENSON, Robert L., Asst. Clinical Prof., Univ. of Ore. Med. Schl., 3181 S. W. Marquam Hill, Portland, Ore. ALLERGY.

BENSON, Simon, Assoc. Prof. of Physiol. and Pharmacol., Wayne Univ. Coll. of Pharmacy, Detroit, Mich. NUTRITION.

BENT, Henry E., Dean, Grad. Faculty and Prof. of Chem., Univ. of Mo., Columbia, Mo. CHEMISTRY.

BENTLEY, Arthur F., Rt. 2, Paoli, Ind. SOCIOLOGY.

BENTLEY, Gordon Mansir, Prof. of Entomol., Univ. of Tenn., Knoxville, Tenn. ZOOLOGY.

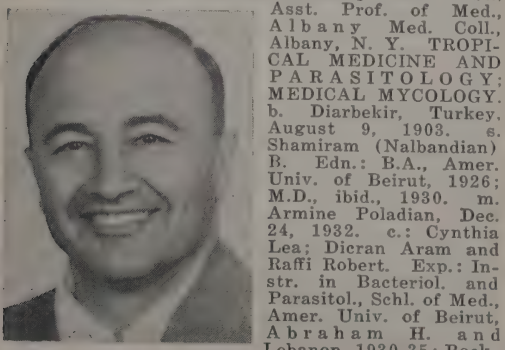
BENTLEY, Madison, Prof. Emer. of Psychol., Cornell Univ., P. O. Box 446, Palo Alto, Calif. EXPERIMENTAL PSYCHOLOGY.

BENTON, Arthur F., Prof. of Chem. and Chmn. Faculty of Chem., Cobb Chem. Lab., Univ. of Va., Charlottesville, Va.

BENTON, Arthur L., Louisville Mental Hygiene Clinic, Louisville, Ky. PSYCHOLOGY.

BERANEK, Leo Leroy, Assoc. Prof. of Communications Engrng. and Tech. Dir. of Acoustics Lab., Mass. Inst. Technology, Cambridge, Mass. COMMUNICATION ENGINEERING AND ACOUSTICS. b. Sept. 15, 1914, Solon, Ia. s. Edward F. and Beatrice (Stahle) B. Edn.: B.A., Cornell Coll., 1936; M.S., Harvard Univ., 1937; Sc.D., ibid., 1940; Hon. Sc.D., Cornell Coll., 1946. m. Phyllis Knight of Boston, Mass., Sept. 6, 1941. d. Mr. and Mrs. H. J. Knight. c.: James K., July 8, 1947. Exp.: Parker Fellow, Harvard Univ., 1939-40; Instr. in Phys. and Communications Engrng., Harvard Univ., 1940-41; Fac. Instr. in Phys. and Communications Engrng., ibid., 1941-43; Dir. of Rsch. on Sound Control, ibid., 1943-45; Dir. of El-Acoust. and Syst. Rsch. Labs., ibid., 1945-46 John Simon Guggenheim Fellow jointly Harvard and M.I.T., 1946-47; Assoc. Prof. of Commun. Engrng. and Tech. Dir. of Acous. Lab., M.I.T., 1947—; Recipient Biennial Award of Acous. Soc. of Amer. for Outstanding Contributions in Acoustics, 1944; President's Certificate of Merit for Contributions to War Effort, 1948. Hon. Pos.: Sec., Natl. Rsch. Coun. Comm. on Sound Control, 1940-42. Mem.: Exec. Coun. of Acoustical Soc. of Amer., 1944-47; Editorial Bd. of Acoustical Soc. of Amer., 1946-49; Assoc. Ed., Acoustical Soc. of Amer., 1949—; Chmn. of Standards Comm. of Acoustical Soc. of Amer. and of Group Z24B of Amer. Standards Assn., 1947—; Chmn., Acoustics Panel, Rsch. and Development Bd. of Natl. Defense Dept. Fellow, Amer. Phys. Soc., A.A.A.S., Acoustical Soc. of Amer.; Sr. Fel., Inst. Radio Engrs.; Mem., Sigma Xi; Groupement des Acousticiens de Langue Francaise, Paris. Special Int.: Room Acoustics, Communication System Design; Noise Reduction, Physics of Sound and Systems Engrng.

BERBERIAN, Dieran Abraham, Sr., Investigator in Chemotherapy, Sterling-Winthrop Rsch. Inst., Albany Med. Coll., Albany, N. Y. TROPICAL MEDICINE AND PARASITOLOGY; MEDICAL MYCOLOGY.



b. Diarbekir, Turkey, August 9, 1903. s. Shamiram (Nalbandian) B. Edn.: B.A., Amer. Univ. of Beirut, 1926; M.D., ibid., 1930. m. Armine Poladian, Dec. 24, 1932. c.: Cynthia Lea; Dieran Aram and Raffi Robert. Exp.: Instr. in Bacteriol. and Parasitol., Schl. of Med., Amer. Univ. of Beirut, Lebanon, 1930-35; Rockefeller Fellowship for Advanced Study in Parasitology and Tropical Medicine, London, Paris and Rome, 1935-36; Adj. Prof. of Bacteriol. and Parasitol., Schol. of Med., Amer. Univ. of Beirut,

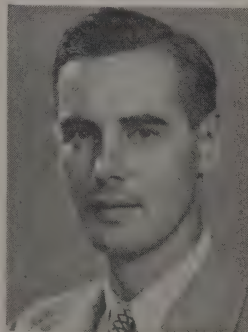
Lebanon, 1936-45; Assoc. Prof. of Bacteriol. and Parasitol., ibid., 1945-47; Sr. Investigator in Chemotherapy, Physician of Inst., Sterling-Winthrop Rsch. Inst., Rensselaer, N. Y., Asst. Prof. of Med., Albany Med. Coll., Albany, N. Y., 1947—. Mem.: N. Y. Acad. of Sci.; Roy. Soc. of Tropical Med. and Hygiene; Amer. Soc. of Tropical Med. and Hygiene; A.A.A.S.; Amer. Soc. of Parasitol.; Soc. of Amer. Bacteriol.; A.M.A.; Albany Co. Med. Assn. Contrb. to: Jour. of A.M.A.; Trans. of Royal Soc. of Tropical Med. and Hygiene; Archives of Dermatol. and Syphilology; Amer. Jour. of Tropical Med. Gen. Int.: Production of Vaccines and Serums During War Yrs. for Use in Lebanon, Syria, Irak, Iran and Abyssinia. Malaria Control Programs in Lebanon. Investigation and Control of Epidemics of Typhus in Syrian Villages During the World War II. Special Int.: Malaria—Its Control and Treatment. Oriental Sore—Its Transmission and Prophylaxis. Fungi of Med. Importance—Their Classification and Treatment. Amoebiasis—Its Prophylaxis and Treatment. Enteric Fevers—Their Prophylaxis and Control.

BERG, Clarence Peter, Prof. of Biochem., State Univ. of Iowa, Iowa City, Iowa. BIOCHEMISTRY.

BERG, Lloyd, Prof. and Hd., Chem. Engrng. Dept., Mont. State Coll., Bozeman, Mont. CHEMICAL ENGINEERING. b. Aug. 8, 1914, Paterson, N. J. s. Olav and Anita (Schneider) B. Edn.: B.S., Lehigh Univ., 1936; Ph.D., Purdue Univ., 1942. m. Edna Barrowclough of Paterson, N. J., Jan. 1, 1938. d. Charles and Cora Barrowclough. c.: Sally; Charles; John; Ann. Exp.: Sherwin-Williams Co., Newark, N. J., Tech. Sales, 1936-39; Gulf Rsch. and Dev. Co., Pittsburgh, Pa., Rsch. Engr., 1942-46; Univ. of Pittsburgh, Lectr., 1942-46; Assoc. Prof. Chem. Engr., Univ. of Kan., Lawrence, Kan., 1946; Prof. of Chem. Engr., Mont. State Coll., Bozeman, Mont., 1946—; Consultant, Phillips Pet. Co., Bartlesville, Okla., 1948—; U. S. Army, Signal Corps, Ft. Monmouth, N. J., Consultant, 1949—. Mem.: A. I. Ch.E.; A.C.S.; A.S.E.E.; Theta Xi; Phi Kappa Phi; Sigma Xi. Contrb. to: Chem. Engrng. Progress; Ind. and Engrng. Chem. Ph.D. Dissertation: An Amination of Pyrazine with Sodium Amide. Listed in: Who's Who in Engrng.; A.M.S.; Who Knows and What Special Int.: Petroleum desulfurization; Battery grade manganese dioxide; Chemical Engineering.

BERG, Max, Clinical Assoc., Dept. of Med., Univ. of Ill. Coll. of Med., 7525 Stony Island, Chicago, Ill. EXPERIMENTAL MEDICINE; PATHOLOGY. b. Chicago, Ill., June 12, 1909. s. EH and Mary (Kadin) B. Edn.: B.S., Univ. of Ill., 1932; M.S., ibid., 1934; M.D., ibid., 1935; Ph.D., ibid., 1941. m. Sylvia Sallo, 1935. c.: Judith; Barbara. Exp.: Asst., Med., Univ. of Ill. Coll. of Med., Chicago, 1936; Instr. in Med., ibid., 1937-39; Assoc. in Pathol., ibid., 1940-45; Clin. Assoc. in Med., ibid., 1946—. Mem.: A.M.A.; Amer. Heart Assn.; A.A.A.S.; Chicago Pathol. Soc.; Sigma Xi. Contrb. to: Arch. Pathol.; Amer. Jour. Digestive Diseases; Arch. Internal Med.; Jour. Lab. and Clinical Med. Special Int.: Internal Med.; Experiments on Acute Renal Insufficiency; Exptl. Peptic Ulcer.

BERGELIN, Olaf Preysz, Assoc. Prof. of Chem. Engrng., Univ. of Del., Newark, Del. CHEMISTRY ENGINEERING. b. Nov.



8, 1911, Big Rapids, Mich. s. John E. and Ruby (Oleson) B. Edn.: B.S.E., Univ. of Mich., 1935; B.S.E., ibid., 1935; M.S., ibid., 1936; Sc.D., ibid., 1942. m. Sarah Rose Radford of Jackson Springs, N. C., Aug., 1942. d. Hilary and Betty Radford. c.: Sarah Marie; Robert Olaf. Exp.: Rsch. Asst., Univ. of Mich., 1935-37; Chem. Engr., Hercules Power Co., 1941-42; Army, U. S. Ord. Dept., TNT Prod., 1942-43; Corps of Engrs., Manhattan Proj., 1943-46; Univ. of Del., Asst. Prof. Chem. Engrng., 1946-47; Assoc. Prof., 1947—.

Mem.: A.I.Ch.E.; A.S.M.E.; A.S.E.E.; Sigma Phi; Sigma Xi. Author: Heat Transfer and Pressure Drop Durin Viscous Flow Across Banks of Tubes, 1950. Contrb. to: Sci. Jour. Ph.D. Dissertation: Liquid-Liquid Extraction Across a Known Interfacial Area. War Record: (See above—2nd Lt., 1st Lt., Capt.). Travel: Europe; N. Amer.; New Zealand. Hobbies: Golf; Fishing. Listed in A.M.S. Special Int.: Geothermal Power, Heat Transfer, Two-Phase Flow.

BERG, William Nathan, Tchr. of Chem., 225 W. 106th St., N. Y., N. Y. STATISTICAL METH-
ODS.

BERGEN, Catharine Mary, Assoc. Prof. of Sci., State Tchrs. Coll., Jersey City 5, N. J. PHYSICAL



SCIENCES. b. Garden City, N. Y., Jan. 16, 1912. d. John O. and Alice (Terry) B. Edn.: A.B., Wellesley Coll., 1933; M.A., Columbia Univ., 1935; Ph.D., ibid., 1942. Exp.: Elem. Sci. Consultant, Garden City, N. Y. Public Schls., 1934-37; Asst. in Physics, Hofstra Coll., Hempstead, N. Y., 1939-40; Elem. Sci. in Lincoln Exptl. Schl. of Tchrs. Coll., Columbia Univ., 1940-43; Assoc. Prof. of Sci., State Tchrs. Coll., Jersey City, N. J., 1941—Hon. Pos.: Editor of Bull. of N. J. Sci. Tchrs. Assn., 1951—; Vice-Pres., Jersey City Chapter of A.A.U.W. Mem.: Amer. Physical Soc.; A.A.A.S.; A.A.U.P.; Natl. Sci. Tchrs. Assn.; N.E.A.; Kappa Delta Pi; Phi Lambda Theta. Contrb. to: Jour. Chem. Edn.; Pl. Sci. and Math.; Metropolitan Detroit Sci. Rev. Special Int.: Sci. for the Layman; Sci. in General Edn.; Role of Sci. in General Culture.

BERGEN, James Tallmadge, Hd., Mechanical Rsch. Section, Armstrong Cork Co., Lancaster, Pa. CHEM-
ISTRY AND ENGI-
NEERING RESEARCH
AND DEVELOPMENT.



b. Seattle, Washing-
ton, July 28, 1916.
s. Hansen and Jessie M.
(McCrindle) B. Edn.:
B.S., Lehigh Univ.,
1938; M.S., ibid., 1939.
m. Ann L. Chalker,
July 26, 1940. c.: John
H.; Robert E.; James T.,
Jr. Exp.: Rsch. Chemist,
Armstrong Cork
Co., 1939-41; Production
and Development Chem-
ist, ibid., 1941-45; Rsch.
Physicist, ibid., 1945-
47; Section Hd., ibid.,
1947—. Mem.: Soc. for
Exptl. Stress Analysis;
Contrb. to: Jour. Ap-
plied Mechanics; Trans. Soc. for Exptl. Stress
Analysis; Jour. Colloid Sci. Special Int.: Rheology;
Plasticity; Stress Analysis; Applied Mechanics.

BERGER, Charles A., Dir. of Biol. Lab., Fordham
Univ., N. Y., N. Y. CYTOLOGY.

BERGGREN, Ruth E. L., Rsch. Chemist, Kind and
Knox Gelatin Co., N. Fifth St., Camden, N. J.
CHEMISTRY.

BERGMAN, Henry Dale, Dean, Div. Veterinary
Med. and Dir., Veterinary Rsch. Inst., Iowa State
Coll., Ames, Iowa. VETERINARY PHYSIOLOGY
AND PHARMACOLOGY.

BERGMAN, Herbert F., Sr. Pathologist, Bureau
Plant Indus., Soils and Agri. Engrng., U. S. D. A.,
244 Amity St., Amherst, Mass. PLANT PATHOL-
OGY.

BERGMAN, Hyman Chaim, Rsch. Assoc., Cedars of
Lebanon Hosp., 4833 Fountain Ave., Los An-
geles, Calif. PHYSIOLOGY.

BERGMAN, Paul, Sr. Psychologist, Rsch. Dept.,
The Menninger Foundation, Topeka, Kans. PER-
SONALITY AND PSY-
CHOTHERAPY RE-
SEARCH. b. Vienna,



Austria, Jan. 29, 1906.
s. Eduard and Antonia
(Rotholz) B. Edn.: Ph.D., Univ. of Vienna,
1929, M.S., Univ. of
Ind., 1943. m. Ellen
Asher, Mar. 24, 1939.
c.: Carol; Barbara; Mi-
riam. Exp.: Consulting
Psychologist, Honolulu,
T. H., 1939-41; Staff
Mem., Menninger Clinic,
Topeka, Kans., 1943—.
Mem.: Amer. Psychol.
Assn.; Topeka Psycho-
analytic Soc. Contrb.
to: The Nervous Child;
Education; Psychosoma-
tic Med.: Menninger Clinic Bull.; Amer. Jour. of
Orthopsychiatry; The Psychoanalytic Study of the
Child; Psychiatry; Amer. Jour. of Psychotherapy.
Special. Int.: Rsch. in Psychotherapy.

BERGMAN, William Erving, Group Leader, Rsch.
Chemist, Phillips Petroleum Co., 1450 Hickory Ave.,
Bartlesville, Okla. PHYSICAL AND COLLOID
CHEMISTRY. b. Laurinburg, N. C., Dec. 30, 1916.
s. Nathan and Sarah (Radner) B. Edn.: B.S., Univ.
of Mass., 1938; M.S., ibid., 1940. m. Mary Belle
Spence, June 3, 1943. c.: Bruce R.; Jon D. and
Don A. Exp.: Rsch. Asst., Univ. of Mo., Columbia,
Mo., 1940-41; Rsch. Chemist, Tenn. Valley Au-
thority, Wilson Dam, Ala., 1941-45; Rsch. Chemist,
Phillips Petroleum Co., Bartlesville, Okla., 1945—.
Mem.: Amer. Chem. Soc.; A.A.A.S.; Phi Kappa
Phi; Sigma Xi. Contrb. to: Jour. of Amer. Chem.
Soc.; Jour. of Phys. Chem.; Indus. Engrng. Chem.;
World Oil; Oil and Gas Jour.; Jour. Petroleum
Tech. Special Int.: Phys. and Colloid Chem.; Oil
Well Drilling and Drilling Fluid Rsch.

BERGMANN, Werner, Assoc. Prof. of Chem., Sterl-
ing Chem. Bldg., Yale Univ., New Haven, Conn.
CHEMISTRY.

BERGNER, Anna Dorothy, Instr., State Tchrs. Coll.,
Towson, Md. CYTOGENETICS.

BERGQUIST, Stanard Gustaf, Prof. of Geol., Chmn.
Dept. of Geol. and Geography, Mich. State Coll.,
East Lansing, Mich. GEOLOGY—WITH SPECIAL
INTERESTS IN GLACIOGEOLOGY; HYDRO-
GEOLOGY AND GEOMORPHOLOGY. b. Aug.
13, 1892 at Ironwood, Michigan. s. Charles John
and Ellen Elizabeth (Walquist) B. Edn.: A.B.,
Univ. of Mich., 1915; M.S., ibid., 1926; Ph.D.,
ibid., 1933; Attended Univ. of Sorbonne, Paris,
France, 1929; Progressive Edn. Workshop, Bronx-
ville, N. Y., summer, 1938. m. Ada Evelyn
Whitman of Holland, Mich., Aug. 6, 1924. c.:
Donna Jeanne. Exp.: Instr., Mich. State Coll.,
1916-23; Asst. Prof., ibid., 1924-29; Assoc. Prof.
and Hd. of Dept., ibid., 1930-32; Prof., ibid., 1933—.
Mem.: Mich. Acad. of Sci.; Pres., Local Chapt.,
Sigma Xi, 1936; Pres., Mich. Acad., 1937; Phi
Sigma; Sigma Gamma Epsilon; Phi Kappa Phi;
Amer. Legion; Mason; Fellow, A.A.A.S.; Fellow, G.
S.A. Author: Miscellaneous Scientific Papers Dealing
with Glacial Geol., Sand Dunes, Nat. Gas, etc. Con-
trb. to: Papers of the Mich. Acad. of Sci., Letters
and Arts; Jour. Sedimentary Petrol.; Sci.; and State
Geol. Survey Reports. Ph.D. Dissertation: The
Pleistocene History of the Tahquamenon Manistique
Drainage Basin. Travel: France; Belgium; Switzer-
land. Listed in: A.M.S.; Who's Who in the Central
States; Who's Who in Amer. Special Int.:
Glaciogeology.

BERGY, Gordon Alger, Prof. of Pharmacy, W. Va.
Univ., Morgantown, W. Va. PHARMACY.

BERKEY, Charles Peter, Prof. Emer. of Geol.,
Columbia Univ., N. Y., 1076 Cumberlande Rd., Palis-
sade, N. J. GEOLOGY. b. March 25, 1867, Goshen,
Ind. s. Peter and Lydia (Stutsman) B. Edn.: B.S.,
Univ. of Minn., 1892; M.S., ibid., 1893; Ph.D., ibid.,
1897. Hon. Degrees: D.Sc., Columbia Univ., 1929;
Sc.D., Minn., 1940. m. Minnie M. Best of Farming-

ton, Minn., Sept. 4, 1894. d. Thompson and Selina Best. c.: Paul Ainsworth, Lt. Col.; Virginia Dale, Mrs. Milton H. Hartigan. Exp.: Ednl., Univ. of Minn., 1895; Ednl., Columbia Univ., 1903; Consult. Geol., N. Y. City Dept., 1906; Consulting Geol., U. S. Bur. of Reclamation, 1930; The Tenn. Valley Authority, 1936; Port of N. Y. Authority, 1928, Rsch. and Exploration, Reconnaissance of Puerto Rico, 1914; Chief Geol., Central Asiatic Expeditions, 1922. Hon. Pos.: Exec. Sec. Geol. Soc. of Amer.; Hon. Mem. Amer. Soc. Civil Engrs. Mem.: Geol. Soc. of Amer.; N. Y. Acad. of Sci.; Amer. Inst. of Mining and Metallurgy; Amer. Philosophical Soc.; Natl. Acad. of Sci.; Phi Gamma Delta; Phi Beta Kappa; Sigma Xi; Tau Beta Pi; Explorers Club of N. Y.; The Century Assn. Author: Geol. of the Catskill Aqueduct, 1911; Geol. of West Point Quadrangle, 1921; Geol. of Mongolia, 1927. Contrb. to: Bull. of Geol. Soc. of Amer.; etc. Ph.D. Dissertation: Geol. of the St. Croix Dalles, 1898. Travel: N. Amer.; Asia; West Indies; Africa; Europe; U. S. Gen. Int.: A Pioneer in Application of Geologic Sci. to Engrng. Practice (on great pub. works); Consulting Geol. on Many Engrng. Proj. of Great Public Importance. Hobbies: Gardening. Listed in: A.M.S.; Who's Who of Several Issues; Natl. Encyc. of Amer. Biog.

BERKEY, Donald Keith, Asst. Prof. of Physics, Colgate Univ., Hamilton, N. Y. PHYSICS.

BERKHEISER, Elven J., Assoc. Clin. Prof. Orthopedic Surgery, Univ. of Ill., 122 S. Michigan Ave., Chicago, Ill. MEDICINE. b. Aug. 23, 1887, Denver, Colo. s. John and Ivy (Moore) B. Edn.: A.B., Lake Forest C., 1909; M.D., Rush Med. Schl., 1914. m. Gladys Sykes of Swift Current, Sask., Can., Dec. 7, 1921. d. D. J. Sykes. Exp.: Instr. Orthopedic Surgery, Rush Med. Univ. of Chicago, 1919-29; Asst. Clin. Prof., 1929-33; Assoc. Clin. Prof., 1933-40; Asst. Prof. of Orthopedic Surg., Rush Med. Univ. of Ill., 1941—; Attending Surgeon, Cook Co. Hosp., 1925-45; Consultant, 1945—; Consultant, U. S. Marine Hosp., Orthopedic Surgeon, Presby. Hosp. Mem.: Amer. Orthopedic Assn.; Clin. Orthopedic Soc.; Chicago Orthopedic Soc.; Inst. of Med.; A.M.A.; Coll. of Surg.; Diplomat in Orthopedic Surgery; Phi Beta Pi; Thirty Second Degree Mason and Shrine. Author: Articles in Med. Jour. War Record: Maj., M. C., World War I. Listed in: Who's Who in Med.

BERKLEY, Earl E., P. O. Box 172, Beltsville, Md. BOTANY.

BERKMAN, Anton Helmer, Chmn. and Prof. of Biol. Sciences, Tex. Coll. of Mines and Metallurgy, El Paso, Tex. PLANT MORPHOLOGY.

BERKNER, Lloyd Viel, Pres., Associated Universities, Inc., 350 Fifth Ave., N. Y. 1, N. Y. ELEC-



TRONICS, GEOPHYSICS AND PHYSICS. b. Milwaukee, Wis., Feb. 1, 1905. s. Henry Frank and Alma Julia (Viel) B. Edn.: B.S., Univ. of Minn., 1927. m. Lillian Fuls, May 19, 1928. c.: Patricia Ann; Phyllis Jean. Exp.: Engr.-in-Chg. of Radio Sta., WLB-WGMS, Minneapolis, Minn., 1925-27; Asst. Elec. Engr. in Chg. of Engr. First Airways Navigational Radio Range System, Airways Div., Bur. of Light-houses, Dept. of Commerce, 1927-28; Radio Engr., 1st Byrd Anta-

arctic Expedition Representing Natl. Bur. of Standards, 1928-30; Assoc. Elec. Engr., Conducting Rsch. on Ionosphere, *ibid.*, 1930-33; Engr. and Physicist in Chg. of Rsch. on the Ionosphere, Dept. of Terrestrial Magnetism, Carnegie Instn. of Washington, Washington, D. C., 1933-38; Repr. of the Natl. Acad. of Sci. as U. S. Delegate to Internal Assembly of Internal Union of Geodesy and Geophysics, Edinburgh, Scotland, 1936; Engr. in Chg., Watheroo Magnetic Obs., Watheroo, Australia, 1938; Visiting Scientist and Lectr., radio Rsch. Bd., Univ. of Sidney, Sidney, Australia, 1939; Delegate, Natl. Acad. of Sci. and Bus. Mgr. Washington

Assembly, Internatl. Union of Geodesy and Geophysics, 1939; Engr. Physicist in Chg. of Ionospheric Rsch. Dept. of Terrestrial Magnetism, Carnegie Instn. of Washington, D. C., 1939-40; Engr.-Physicist, Rsch. on Proximity Fuses, Dept. of Terrestrial Magnetism, *ibid.*, 1940-41; Engr. and Observer-in-Chg., Founding Coll. Magnetic Observatory, Univ. of Alaska, College, Alaska, 1941; Active Naval Officer, 1941-46; Hd. of Radar Section, U. S. Navy Bur. of Aeronautics, Washington, D. C., 1941-43; Dir. of Elec. Material Branch, *ibid.*, 1943-45; Tech. Panning Officer for Future Operations, USS Enterprise, U. S. Navy, 1945-46; Hd. of Section on Exploratory Geophysics of Atmosphere, Dept. of Terrestrial Magnetism, Carnegie Instn. of Washington, D. C., 1946; First Exec. Scy., Rsch. and Dev. Bd. Dept. of Defense, 1946-47; Hd. of Section of Exploratory Geophysics of Atmosphere, Dept. of Terrestrial Magnetism, Carnegie Instn. of Washington, D. C., 1947-49; Dir. of Foreign Milit. Asst. Program and Special Asst. to Secy. of State, Dept. of State, Washington, D. C., 1949; Hd. of Section of Exploratory Geophysics of Atmosphere, Dept. of Terrestrial Magnetism, Carnegie Instn. of Washington, 1949-51; Consultant to Mass. Inst. of Tech. on Special Projects, 1950-52; Pres. and Chmn. of Exec. Com., Associated Universities, Inc. and Rsch. Assoc., Carnegie Instn. of Washington, D. C., 1950—; Consultant to Chmn., Rsch. and Dev. Bd., *ibid.*, 1947—; Consultant to Natl. Security Resources Bd., *ibid.*, 1952—. Hon. Pos.: Dir., L. I. Biol. Assn.; Mem., Bd. of Trustees, Assoc. Universities, Inc. Mem.: Natl. Acad. of Sci.; Policy Comm., Div. of Internatl. Relations, Natl. Rsch. Coun.; Amer. Phys. Soc., Fellow; Fellow, Amer. Inst. of Elec. Engrs.; Fellow, Inst. of Radio Engrs., Joint Tech. Adv. Comm.; Amer. Polit. Sci. Assn.; Amer. Polar Soc.; Amer. Geophys. Union; Phil. Soc. of Washington; Wash. Acad. of Sci.; A.A.A.-S.; Exec. Comm., Internatl. Sci. Radio Union; Exec. Coun. and Jr. Past Pres., U. S. A. Natl. Comm. of Internal Scientific Radio Union; Internal Joint Commn. on Ionosphere; Mem. of Exec. Comm., Internal Union of Geodesy and Geophysics; Internatl. Assn. of Terrestrial Magnetism and Elec. Coun. on Foreign Relations; Faculty Club of M.I.T.; Cosmos Club; Explorers Club; Acacia; Seabard and Blade; Theta Tau; Eta Kappa Nu; Plumb Bob; Mason. Contrb. to: Bur. Stan. Jour. of Rsch.; Proc. Inst. of Radio Engrng.; Union Geod. Geophys. Internatl. Bull.; Proc. Terr. Mag.; Amer. Geophys. Union; Carnegie Inst. of Wash. Publication No. 501; Sci.; Nature; Phys. Rev.; Jour. Applied Phys.; Comm. Relations Solaire et Terrestres; Jour. Wash. Acad. of Sci.; Proc. Amer. Phil. Soc.; Elec. Engrng.; Carnegie Instn. Wash. Pub. War Record: U. S. Navy, 1941-46; U. S. Congressional Gold Medal for Services on Byrd Antarctic Expedition 1, 1930; Silver Medal of Aeronautical Inst.; Gold Medal, N. Y. C., 1930; Sci. Award of Washington Acad. of Sci. for work in Ionospheric Rsch., 1941; Commendation Ribbon of Secy. of Navy, 1944; Legion of Merit from Pres., 1946; Hon. Officer of the Order of British Empire, 1945; Naval Reserve Medal with One Star; Amer. Defense Service Medal with One Star; Amer. Area Campaign Medal; Pacific Campaign Medal with One Star; World War II Victory Medal; Outstanding Achievement Award, Univ. of Minn., 1952. Special Int.: Radio War Propagation; Structure of the High Upper Atmosphere; Ionization Measurements of the Ionosphere; Relation of Upper Atmospheric Ionization to Terrestrial Magnetism; Aviation Radio Development; Solar Phenomena: Solar and Terrestrial Relationships.

BERKSON, Joseph, Hd., Div. of Biometry and Med. Statistics, Mayo Clinic, Rochester, Minn. BIOMETRY, MEDICAL STATISTICS.

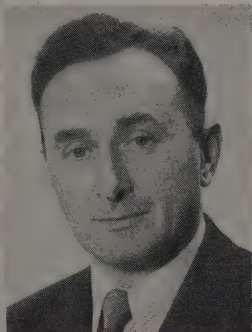
BERLIN, Aaron Samuel, Munitions Engr., Tech. Command, Edgewood Arsenal, Md.

BERLINER, Julius Frederick Thomas, Chem. and Engrng. Consultant, 2710 S. Parkway, Chicago 16, Ill. CHEMICAL DEVELOPMENTS. b. Tenerife, Canary Islands, July 16, 1902. s. Sol and Jennie (Ottenberg) B. Edn.: B.S., George Wash. Univ., 1923; M.S., *ibid.*, 1924; Ph.D., *ibid.*, 1926. Exp.: Asst. Metallurgist, U. S. Bur. of Standards, Washington, D. C., 1913-23; Assoc. Chemist, U. S. Bur. of Chem., Washington, D. C., 1923-26; Engr.,

U. S. Bur. of Mines, 1926-28; Consulting Chem. Engr., Chase Natl. Bank and Blair and Co., New York, N. Y., 1928-29; Development Engr., E. I. du Pont de Nemours and Co., Wilmington, Del., 1929-45; Chem. and Engrng. Consultant, Chicago, Ill., 1945—. Mem.: A.A.A.S. (Fellow); Amer. Chem. Soc.; Alpha Chi Sigma; Sigma Tau; Assn. Pulp and Paper Indus.; Philadelphia Acad. of Sci.; Registered Professional Engr., Ill. and Del. Contrb. to: Published About 60 Articles in Chem., Wood Tech., Plastics, Water Treatment and Physics. Special Int.: Utilization of Wastes Particularly Agril., Plastics, Pulp and Conversion to Hardboard and Bldg. Board. Pharmaceuticals and Fuels.

BERLY, Joel Anderson, Assoc. State Entomologist, Clemson Agril. Coll., Clemson, S. C. ENTOMOL-OGY.

BERMAN, Louis, Instr. in Astronomy, City Coll. of San Francisco, San Francisco, Calif. ASTRO- PHYSICS. b. London,



England, Mar. 21, 1903. s. George William and Jennie (Esakowitz) B. Edn.: B.A., Univ. of Minn., 1925; M.A., ibid., 1927; Ph.D., Univ. of Calif., 1929. m. Esther Goldberg, June 13, 1934. c. Susan Louise. Exp.: Lick Observatory Fel- low, Univ. of Calif., Berkeley, Calif., 1927-29; Instr. of Astronomy, Carleton Coll., North- field, Minn., 1929-31; Instr. in Astronomy and Math., San Mateo Jr. Coll., San Mateo, Calif., 1931-35; Instr. in As- tronomy, City Coll. of San Francisco, San Francisco, 1935—. Mem.: Amer. Astronomical Soc.; Astronomical Soc. of the Pacific. Contrb. to: Popular Astronomy; Lick Ob- servatory Bull.; Monthly Notices of the Royal As- tronomical Soc.; Astrophys. Jour.; Astronomical Jour.; Astronomical Soc. of the Pacific Publications. War Record: U. S. Navy, 1943-46. Special Int.: Rsch. in Stellar Atmospheres, Gaseous Nebulae, Double Stars, Variable Stars and Galactic Rotation.

BERNFELD, Peter, 30 Bennet St., Boston, Mass. BIOCHEMISTRY.

BERNHEIM, Bertram Moses, Assoc. Prof. of Surg- ery, Johns Hopkins Med. Schl., 2424 Eutaw Pl., Baltimore, Md. SURGERY.

BERNHEIM, Frederick, Prof. of Pharmacol., Duke Univ., Med. Schl., Durham, N. C. PHARMACOL- OGY.

BERNSTEIN, Seymour, Chf. Physicist, Oak Ridge Natl. Lab., Oak Ridge, Tenn. Address: 203 Outer Drive, Oak Ridge, Tenn.



NUCLEAR PHYSICS AND ATOMIC EN- ERGY. b. February 20, 1909, Chicago, Ill.; s. I. S. and Etta Scher B. Edn.: B.S., Univ. of Ill., 1930; M.S., Univ. of Chicago, 1937; Ph.D., ibid., 1939. m. Adelaide Rubin of Chicago, Ill., 1938; d. Sol and Esther Rubin; c.: Ruth Alice; Irene Susan. Exp.: Engrng., City of Chicago, Bur. of Engrng., 1930-34; Instr. in Phys., Aus- tin Jr. Coll., Chicago, Ill., 1939-42; Resch. As- soc. in Phys., Univ. of Chicago, Chicago, Ill., 1942-44; Resch. Physicist, Oak Ridge Natl. Lab., Oak Ridge, Tenn., 1944—; Lectr. in Phys., Univ. of Tenn., Knoxville, Tenn., 1948-52. Mem.: Comm. on Neu- tron Standards and Measurements of the Natl. Resch. Coun.; Resch Assoc., Oak Ridge Inst. of Nuclear Studies; Amer. Phys. Soc.; Sigma Xi; Tau Beta Pi; Pi Mu Epsilon. Contrb. to: Phys. Rev. Ph.D.

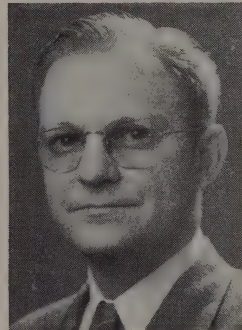
Dissertation: X-Ray Diffraction by a Film of Counted Molecular Layers. Hobby: Sailing. Listed in: A. M.S.

BERNSTEIN, Benjamin A., Prof. of Math. Emeritus, Univ. of Calif., 2785 Shasta Rd., Berkeley 8, Calif. FOUNDATIONS OF MATHEMATICS. b. Posvol, Lithuania, May 20, 1881. s. Wolf and Chaje Esther (Shalowitz) B. Edn.: A.B., Johns Hopkins Univ., 1905; Ph.D., Univ. of Calif., 1913. m. Rose David- son, June 29, 1920. c.: Tybel Litwin. Exp.: Instr. in Math., Univ. of Calif., 1907-17; Asst. Prof., ibid., 1918-22; Assoc. Prof., ibid., 1923-28; Prof., ibid., 1929-50; Prof. Emeritus, ibid., 1951—. Mem.: Amer. Math. Soc.; Math. Assn. of Amer.; Amer. Philos. Soc.; Assn. for Symbolic Logic; Phi Beta Kappa; Sigma Xi; Pi Mu Epsilon. Contrb. to: Trans. Amer. Math. Soc.; Amer. Jour. Math.; Annals of Math.; Bull. Amer. Math. Soc.; Duke Math. Jour.; Proc. Cambridge Math. Soc.; Scripta Mathematica; etc. Special Int.: Postulate Theory; Boolean Algebra; Math. of Logic.

BERNTHAL, Theodore George, Prof. of Physiol., Med. Coll. of S. C., 16 Lucas St., Charleston, S. C. PHYSIOLOGY.

BERRY, Charles T., Al Harvey Rd., Stonington, Conn. GEOLOGY.

BERRY, Clifford Edward, Asst. Dir. of Rsch., Cons. Engrng. Corp., 300 N. Sierra Madre Villa Ave., Pasadena, Calif. MASS



SPECTROMETRY. b. Gladbrook, Iowa, Apr. 19, 1918. s. Fred G. and Grace N. (Strohm) B. Edn.: B.S., Iowa State Coll., 1939; M.S., 1948. m. Martha Jean Reed, May 30, 1942. c.: Carol E. and David G. Exp.: Rsch. Asst., Phys- ics Dept., Iowa State Coll., Ames, Iowa, 1939-42; Rsch. Phys., Cons. Engrng. Corp., Pasade- na, Calif., 1942-50; Chf. Physicist, ibid., 1950-52; Asst. Dir. of R s c h ., ibid., 1952—. Mem.: Amer. Phys. Soc.; Sigma Xi; Phi Kappa Phi; Pi Mu Epsilon; Eta Kappa Nu. Contrb. to: Jour. of Applied Physics; Annals of Math. Stat.; Phys. Rev.; Modern Instrumental Analysis; Jour. of Chem. Physics; Rev. Scientific Instruments; Ind. and Engr. Chem.; Instruments. Special Int.: Mass Spectrometry and Computing Devices.

BERRY, Edward Cain, Chf. Bacteriologist, Hanford Engr. Works, E. I. du Pont de Nemours & Co., Richland, Wash. MYCOLOGY.

BERRY, Edward Willard, Prof. and Chmn. Dept. of Geol. Coll. Station, Duke Univ., Durham, N. C. PALEONTOLOGY. b. Passaic, N. J., Nov. 24, 1900. s. Edward Wilber and Mary (Willard) B. Edn.: A.B., Johns Hopkins Univ., 1924; Ph.D., ibid., 1929. m. Dorothy Everett Pidgeon, Oct. 12, 1925. c.: Mary-Susan (Mrs. E. P. Robare); Edward Lewis; Samuel Stedman. Exp.: Micro- paleontologist, Internatl. Petroleum Co., Negritos, Peru, S. Amer., 1925-28; Instr. in Geol., Ohio State Univ., 1929-36; Prof. Geol., Duke Univ., 1936—; Chmn. Dept. of Geol., ibid., 1936—. Hon. Pos.: Vice-Pres., Internatl. Botanical Congress, 1934-35. Mem.: Geol. Soc. Amer.; Geol. Soc. of France; Geol. Soc. of Switzerland; A.A.A.S.; Geog. Soc. of New Zealand; Geol. Soc. of Peru; A.A.P.G.; A.I.-M.E.; Kappa Sigma; Torch. Contrb. to: Amer. Jour. of Sci.; Bull. G.S.A.; Bull. A.A.P.G.; Ohio Jour. Sci.; Bull. U. S. Natl. Museum; Naturalist; etc. Special Int.: Coal and Oil Consulting.

BERRY, George W(illard), Geol., Sun Oil Co., Box 1798, Denver, Colo. b. Feb. 22, 1915, Poolville, N. Y.; s. Henry R. and Alma (Nash) B. Edn.: A.B., Colgate Univ., 1936; M.S., Cornell Univ., 1938; Ph.D., ibid., 1941. m. Ethel Cole of Detroit, Mich., Feb. 14, 1946; d. Mr. and Mrs. Howard Cole. c.: Anne Louise; Barbara Edith. Exp.: Asst. Geologist, Cornell Univ., 1936-37; Sr. Asst. Geologist, 1937-

38; Instr. Geology, 1938-41; Geologist Scout, Texas Co., Tyler, Texas, 1941-42; U. S. Navy, Ensign to Lt., 1942-46, Intelligence and Photo Interpretation; Geol., Texas Co., Tallahassee, Fla., Casper, Wyo., 1946-48; Geol., Sun Oil Co., Casper, Wyo., Denver, Colo., 1948—; Chmn., Geol. Assn. Field Conf., Wyo., 1949; Pres., Wyo. Geol. Assn., 1950. Mem.: A.A.-A.S.; Amer. Inst. of Mining and Metall. Engrs.; A.A.P.G.; Amer. Geophys. Union; Geol. Soc. of Amer.; Soc. Econ. Geol.; Sigma Xi; Phi Kappa Phi; Delta Upsilon; Sigma Gamma Epsilon. Contrb. to: Geol. Soc. of Amer. Ph.D. Dissertation: Structure and Stratigraphy at Three Forks, Mont. War Record: (See above); Overseas Duty in Pacific Areas. Listed in: A.M.S.

BERRY, Mildred Freburg (Mrs. James Berry), Prof. of Speech and American Literature, Rockford Coll., Rockford, Ill. **SPEECH REEDUCATION.** b. March 12, 1902, Pomeroy, Iowa. d. Frederick and Christina (Johnson) F. Edn.: A.B., Univ. of Iowa, 1922; M.A., *ibid.*, 1925; Ph.D., Univ. of Wis., 1937. m. James Berry of Alexandria, Va., July 4, 1924. s. Wm. Warren Berry. c.: Richard Warren. Exp.: Instr. in Speech, Univ. of Va., 1922-26; Prof. of Speech, Rockford Coll., 1926—; Lectr. in Speech, Univ. of Wis., Summers, 1927, 1930, 1931, 1941; Univ. of Denver, 1944; Dir., Summer Speech Center, Rockford Coll., summers, 1945-50. Mem.: Phi Beta Kappa; Pi Lambda Theta; Delta Sigma Rho; Fellow, A.S.H.A.; A.A.U.P.; A.A.U.W.; Delta Zeta; Delta Sigma Rho; Dir., Ill. League of Women Voters; Trustee, Civic Symphony Assn. of Rockford. Author: The Defective in Speech, 1942 (co-author). Contrb. to: Ednl. Jours. Ph.D. Dissertation: Med. Hist. of 500 Stuttering Children. Listed in: A.M.S.

BERRY, Paul A., Entomologist, U. S. D. A., Foreign Parasite Introduction, Washington, D. C. **ENTOMOLOGY.**

BERRY, Samuel Stillman, 1145 W. Highland Ave., Redlands, Calif. **MALACOLOGY.**

BERRY, William Johnston, retired, The Berrypatch, P. O. Box 298, Stony Brook, N. Y. **MATHEMATICS.**

BERS, Lipman, Prof., N. Y. Univ., New York, N. Y. **MATHEMATICS.**

BERUEFFY, Robert Ryan, Assoc. Prof. of Chem., Omaha Univ., 5818 Military Ave., Omaha, Nebr. b. Ft. Worth, Tex., Mar. 16, 1914. s. Max and Wilhelmina (Goerte) B. Edn.: B.A., Colo. Univ., 1940; M.A., Colo. Coll., 1944; Ph.D., Royal Pontifical, Univ. of Santo Tomas. m. Edna Nelson. Exp.: Chemist, Bureau of Standards, 1944-45; Chemist, Dept. of the Interior, 1945-48; Hd., Dept. of Chem., Hartwick Coll., 1949-52; Assoc. Prof. of Chem., Univ. of Omaha, Omaha, Nebr., 1952—. Mem.: Amer. Chem. Soc.; Assoc., Natl. Rsch. Council; Phi Beta Kappa. War Record: Officer, U. S. Navy, 1941-43. Special Int.: Biochem.; Pharmacol.

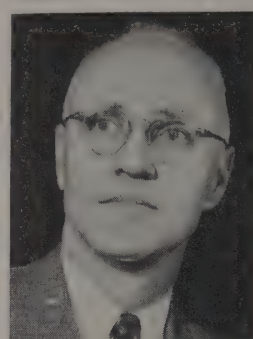
BERT, Otto F. H., LeMoyné Prof. of Applied Math., Wash. and Jefferson Coll., Washington, Pa. **MATHEMATICS, ASTRONOMY.**

BERTSCH, Carl Vendalaine, Assoc. Prof. in Physics, Newark Coll. of Engrng., 98 Underwood St., Newark 6, N. J. **PHYSICS.** b. Quincy, Mich., July 29, 1903. s. Charles F. and Emma (Blosser) B. Edn.: B.S., Univ. of Mich., 1923; M.S., *ibid.*, 1931; Ph.D., *ibid.*, 1937. m. Pearl W. Shurlow, Dec. 28, 1929. c.: Christine Emma; Carol Georgene. Exp.: Tchr., Grade Schls., Mich., 1921-24; Instr. of Physics, Case Schl. of Applied Sci., Cleveland, Ohio, 1923-30; Instr. of Math., Freshman Coll., Brown City, Mich., 1934-35; Acting Prof. of Physics, Western Coll., Oxford, Ohio, 1936-37; Hd. Dept. of Math. and Physics, Intermountain Union Coll., Billings, Mont., 1937-38; Asst. Prof. of Math., Southwestern Coll., Winfield, Kans., 1938-41; Asst. Prof. of Physics, Amer. Univ., Washington, D. C., 1941-42; Tech. Crystal Section, Signal Corps, U. S. War Dept., Washington, D. C., 1942-44; Physicist, Reeves Sound Lab., N. Y. C., 1944-46; Asst. Prof. of Physics, Newark Coll. of Engrng., Newark, N. J., 1946-49; Assoc. Prof., *ibid.*, 1949—. Mem.: Amer.

Phys. Soc.; A.A.A.S.; Amer. Soc. of Engrng. Edn.; Sigma Xi. Contrb. to: Phys. Rev. Special Int.: X-Rays of Crystals, Piezoelec. Crystals; Ultrasonics.

BESLEY, Fred Wilson, retired, 303 Wendover Rd., Baltimore, Md. **FORESTRY.**

BESLEY, Harry Elmer, Prof. of Agricultural Engr., Rutgers Univ., New Brunswick, N. J. **AGRICULTURAL ENGINEERING.**



b. McLean, Va., June 3, 1909. s. Harry E. G. and Sallie (Money) B. Edn.: B.S., Va. Polytech. Inst., 1929; M.S., Univ. of Md., 1931. m. Elizabeth Norton, Aug. 26, 1933. c.: Richard. Exp.: Asst. Agri. Engr., Md. Agri. Expt. Station, College Park, Md., 1931-32; Instr. and Asst. Prof. of Agri. Engr., Rutgers Univ., New Brunswick, N. J., 1932-40; Prof. and Dept. Chmn., Agricultural Engr., Rutgers Univ., and N. J. Agri. Expt. Sta., New Brunswick, N. J., 1946—.

Hon. Pos.: Chmn., No. Atlantic Section, A.S.A.E., 1946-47; Chmn., Northeastern Farm Housing Technical Comm., 1948—. Mem.: Amer. Soc. of Agricultural Engr.; Amer. Soc. for Engineering Edn.; Sigma Nu; Phi Kappa Phi; Alpha Zeta; Exchange Club of New Brunswick; Mason. Contrb. to: Agricultural Engr. War Record: Corps of Engr., U. S. Army, 1941-46; Advances from Captain to Colonel. Gen. Int.: Co-Designer of Silos for Grass Silage. Spec. Int.: Engineering Phases of Grassland Agri., Farm Housing in Northeastern United States.

BESSEY, Ernst Athearn, Prof. of Botany, Mich. State Coll., East Lansing, Mich. **MYCOLOGY.**

BESSEY, William Higgins, Assoc. Prof. of Physics, Univ. of Mo. Schl. of Mines and Metallurgy, Rolla, Mo. **PHYSICS.**

BEST, Charles Herbert, Dir. of the Banting and Best Dept. of Med. Rsch., and the Dept. of Physiol., Univ. of Toronto, Toronto, Can. **MEDICAL RESEARCH.** b. West Pembroke, Maine, Feb. 27, 1899. s. Herbert Heustis and Luella (Fisher) B. Edn.: B.A., Univ. of Toronto, 1921; M.A., *ibid.*, 1922; M.D., *ibid.*, 1925; D.Sc., Univ. of London, 1928. Hon. Deg.: D.Sc., Univ. of Chicago, 1941; Docteur, Honoris Causa, Univ. of Paris, 1945; Sc.D., Univ. of Cambridge, 1946; M.D., Honoris Causa, Univ. of Amsterdam, 1947; M.D., Honoris Causa, Univ. of Louvain, 1947; M.D., Honoris Causa, Univ. of Liege, 1947; D.Sc., Univ. of Oxford, 1947; LL.D., Dalhousie Univ., 1949; LL.D., Queen's Univ., 1950; Univ. of Chile, 1951; Univ. of Uruguay, 1951; Univ. of San Marcos, Peru, 1951; LL.D., Univ. of Melbourne, 1952; D.Sc., Laval Univ., 1952. m. Margaret Mahon, Sept. 3, 1924. c.: Charles Alexander; Henry Bruce. Exp.: Fellow, Dept. of Physiol., Univ. of Toronto, Can., 1920-21; Dir., Insulin Div., Connaught Labs., 1921-25; Rsch. Assoc., Banting and Best Dept. of Med. Rsch., 1923-41; Asst. Prof. and Acting Hd., Dept. Physiol. Hygiene, Univ. of Toronto, 1926-29; Hd., Dept. of Physiol., *ibid.*, 1929—; Dir., Banting and Best Dept. of Med. Rsch., *ibid.*, 1941—; Assoc. Dir., Connaught Labs., 1932-41; Honorary Consultant, *ibid.*, 1941—. Hon. Pos.: Scientific Dir. of the Internatl. Health Div. of the Rockefeller Foundation, 1941-43; Chm., Bd. of Scientific Dirs., *ibid.*, 1943; Mem., Natl. Rsch. Council of Can., 1947—. Mem.: The Royal Soc. (England); The Royal Soc. of Can.; Amer. Philos. Soc.; Natl. Acad. Sci.; Nu Sigma Nu; Alpha Omega Alpha. Co-author: The Physiol. Basis of Med. Practice, 1950; The Human Body, 1948; The Living Body, 1951. War Record: Initiated the Canadian Serum Project for the provision of dried human serum for military uses immediately after outbreak of World War II in 1939; This became a major undertaking of the Connaught Labs. in collaboration with the Canadian Red Cross Soc. and with the sponsorship

and financial support of the Canadian Govt.; Active Service with the Royal Canadian Navy, as Dir. of the R.C.N. Med. Rsch. Div. as Surgeon Capt., 1941-46. Gen. Int.: In 1921 Insulin was discovered by Banting and Best; The King's Silver Jubilee Medal, 1935; Commander of the Order of the British Empire, 1944; Canadian Red Cross Soc. Award of Merit; The Navy League of Can. Award of Merit; King Haakon VII Liberty Cross, Norway, 1947; Legion of Merit, U. S. Govt., 1947; Commander of the Order of the Crown, Belgium, 1948.

BEST, Harry, Prof. of Sociol., Univ. of Ky., Lexington, Ky. SOCIOLOGY.

BEST, R. Russell, Assoc. Prof. of Surgery and Anatomy, Univ. of Nebr. Coll. of Med., Omaha, Nebr. SURGERY.

BETH, Eric W., Chief, Analytic Section, Upper Air Laboratory, Air Force Cambridge Research Center, P. O. Box 307, Cambridge 30, Mass. PHYSICS. b. June 7, 1912, Vienna, Austria. s. Carl E. and Marianne (Weiss) B. Edn.: Ph.D., Univ. of Vienna, 1934; Univ. of Vienna, 1930-31; Univ. of Göttingen, 1931-32; Univ. of Munich, 1932-33; Univ. of Vienna, 1933-34; Univ. of Copenhagen, 1935; Univ. of Utrecht, 1935-36; Univ. of Cambridge, England, Summer, 1936; Univ. of Calif., 1937-39; Reed Coll., Portland, Ore., 1939-40. Exp.: Asst. in Physics, Univ. of Vienna, 1936-37; Rsch. Fellow Univ. of Calif., 1937-38; Tehng. Asst., ibid., 1938; Tehng. Asst., Reed Coll., 1939-40; Visiting Instr., Mills Coll., Calif., 1940-41; Instr. Ill. Inst. of Tech., 1941-42; Physicist, A. F. Cambridge Rsch. Center, 1946—; Chief Analytic Sec., Upper Air Lab., 1949—. Mem.: Amer. Phys. Soc.; Inst. of Radio Engrg.; Sigma Xi. Contrb. to: Physica. Ph.D. Dissertation: Ionization According to Atomic Model of Thomas and Fermi, Especially as Compared with Saha's Formula. War Record: U. S. Army, 1941, 1942-45; Overseas, 1944-45. Travel: N. Amer.; England; Europe. Listed in: A.M.S. Special Int.: Wave Mechanics; Gas Theory; Astrophys.; Electronics; Quantum Theory of the Non-Ideal Gas; Cosmic Radiation; Thermal Ionization of Stellar Matter; Upper Air Properties.

BETH, Richard Alexander, Hd. Physics Dept. and Prof. of Physics, Western Reserve Univ., Cleveland, Ohio. PHYSICS.

BETHE, Hans Albrecht, Prof. of Physics, Lab. of Nuclear Studies, Cornell Univ., Ithaca, N. Y. THEORETICAL PHYSICS, ESPECIALLY THEORY OF THE ATOM AND THE ATOMIC NUCLEUS. b. Strasbourg, Alsace-Lorraine, July 2, 1906. s. Albrecht Theodore and Anna (Kuhn) B. Edn.: Ph.D., Univ. of Munich, 1928. Hon. Deg.: D.Sc., Brooklyn Poly. Inst., 1950; D.Sc., Denver Univ., 1952. m. Rose Susan Ewald, 1939. c.: Henry George; Monica Ann. Exp.: Instr. in Theoretical Physics, Universities of Frankfurt, Stuttgart, Munich and Tübingen, 1928-33; Lectr., Universities of Manchester and Bristol, England, 1933-35; Asst. Prof., Cornell Univ., 1935; Prof., ibid., 1937—; Dir., Theoretical Physics Div. of Alamos Atomic Scientific Lab., 1943-46. Mem.: Natl. Acad. Sci.; Amer. Phys. Soc.; Amer. Astron. Soc.; Amer. Philos. Soc.; Sigma Xi; Phi Kappa Phi; Gamma Alpha. Contrb. to: Phys. Rev.; etc. Gen. Int.: Awarded A. Cressy Morrison Prize, N. Y. Acad. Sci., 1938, 1940; Henry Draper Medal of Natl. Acad. Sci., 1948; U. S. Medal of Merit, 1945. Special Int.: Nuclear Physics; Physics of Mesons; Energy Production in Stars; Theory of Shock Waves; Penetration of Radiation through Matter.

BETHEA, Oscar Walter, retired, 2215 Joseph St., New Orleans, La. INTERNAL MEDICINE.

BETHLAHMY, Nedavia, Forester, Northeastern Forest Expt. Station, Lehigh Univ., Bethlehem, Pa. FOREST SOILS. b. Palestine, July 23, 1918. s. David and Rachel (Aboulafia) B. Edn.: B.S., Pa. State Coll., 1939; M.F., Yale Univ., 1940. m. Evelyn Nathan, Feb. 14, 1943. c.: David. Exp.: Rsch. Forester, U. S. Forest Service, 1946. Mem.: Soc. Amer. Foresters; Amer. Geophys. Union; Soil Sci. Soc. of Amer.; Xi Sigma Pi. Contrb. to: Trans. A.G.U.; Ecology; Soil Sci. War Record: Capt. U. S. Army. Special Int.: Forest Influences—Soils and Water.

BETTS, Attie Lester, Assoc. Prof. of Elect. Engrg., Schl. of Elec Engrng., Okla. A. and M. Coll., Stillwater, Okla. ELECTRICAL ENGINEERING. b. July 30, 1916, Fair, Tex. s. Tom L. and Beulah (Richardson) B. Edn.: B.S., Tex. A. and M. Coll., 1938; M.S., ibid., 1939; Ph.D., Univ. of Texas, 1952. m. Erma Fife of Beaumont, Tex., Oct. 5, 1940. d. J. H. and Ora Fife. c.: Judith Lynn; Sheryl Ilene. Exp.: Graduate Asst., Texas A. and M. Coll., 1938-39; Engr., Gulf States Utilities Co., Beaumont, Tex., 1939-41; Instr. of Radio, Armored Force Communication Schl., 1941;



Instr. Elect. Engrng., Okla. A. and M. Coll., Stillwater, Okla., 1941-42; Radar Officer, U. S. Army Signal Corps, 1942-46; Instr. Elect. Engrng., Okla. A. and M. Coll., 1946; Asst. Prof., 1946-48; Assoc. Prof., 1948—. Mem.: Inst. of Radio Engrng.; Okla. Soc. of Prof. Engrs.; Amer. Soc. of Engrng. Edn.; Eta Kappa Nu. War Record: (See above.) Listed in: A.M.S.; Who's Who in South and Southwest. Special Int.: Electronic Instrumentation, Servomechanisms, Microwaves.

BETTS, Emmett Albert, Prof. and Director of Reading Clinic, Temple Univ., Philadelphia 22, Pa. PSYCHOLOGY OF LANGUAGE AND PSYCHOPHYSIOLOGY OF VISION. b. February 1, 1903, Elkhart, Iowa. s. Albert Henry and Grace (Greenwood) B. Edn.: B.S., Des Moines Univ., 1925; M.A., Univ. of Iowa, 1928; Ph.D., ibid., 1931. m. Thelma Marshall of Newton, Iowa, May 29, 1924; d. S. S. Marshall; c.: Beverly Jean, Shirley Lee, Margaret Jane. Exp.: Voc. Dir., Orient, Iowa, 1922-24; Supt. of Schls., Northboro, Iowa, 1925-29; Rsch. Asst., Univ. of Iowa, 1929-31; Schl. Psychologist, Shaker Heights, Ohio, 1931-34; Tchr. of Edn., Dir. State Nor. Schl., Oswego, N. Y., 1934-37; Rsch. Prof. and Dir. of Reading Clinic, Pa. State Coll., 1937-46. Hon. Pos.: Fellow, Distinguished Service Foundation in Optometry; Beta Sigma Kappa (Hon. Mem.). Mem.: Natl. Soc. for Study of Edn.; Progressive Edn. Assn.; Phi Delta Kappa; Masons (Commandery, Consistory, Shrine); B.P.O.E.; Beta Sigma Kappa; Psi Chi; Amer. Edn. Resch. Assn.; A.P.A.; A.A.S.A.; Pa. Acad. of Sci.; A.A.A.P.; Amer. Psychol. Assn.; A.A.A.S.; A.A.U.P.; Natl. Dept. of Elem. Prins.; Natl. Dept. of Suprvs.; Natl. Coun. of Tchrs. of Eng. Author: Betts Ready to Read Tests, 1934; Prevention and Correction of Reading Difficulties, 1935; Visual Problems of School Children, 1941; Foundations of Reading Instruction, 1946; Index to Prof. Publications on Reading and Related Topics, 1944. Co-author: Betts Basic Readers, 1948; Betts-Arey Directed Spelling Activities; Betts-Greene Daily Drills in Lang. Skills. Ed.: Amer. Adventure Series. Contrb. to: Various Ednl. Publs. Gen. Int.: A Physiological Approach to Analysis of Reading Difficulties. Hobbies: Aviation; Staff Officer, Pa. Wing C.A.P., U.S.A.F.; Radio. Listed in: Who's Who in the East.

BETTS, Gilbert Lee, Dir. of Personnel Service Dept., Educational Test Bureau, 720 Washington Ave., S. E., Minneapolis, Minn. EDUCATIONAL PSYCHOLOGY.

BETZ, George C., Metal and Thermit Corp., 100 E. 42nd St., N. Y. 17, N. Y. CERAMICS.

BEUTNER, Reinhard Heinrich, Prof. of Pharmacol., Hahnemann Med. Coll., Philadelphia, Pa. PHARMACOLOGY.

BEVAN, Arthur, 46 Righters Mill Rd., Penn Valley, Narbeth, Pa. AGRICULTURE.

BEVAN, Arthur Charles, Prin. Geologist, Ill. Geol. Survey, 137 Natural Resources Bldg., Urbana, Ill. GEOLOGY (STRATIGRAPHY, STRUCTURAL, GEOMORPHOLOGY, INDUSTRIAL MINERALS).

BETTS, Robert Edward. Librarian, Tex. Engrs. Library, College Station, Tex. **THE ADMINISTRATION AND DEVELOPMENT OF TECHNOLOGY LIBRARIES.** b.



New Bern. N. C., Apr. 11, 1907. s. James Russell and Lois Thomas (Autrey) B. Edn.: A.B., Univ. of N. C., 1932; B.S., George Peabody Coll. for Tehrs., 1942. Exp.: Library Asst., Soc. Security Bd. Library, Washington, D. C., 1942; Library Asst. and Binding Reviser and Statistician, Library of Congress, Washington, D. C., 1943-45; Chf. of Stacks, U. S. Dept. of Agri. Library, Washington, D. C., 1945; Selec-

tor and Searcher, Acquisitions Div., Army Med. Lib., Wash. D. C., 1946-47; Librn., Iowa Wesleyan Coll., Mt. Pleasant, Iowa, 1947-48; Librn., Tex. Engrs. Library, Coll. Sta., Tex., 1948—. Hon. Pos.: Charter Mem. and First Treas., Tex. Chapt., Special Libraries Assn., 1949-50; Chmn., Pure and Applied Sci. Sect. of Assn. of Coll. and Reference Libraries, Amer. Library Assn., 1952-53. Mem.: Amer. Library Assn.; Assn. of Coll. and Reference Libraries; Special Libraries Assn.; Amer. Soc. for Engrng. Edn. Contrb. to: Special Libraries. Gen. Int.: Compiler of Bibliography of Soil Mechanics and the Uses of Asphalt and Cement in Paving Roads, in Soils Lab. Manual, Engr. Sect., Headquarters Fourth Army, Ft. Sam Houston, Tex., 1950. Special Int.: Preparation of Several Lists of Basic Engrng. Books and Periodicals for Different Types of Public and Special Libraries; Compiler of a Number of Bibliographies on Scientific and Tech. Subjects.

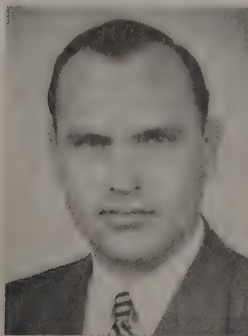
BEVELANDER, Gerrit. N. Y. Univ., N. Y. C. DENTISTRY.

BEVIER, George, Staff Mem., Internatl. Health Div., Rockefeller Foundation. N. Y., N. Y. **PUBLIC HEALTH.**

BEVIN, Sydney, Chf. Engr., Fiske Bros. Refining Co., Toledo, Ohio. **MECHANICAL ENGINEERING.**

BEVIS, Howard Landis, Pres., Ohio State Univ., Columbus, Ohio. **EDUCATION.**

BEWICK, Howard A., Asst. Chf. of Rsch., Solvay Process Div., Allied Chem. and Dye Corp., Syracuse 1, N. Y. **ALKALIES, ORGANIC PROCESSES, ANALYTICAL CHEMISTRY.** b.



Toronto, Can., Sept. 9, 1916. s. Albany and Maude (Coupland) B. Edn.: B.A., Univ. of Toronto, 1940; M.A., ibid., 1941; Ph.D., ibid., 1945. m. Lenore Isobel, Apr. 28, 1945. c.: Paul H. and Brenda M. Exp.: Rsch. Chem., Imperial Oil Co., Sarnia, Can., 1943-44; Rsch. Chem., Natl. Rsch. Coun., Univ. of Toronto, Toronto, Can., 1944-46; Analytical Supervisor, 1946-51; Rsch. Supervisor, 1951;

Asst. Chief of Rsch., 1951—; Solvay Process Div., Allied Chem. and Dye, Syracuse, N. Y. Mem.: Amer. Chem. Soc.; Amer. Soc. Qual. Control.; Electrochem. Soc.; Amer. Mgmt. Assn. Contrb. to: Analytical Chem. Special Int.: Alkalies, Mercury Cells for Chlorine, Chlorinated Organics, Trace Constituents in Inorganic Chem.

BEWLEY, L. V., Prof. Dept. of Elec. Engrng. and Dir. of Curriculum in Elec. Engrng., Lehigh Univ., Bethlehem, Pa. **ELECTRICAL POWER ENGINEERING AND LIGHTNING PROTECTION.**

BEYER, Harold George, 8848 212th Pl., Queens Village, N. Y. **PHYSICS.**

BEYER, Warren Wilk, Engr., C & CCC, UC & CC, Oak Ridge, Tenn. 100 Panama Rd., Oak Ridge, Tenn. **PRECISION ELECTRONIC ANALYTICAL INSTRUMENTATION.** b.



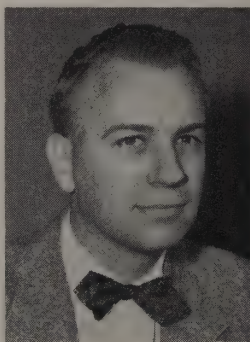
Neenah, Wis., Feb. 22, 1921. s. Charles and Adala R. (Pfund) B. Edn.: B.S.E.E., Univ. of Wis., 1947. m. Billye Ruth, May 14, 1948. c.: Susan Mellisa. Exp.: Engr. and Electronic Dev., Tenn. East., Oak Ridge, Tenn., 1944-46; Engr., C & CCC, UC & CC, Oak Ridge, Tenn., 1948—. Mem.: Amer. Chem. Soc.; A.A.A.S. Special Int.: Dev. of Instruments for Nuclear, Chem., and Isotopic

Analysis.

BIANCHI, Fred August, Assoc. Entomol., Expt. Sta., Hawaiian Sugar Planters' Assn., Honolulu, Hawaii. **ENTOMOLOGY.** b. Guatemala City, C.A., June 17, 1905. s. Fridolino and Maria (de Bianchi) B. Edn.: B.A., Stanford Univ., 1930. m. Ruth Thomas, Apr. 30, 1937. Exp.: Assoc. Entomol., Expt. Sta., Hawaiian Sugar Planters' Assn., Honolulu, Hawaii, 1930—. Mem.: A.A.A.S. Contrb. to: Hawaiian Sugar Planters Record; Proc., Hawaiian Entomol. Soc. Spec. Int.: Biol. Control of Insect and Plant Pests; Taxonomy of Thysanoptera.

BIBB, Samuel Fletcher, Assoc. Prof. of Math., Tech. Center, 3300 Federal St., Chicago 16, Ill. **MATHEMATICS.**

BICE, Claude W., Mgr., Technical Rsch., The R. T. French Co., Rochester, N. Y. **AGRICULTURAL BIOCHEMISTRY.** b.



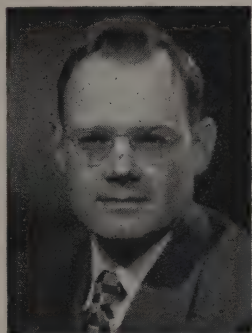
Kansas City, Missouri, May 3, 1918. s. C. F. and Woneta (Spencer) B. Edn.: B.S., Ft. Hays Kans. State Coll., 1940; M.S., ibid., 1943; Ph.D., Univ. of Minn., 1950. m. Eileen J. Van Wormer on Apr. 19, 1941. c.: Lawrence Kent; Susan Kaye. Exp.: Chemist, Northern Regional Rsch. Lab., Div. of Starch and Dextrose, U. S. Dept. Agri., Peoria, Ill., 1941-45; Rsch. Fellow, Div. of Agri. Biochem., Univ. of Minn., St. Paul, Minn., 1946-49; The R. T. French Co.,

Rochester, N. Y., 1950—; Mgr., Tech. Rsch., ibid., 1953—. Mem.: Amer. Chem. Soc.; Amer. Assn. of Cereal Chem.; Sigma Xi; Delta Epsilon; Sigma Tau Gamma. Contrb. to: Sci.; Cereal Chem.; Food Indus. War Record: U. S. N., 1945-46. Special Int.: Chem., Microscopy and Technol. of Starch, Cereals, and Condiments; Care and Nutrition of Small Animal Pets, Particularly Caged Birds.

BIBBY, Basil Glover, Prof. of Dentistry, Univ. of Rochester, Dir., Eastman Dental Dispensary, 800 E. Main St., Rochester, N. Y. **BACTERIOLOGY.** b. Wapawa, New Zealand, Oct. 6, 1904. s. James Woodhouse and Mary (Tod) B. Edn.: B.D.S., Univ. of Otago, New Zealand, 1927; Ph.D., Univ. of Rochester, 1935; D.M.D., Tufts Coll. Dental Schl., 1939. m. Beatrice Boardman, 1933. c.: Ruth; Anne; Susan; Douglas. Exp.: Asst., Christ church Hosp., 1928; Instr. in Operative Dentistry, Otago Univ., New Zealand, 1929; Dental Practice (Locum Tenens), Wellington, New Zealand, 1930; Rockefeller Dental Fellow, Univ. of Rochester, Rochester, N. Y., 1930-33; Sr. Rockefeller Dental Fellow, ibid., 1933-35; Recipient of the Benjamin Lord Prize First District Dental Soc., 1934; Consultant, Eastman Dental Dispensary, 1937-38; Asst. Prof. of

Dentistry, Univ. of Rochester, 1936-38; Tufts Coll. Dental Schl., Dean and Prof. of Bacteriol. in Tufts Med. and Dental Schls., 1940-47; Dir., Eastman Dental Dispensary, Prof. of Dentistry, Univ. of Rochester Schl. of Med. and Dentistry, 1947—Hon. Pos.: Past Pres. of Central N. Y. Soc. Amer. Bacteriologists; Adv. Comm., Armed Forces Med. Library; Alumni Trustee Tufts Coll., 1948—; Hon. Mem. Sociedad Odontologia de Chile; Assn. de Odontologia del Peru; Past-Pres. of I.A.D.R.; Past-Pres., Pan. Amer. Odontological Soc.; Editor, Biol. Abstracts (Section on Oral Bacteriol. and Teeth and Associated Structures); Com. on Indexing Med. Literature of the Armed Forces Med. Library. Mem.: Amer. Dental Assn.; Mass. Dental Soc.; New England Dental Soc.; Amer. Acad. Dental Sci.; Internatl. Assn. of Dental Rsch.; Soc. Amer. Bacteriologists; Sigma Xi; Rotary Club. Contrb. to: Jour. Dental Rsch.; Jour. Amer. Dental Assn.; Biol. Abstracts; Dental Survey; Bacteriol. Revs.; Jour. Bacteriol. Special Int.: Prevention of Dental Caries. Gen. Int.: Alpha Omega Distinguished Service Award, 1949; Recipient of Chicago Dental Soc. Prize, 1950.

BICE, Richard A., Engrng. Dept. Mgr., Sandia Corp., Albuquerque, N. Mex. **DEVELOPMENT ENGINEERING IN FIELD OF ATOMIC ORDNANCE.** b. Longmont, Colo., June 6, 1917. s. Edwin S. and Elizabeth (Avery) B. Edn.: B.S.M.E., Colo. State A. and M. Coll. 1939. m. Margaret Fite. 1939. c.: Stephen R. Exp.: Field Engr., Development of Sugar Beet Planting and Harvesting. Univ. of Calif., Ft. Collins, Colo., 1939-40; Rsch. Engr., Rsch. Labs., Westinghouse Elec. and Mfg. Co., E. Pittsburgh, Pa., 1940-45; Alternate Group Leader, Los Alamos Sci.



Labs., Los Alamos, N. Mex., 1945-46; Operation Crossroads, Field Team Leader, ibid., 1946; Asst. to Dir. Sandia Branch, ibid., 1947; Engrng. Dept. Mgr., ibid., 1948-49; Engrng. Dept. Mgr., Sandia Corp., Albuquerque, N. Mex., 1949—. Mem.: Amer. Soc. of Mech. Engrng.; Phi Delta Theta; Pi Tau Sigma; Sigma Tau. Special Int.: Lubrication and Atomic Ordnance.

BICHACOFF, Billie Delores, Physician and Surgeon, 615 W. Wayne St., Fort Wayne, Ind. **ORGANIC CHEMISTRY, ALSO MEDICINE.** b. La Fontaine, Ind., Feb. 13, 1920. d. Stoyan and Sara (Badger) B. Edn.: B.S., Northwestern Univ., 1942; M.S., Univ. of Chicago, 1945; M.D., Johns Hopkins Univ., 1950. Exp.: Internship, Wesley Memorial Hosp., Chicago, Ill., 1950-51. Mem.: Amer. Chem. Soc.; A.A.A.S.; A.M.A.; A.A.U.W.; Delta Zeta.

BIDDLE, Anna E., Tehr., S. Philadelphia H. S. for Girls, 1045 Drexel Ave., Drexel Hill, Pa. **PSYCHOLOGY.**

BIDDLE, Russell Lee, Assoc. Prof. of Biol., Coll. of the City of N. Y., 139th St. and Convent Ave., N. Y. 31, N. Y. **GENETICS.**

BIDDULPH, Orlin, Prof. of Botany, State Coll. of Wash., Pullman, Wash. **PLANT PHYSIOLOGY.**

BIERRING, Walter Lawrence, State Commissioner of Health, State Dept. of Health, 1210 Bankers Trust Bldg., Des Moines, Iowa. **INTERNAL MEDICINE, PUBLIC HEALTH.**

BIESTER, Alice, Prof. of Nutrition, Univ. Farm, Univ. of Minn., St. Paul, Minn. **HUMAN NUTRITION.**

BIETER, Raymond N., Assoc. Prof. of Pharmacol., Med. Schl., Univ. of Minn., Minneapolis, Minn. **PHARMACOLOGY.**

BIGELOW, Henry Bryant, Harvard Univ., Cambridge, Mass.

BIDWELL, Richard Macpherson, Staff Mem., Los Alamos Scientific Lab., Box 1663, Los Alamos, N. Mex.



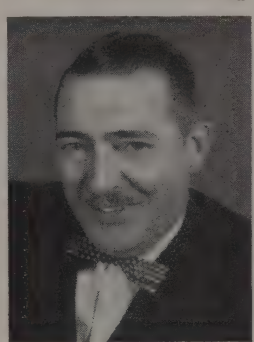
INORGANIC CHEMISTRY. b. Rochester N. Y., Dec. 31, 1919. s. William M. and Muriel (Macpherson) B. Edn.: B.S., Univ. of Rochester, 1941; M.S., Western Reserve Univ., 1948; Ph.D., ibid., 1950. Exp.: Tech., DuPont Co., Niagara Falls, N. Y., 1941; Asst. in Chem., Brown Univ., Providence, R. I., 1941-42; Jr. Rsch. Chem., ibid., 1942-44; Rsch. Chem., Carbide and Carbon Chem. Corp., N. Y. and Oak Ridge, 1944-46; Harshaw Fellow in Chem., Western Reserve

Univ. Cleveland, Ohio, 1946-49; Staff Mem., Los Alamos Sci. Lab., Los Alamos, N. Mex., 1949—. Mem.: Amer. Chem. Soc.; Amer. Inst. of Chem. Engrs.; Sigma Xi; Theta Pi Sigma. Contrb. to: Chem. Rev.; Jour. of Amer. Chem. Soc. Special Int.: Solubility, Critical Temp. Phenomena, High Pressure Reactions, Nuclear Chem. and Odd Valence States.

BIGELOW, Lucius A., Assoc. Prof. of Chem., Duke Univ., Durham, N. C.

BIGELOW, Maurice Alpheus, Prof. Emer. Biol., Tehrs. Coll., Columbia Univ., 525 W. 120th St., N. Y., N. Y. **ZOOLOGY, EMBRYOLOGY.**

BIGELOW, Maurice Hubbard, Tech. Dir., Plaskon Div., Libbey-Owens-Ford Glass Co., Toledo, Ohio.



CHEMISTRY. b. New Haven, Conn., Oct. 25, 1903. s. Joseph O. and Betha (Findeisen) B. Edn.: B.Ch.E., Northeastern Univ., 1924; Ph.D., Univ. of Pittsburgh, 1933. Exp.: Chemist, Lever Brothers Soap Co., Cambridge, Mass., 1924-25; Hd. Dept. of Sci., Amer. Coll., Salonica, Greece, 1925-28; Instr., Univ. of Pittsburgh, Pittsburgh, Pa., 1928-33; Fellow, Mellon Inst. of Indus. Rsch., Pittsburgh, Pa., 1933-35; Dir. of Tech. Service, Plaskon Co., Inc., Toledo, Ohio, 1935-42; Tech. Dir., Plaskon Div., Libbey-Owens-Ford Glass Co., Toledo, Ohio, 1946—.

Mem.: Amer. Chem. Soc.; Amer. Inst. of Chem. Engrs.; Amer. Ordnance Assn.; Amer. Soc. for Testing Materials; Ohio Acad. of Sci.; Sigma Xi; Phi Lambda Upsilon; Alpha Chi Sigma. Author: The New Plastics, 1945; Handbook of Plastics, 1949; Acetylene and Carbon Monoxide Chem., 1949. Contrb. to: Chem. Engrng.; Armed Forces Chem. Jour.; Jour. of Chem. Edn.; Jour. of Amer. Ceramic Soc. Special Int.: Acetylene Chem.; Plastics and Glass.

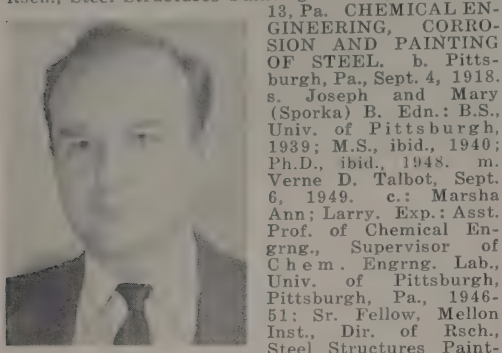
BIGELOW, Robert Payne, Prof. Emer. Zool. and Parasitology, Mass. Inst. of Tech., 72 Blake Rd., Brookline, Mass. **ZOOLOGY.**

BIGGER, John Henry, Assoc. Entomologist, Ill. Natural History Survey, 1018 W. John St., Champaign, Ill. **ENTOMOLOGY.**

BILLHARTZ, W. H., Product Development Physicist, Pittsburgh Corning Corp., Port Allegany, Pa. **OPTICS.** b. Pittsburgh, Pa., Aug. 30, 1908. s. William Henry and Mabel (Foust) B. Edn.: B.S., Univ. of Pittsburgh, 1930; M.S., ibid., 1934; Ed.M., ibid., 1936; Ph.D., ibid., 1938. m. Rose McClain, June 29, 1939. c.: Carol Jeannette. Exp.: Physics and Dir. Visual Edn., H. S., Bellaire, Ohio, 1936-42; Consultant, Amer. Window Glass Co., 1935-42; Hd., Phys. and Math., Franklin Coll. of Ind.,

1942-46; Hd. Phys. and Math., Morehead State Coll., Ky., 1946-47; Hd. Phys., Western Coll., Oxford, Ohio, 1947-50; Consultant, E. Berninghouse Co. and Tatterman Marionettes, 1950-51; Physicist, Pittsburgh Corning Corp., Port Allegany, Pa., 1951—. Mem.: Amer. Phys. Soc.; Optical Soc. of Amer.; A.A.P.T.; Illuminating Engrng. Soc.; Phi Delta Kappa. Contbr. to: Jour. Acoustical Soc.; Schl. and Soc.; Illumination Engrng. Special Int.: Glass and Optics.

BIGOS, Joseph, Sr. Fellow, Mellon Inst., and Dir. of Rsch., Steel Structures Painting Council, Pittsburgh



13, Pa. **CHEMICAL ENGINEERING, CORROSION AND PAINTING OF STEEL**. b. Pittsburgh, Pa., Sept. 4, 1918. s. Joseph and Mary (Sporka) B. Edn.: B.S., Univ. of Pittsburgh, 1939; M.S., *ibid.*, 1940; Ph.D., *ibid.*, 1948. m. Verne D. Talbot, Sept. 6, 1949. c.: Marsha Ann; Larry. Exp.: Asst. Prof. of Chemical Engrng., Supervisor of Chem. Engrng. Lab., Univ. of Pittsburgh, Pittsburgh, Pa., 1946-51; Sr. Fellow, Mellon Inst., Dir. of Rsch., Steel Structures Painting Council, Pittsburgh, Pa., 1951—. Mem.: Sigma Tau; Phi Lambda Upsilon; Amer. Chem. Soc.; Amer. Inst. of Chem. Engrs.; Natl. Assn. of Corrosion Engrs.; A.A.U.P.; Sigma Xi. Special Int.: Corrosion; Paints; Cleaning and Painting of Steel; Chem. Engrng. Author: Distillation Theory, 1947; Lab. Manual of Chem. Engrng., 1949; Graphical Solutions of Leaching and Extraction Operations, 1950.

BILLIG, Florence Grace, Prof. of Sci. Edn. and Supt. of Sci., Elem. Schls., Coll. of Edn., Wayne Univ., Detroit, Mich. **BIOLOGY, SCIENCE EDUCATION**.

BILLINGS, Bruce Hadley, Dir. of Rsch., Baird Assoc., Inc., 33 Univ. Rd., Cambridge 38, Mass. **PHYSICS**.

BILLINGS, Frederick Horatio, retired, 260 High Dr., Laguna Beach, Calif. **BOTANY**.

BILLINGS, Hannah Louisa, Assoc. Prof., Smith Coll., Hatfield, Mass. **PHYSICS**.

BILLINGS, John Harland, Hd., Dept. of Mech. Engrng., Drexel Inst. of Tech., Philadelphia, Pa. **MECHANICAL ENGINEERING**.

BILLINGS, Marland Pratt, Prof. of Geol., Geol. Museum, Oxford St., Cambridge 38, Mass. **GEOLOGY**.

BILLINGS, William Dwight, Assoc. Prof. of Biol., Univ. of Nev., Reno, Nev. **PLANT ECOLOGY**.

BILLINGSLEA, Fred Yarnell, Asst. Prof. of Psychol., Mich. State Coll., East Lansing, Mich. **PSYCHOLOGY**.

BILLINGSLEY, Paul, Consulting Mining Geologist, S. Amer. Development Co., Burton, Wash. **MINING GEOLOGY**.

BILLS, Charles Everett, Rsch. Dir., Mead Johnson and Co., Evansville, Ind. **BIOCHEMISTRY**.

BILLS, Marion Almira, Asst. Secy., Aetna Life Ins. Co., Hartford Conn. **PSYCHOLOGY**.

BILOON, Sol, Asst. Clinical Prof. of Med., Columbia Univ., 1882 Grand Concourse, N. Y., N. Y. **INTERNAL MEDICINE**.

BILSING, Scherman Weaver, Hd., Dept. of Entomol., Tex. A. and M. Coll., College Station, Tex. **ZOOLOGY**.

BINDER, Raymond Charles, Prof. of Mech. Engrng., Schl. of Mechanical Engrng., Purdue Univ., West

Lafayette, Ind. **MECHANICAL ENGINEERING—FLUID MECHANICS AND FLUID MACHINERY**. b. Chicago, Illinois, July 25, 1907. s. Robert E. and Theresa (Schindler) B. Edn.: Ph.D., Calif. Inst. of Tech., 1936; M.S., *ibid.*, 1933; S.B., Mass. Inst. of Tech., 1930. m. Elizabeth Timberlake of Lafayette, Ind., Aug., 1937. d. Frank B. Timberlake. c.: Carol. Exp.: Prof. of Mech. Engrng., 1944 to present; Assoc. Prof. of Mech. Engrng., 1940-44; Asst. Prof. of Mech. Engrng., 1937-40, all at Purdue Univ.; Jr. Engr., Grad. Asst., and Grad. Student at Calif. Inst. of Tech., 1931-36; Instr., Mech. Engrng., Purdue Univ., 1936-37; Asst. Prof., *ibid.*, 1937-40; Assoc. Prof., *ibid.*, 1940-44; Prof., *ibid.*, 1944—. Hon. Pos.: Amer. Soc. Mech. Engrng., Fluid Meters Comm.; Chmn. of A.S.M.E. Power Test Codes Comm. on Safety and Relief Valves. Mem.: Amer. Soc. of Mech. Engrng.; Inst. of Aeronautical Sci.; Amer. Soc. for Engrng. Edn.; Sigma Xi; Tau Beta Pi; Pi Tau Sigma. Author: Fluid Mechanics, 1949; Advanced Fluid Dynamics and Fluid Machinery, 1950. Contbr. to: Over 30 Articles to Various Magazines and Periodicals. Ph.D. Dissertation: Investigation of the Instantaneous Velocity Distribution in the Volute of a Centrifugal Pump. Gen. Int.: Now in Charge of Fluid Mechanics Instruction and Rsch. at Purdue Univ. Listed in: Who's Who in Amer.; A. M. S.; Who's Who in Engrng.

BINFORD, Raymond, Pres. Emer., Guilford Coll., Guilford Coll., N. C. **ZOOLOGY**.

BING, Franklin Church, Dir., Amer. Inst. Baking, 1135 Fullerton Ave., Chicago, Ill. **BIOCHEMISTRY**.

BING, R. H., Prof. of Math., Univ. of Wis., Madison, Wis. **MATHEMATICS**.

BINGHAM, Harold Clyde, Vocational Advisement Supvr., U. S. Veterans Admin., 5221 Massachusetts Ave., Washington, D. C. **PSYCHOLOGY**.

BINGHAM, Walter Van Dyke, Private Practice, 1661 Crescent Pl., Washington, D. C., **PSYCHOLOGY**.

BINGLEY, George A., Tutor, St. John's Coll., 42 East St., Annapolis, Md. **MATHEMATICS**.

BIRCH, Albert Francis, Harvard Univ., Cambridge 38, Mass.

BIRCH, Francis, Harvard Univ., Cambridge, Mass. **GEOLOGY**.

BIRCH, Raymond Embree, Dir. of Rsch., Harbison-Walker Refractories Co., Farmers Bank Bldg., Pittsburgh, Pa. **GEOLOGY AND GENERAL SCIENCE**.

BIRCHER, Louis Jacob, Prof. of Physical Chem., Vanderbilt Univ., Nashville, Tenn. **PHYSICAL CHEMISTRY**.

BIRD, Emerson Wheat, Assoc. Prof. of Dairy Industry and Chem., Iowa State Coll., Ames, Iowa. **CHEMISTRY**.

BIRD, Grace Electra, Prof. Emer. of Psychol., R. I. Coll. of Edn., 157 Cypress St., Providence, R. I. **PSYCHOLOGY**.

BIRD, H. R., Univ. of Wis., Poultry Husbandry Dept., Madison, Wis. **NUTRITION**.

BIRD, Harold Crusius, Chmn., Dept. of Civil Engrng., Duke Univ., Durham, N. C. **CIVIL ENGINEERING**.

BIRD, Henry, 600 Milton Rd., Rye, N. Y. **ENTOMOLOGY AND GENERAL SCIENCE**.

BIRD, Junius, Asst. Curator of Anthropol., Amer. Museum Natural History, 77th St. and Central Park, West N. Y., N. Y. **ANTHROPOLOGY**.

BIRD, Ralph Durham, Entomologist, Dominion Entomol. Lab., Box 250, Brandon, Man., Can. **ENTOMOLOGY**.

BIRDSALL, Lewis I., Specialist, Sulfate of Alumina, General Chemical Co., 3357 W. 47th Pl., Chicago, Ill. **CHEMISTRY**.

BIRGE, Edward Ashabel, Pres. Emer., Dept. of Biol., Univ. of Wis., 2011 Van Hise Ave., Madison, Wis. LIMNOLOGY.

BIRGE, Raymond Thayer, Univ. of Calif., Berkeley, Calif.

BIRKELAND, Charles John, Prof. of Horticulture and Head Department, Univ. of Ill., Urbana, Ill. HORTICULTURE GENETICS. b. April 16, 1916, Warwick, N. D. s. John J. and Harriet Agnes (Watts) B. Edn.: N. D. State Coll., 1935-37; B.S., Mich. State Coll., 1939; M.S., Kans. State Coll., 1941; Ph.D., Univ. of Ill., 1947. m. Wilma Florine Evans of Hutchinson, Kans., Dec. 25, 1941. d. R. L. Evans. c.: Charles Evans; Jan's Lynn; John Richard. Exp.: Graduate Research Asst. in Horticulture, Kans. State Coll., 1939-41; Asst. Horticulturist, *ibid.*, 1941-46; Asst. in Pomology, Univ. of Ill., 1946-47; Asst. Prof. Pomol., 1947-48; Asst. Prof. Plant Breeding, 1948-49; Act. Hd. Dept. Hort., 1949-50; Prof. of Hort. and Hd. Dept., 1950—. Mem.: Phi Kappa Phi; Sigma Xi; Gamma Sigma Delta; Alpha Zeta; Phi Sigma; Lincoln Debate Club; A.S.H.S.; A.A.A.S.; A.P.S.; Ill. State Hort. Soc.; R.O.A.; Alpha Gamma Rho. Contrb. to: Amer. Soc. Hort. Sci. Ph.D. Dissertation: A Study of the Internal Structure of Apple Leaves of Varieties, Species and Hybrids, with Special Reference to Growth and Fruitfulness. War Record: U. S. Navy, N.T.S., Port Dir. Operation Officer, San Francisco and Okinawa, 1943-46; Ensign to Sr. Grade Lt. Gen. Int.: Sigma Xi Rsch. Award. Hobbies: Golf; Archery; Hunting. Listed in: A.M.S.; Who Knows—What. Special Int.: Pomological Physiol. and Genet'cs.

BIRKELAND, Jorgen M., Assoc. Prof. of Bacteriol., Ohio State Univ., Columbus, Ohio. BACTERIOLOGY.

BISBEY, Bertha, Prof. of Nutrition, Dept. of Home Econ., Univ. of Mo., Columbia, Mo. NUTRITION.

BISCH, Louis Edward, 515 Madison Ave., N. Y., N. Y. PSYCHIATRY.

BISCHOFF, Fritz Emil, Dir. of Rsch., Santa Barbara Cottage Hosp. Rsch. Inst., Santa Barbara, Calif. BIOCHEMISTRY. b. Milwaukee, Wis., May 21, 1899. s. Emil A. and Elsie (Meyer) B. Edn.: B.S., Univ. of Wis., 1920; M.S., *ibid.*, 1922; Ph.D., *ibid.*, 1924. Exp.: Rsch. Chemist and Plant Supvr., Newport Chem. Co., Carrollville, Wis., 1920-21; Rsch. on Thio Indigo Dyes, E. I. du Pont de Nemours Co., Wilmington, Del., 1924-25; Rsch. Chemist, Santa Barbara Cottage Hosp., Santa Barbara, Calif., 1925-28; Dir. of Clinical Chem. Labs., *ibid.*, 1928-48; Dir. of Rsch., Santa Barbara Cottage Hosp. Rsch. Inst., 1939—. Hon. Pos.: Certified Clinical Chemist, Amer. Bd. of Clinical Chem.; Natl. Exec. Com., Amer. Assn. Clinical Chemists, 1951-52; Advisory Trustee, Internatl. Cancer Rsch. Foundation, 1946-48. Mem.: Amer. Chem. Soc.; Amer. Inst. of Nutrition; Amer. Assn. for Cancer Rsch.; Amer. Soc. of Biol. Chemists; Amer. Assn. Clinical Chemists; Phi Beta Kappa; Sigma Xi; Phi Lambda Upsilon. Contrb. to: Jour. Amer. Chem. Soc.; Jour. Amer. Pharm. Assn.; Jour. Biol. Chem.; Jour. Pharm. and Expt. Therap.; Amer. Jour. Physiol.; Jour. Nutrition; Sci.; Amer. Jour. Cancer; etc. War Record: World War I, Private, 1918. Gen. Int.: Development of Delayed Acting Hormones, especially Insulin; Chem. of Hormones. Special Int.: Rsch. on Contact Catalysis, Volatile Oils, Sulfur Dyes, Chem. Protein on Hormones, Chem. Lead Poisoning, Chemotherapy in Cancer, Hyperthermia, Insulin, Pituitary, Carbohydrate Metabolism; Clinical Rsch. on the Acid Base Balance in Man; Cancer Rsch. as Related to Hormones, Sex Hormones.

BISHOP, Frederic L., Am. Window Glass Co., Rsch. Dept., Turtle Creek, R. R. 2, Pa. CERAMICS.

BISHOP, Howard Berkey, Pres., Human Engrng. Foundation, 33 Prospect Hill Ave., Summit, N. J. HUMAN ENGINEERING.

BISHOPP, Fred Corry, Asst. Chf., Bureau of Entomol. and Plant Quarantine, U. S. Dept. of Agri., Washington 25, D. C.



ENTOMOLOGY. b. Virginia Dale, Colo., Jan. 14, 1884. s. Thomas Barton and Harriet Caroline (McKay) B. Edn.: B.S., Colo. A. and M. Coll., 1902; M.S., *ibid.*, 1926; Ph.D., Ohio State Univ., 1932. m. Eulalie Virginia Spencer, Dec. 9, 1908. c.: Harriett Eloise; Fred Thomas; Howard Spencer (dec.); Hazel Eulalie. Exp.: Fellowship, Colo. A. and M. Coll., 1902-04; Asst. Prof. of Zool. and Entomol. and Asst. State Entomologist, Univ. of Md., 1904-05; Special

Field Agent U. S. Bureau of Entomol. and Plant Quarantine, U. S. Dept. of Agri., 1905-08; Asst. Entomologist, *ibid.*, 1908-11; Entomologist, *ibid.*, 1911-26; Chf., Div. of Insect Affecting Man and Animals, *ibid.*, 1926-41; Asst. Chf. in Chg. of Rsch., *ibid.*, 1941—. Hon. Pos.: Mem., Bd. of Dir., Georgas Memorial Inst.; Hermann Biggs Memorial Lectr., N. Y. Acad. Med., 1945. Mem.: Fellow, A.A.A.S.; Fellow, Entomol. Soc. Amer.; Fellow, Amer. Pub. Health Assn.; Amer. Assn. Econ. Entomologists (Pres., 1937); Amer. Soc. Parasitologists (Pres., 1938); Wash. Acad. Sci.; Entomol. Soc. of Wash. (Pres., 1932); Amer. Soc. Tropical Med. and Hygiene; Acad. Tropical Med.; Natl. Malaria Soc.; Amer. Mosquito Control Assn. (Vice-Pres., 1952); Biol. Soc. of Wash.; Sigma Xi; Phi Kappa Phi. Contrb. to: Popular Sci. Monthly; Science; Yearbook, U. S. Dept. of Agri.; Soap and Sanitary Chem.; Agril. Chem.; Pest Control. Gen. Int.: Directed early rsch. and development of DDT and recommended its adoption as a delousing agent for military use, 1943. Special Int.: Biol. and Control of Insects and Ticks of Med. and Veterinary Importance! Taxonomy of Ticks; Control of Various Crop Pests and Household Insects.

BISELL, Malcolm Havens, retired, Box 40, Rt. 1, Calistoga, Calif. CLIMATOLOGY AND REGIONAL GEOGRAPHY.

BISSONNETTE, Thomas Hume, J. Pierpont Morgan Prof. of Biol. and Hd. Dept., Trinity Coll., Hartford, Conn. PHYSIOLOGY REPRODUCTION AND PHOTOPERIODIC CYCLES.

BITTINGER, Charles, 3403 Q St., N. W., Washington, D. C. PHYSICS.

BIXLER, Roy White, Regional Dir., Div. Surplus Property Utilization, U. S. Office of Edn., 5638 S. Waterbury Rd., Des Moines, Iowa. EDUCATION.

BJERKNES, Jacob, Univ. of Calif., Los Angeles 24, Calif.

BLACK, Archie, Hd., Nutritional Products Development Lab., E. R. Squibb and Sons, New Brunswick, N. J. NUTRITION.

BLACK, Arthur P., Physician, 2735 Federal St., El Paso, Tex. PEDIATRICS.

BLACK, James Gilbert, Eastern State Tchrs. Coll., Richmond, Ky. MATHEMATICS, PHYSICS.

BLACK, James Harvey, Consultant in Med., Southwestern Med. Coll., 1719 Pacific Ave., Dallas 1, Texas. ALLERGY.

BLACK, John W., SPEECH AND HEARING.

BLACK, Knox Charlton, Bus. Mgr., Polytech. Rsch. and Dev. Co., 55 Johnson St., Brooklyn 1, N. Y. PHYSICS AND ELECTRONIC ENGINEERING. b. Cambridge, Mass., Apr. 23, 1905. s. Ebenezer Charlton and Agnes (Knox) B. Edn.: A.B., Harvard Coll., 1924; A.M., Harvard Univ., 1926; Ph.D., *ibid.*, 1927. m. Margaret Henely (dec.). c. Margaret Anne; Eugene Charlton; John Gavin. 2nd m. Magda Kretschmann, Oct. 18, 1946. Exp.: Instr.,

Harvard Univ., Cambridge, Mass. 1927-29; Rsch. Physicist, Boonton Rsch. Corp., Boonton, N. J., 1929-30; Supvng. Engr., Bell Telephone Lab., N. Y., N. Y., 1930-43; Consultant, War Dept., 1941-45; Mgr., Field Engr. and Sales Div., Aircraft Radio Corp., Boonton, N. J., 1943-47; Chf. Engr., Air Associates, Teterboro, N. J., 1948-49; Consultant, Rsch. and Development Bd., Washington, D. C., 1949—; Chf. Scientist, Technical Adviser to Commander, Naval Air Development Center, Johnsville, Pa., 1949-1952; Bus. Mgr., Polytechnic Rsch. and Development Co., Inc. Brooklyn, N. Y., 1952—. Mem.: A.A.A.S.; Amer. Phys. Soc.; Amer. Acoustical Soc.; Inst. of Radio Engrs.; Inst. of Aeronautical Sci.; Phi Beta Kappa.

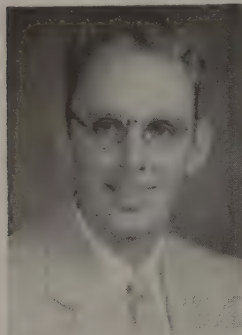
BLACK, Lindsay MacLeod, Prof. of Botany, Univ. of Ill., Urbana, Ill. PLANT PATHOLOGY.

BLACK, Newton Henry, Asst. Prof. Emer. of Physics, Jefferson Physical Lab., Harvard Univ., 21 Follen St., Cambridge, Mass. PHYSICS, ELECTRICITY.

BLACK, Richard J., N. Y. Med. Coll., N. Y. C. PROTEINS AND AMINO ACIDS.

BLACK, Richard Joseph, Rsch. Dir., C. M. Armstrong Co., 15 Cooper Rd., Scarsdale, N. Y. PHYSIOLOGICAL CHEMISTRY.

BLACK, Robert Foster, Rsch. Geologist, U. S. Geol. Survey, Washington 25, D. C. GEOLOGY. b. Dayton, Ohio, Feb. 1, 1918. s. Stanley C. and Margaret (Martin) B. Edn.: B.A., Coll. of Wooster, 1940; M.A., Syracuse Univ., 1942; Ph.D., Johns Hopkins Univ., 1953. m. Hernelda R. Lone, February 12, 1944. c.: John R. Exp.: Geol. Asst., Coll. of Wooster, Syracuse Univ. and Calif. Inst. of Tech., 1938-43; Geologist, Roosevelt Wildlife Comm., N. Y., 1941-42; Geol., U. S. Geol. Survey, Washington, D. C., 1943-45; Chf., Alaska Terrain and Permafrost Sect., U. S.



Geol. Survey, 1946-49; Research Geologist, 1950—. Mem.: Amer. Geophys. Union; Geol. Soc. of Washington; Sigma Xi; A.I.M.E.; Amer. Soc. of Photogrammetry; Fellow, Geol. Soc. of Amer.; Amer. Geog. Soc.; Amer. Polar Soc.; A.A.A.S.; Arctic Inst. N. Amer. Contrb. to: Bull., Geol. Soc. of Amer.; Amer. Geophys. Union Trans.; Geog. Rev.; Arctic; Jour. of Geol.; Photogrammetric Engrng. Jour. Special Int.: Permafrost; Arctic Geomorphol.; Pleistocene Geol.; Engrng. Geol.

BLACK, Rodney Elmer, Assoc. Prof. of Phys. Chem., Univ. of Ky., Lexington, Ky. PHYSICAL CHEMISTRY. b. Sept. 21, 1916, Pawhuska, Okla. s. Judge Elmer Julius and Maude Quick (Newman) B. Edn.: B.S., Okla. A. and M. Coll., 1938; M.S., Univ. of Wis., 1940; Ph.D., ibid., 1942. Exp.: Weston Fellow. Awarded by Electrochem. Soc., 1941-42; Rsch. Chem., Barrett Div., Allied Chem. and Dye Corp., Phila., Pa., 1942-43; Sr. Rsch. Chem., Phillips Pet. Co., Bartlesville, Okla., 1943-47; Prof. of Chem., Morningside Coll., Sioux City, Ia., 1947-51; Assoc. Prof. of Phys. Chem., Univ. of Ky., Lexington, Ky., 1951—. Mem.: A.C.S.; Amer. Assn. of Univ. Profs.; A.A.A.S.; Sigma Xi; Phi Kappa Phi; Alpha Chi Sigma; Phi Lambda Upsilon; Exchange Club. Contrb. to: Trans. of Electrochem.



Soc. Ph.D. Dissertation: Electrodeposition of Tungsten Alloys. Travel: N. Amer. Hobbies: Photography; Chess; Tennis. Listed in: Who's Who in Amer.; Chem. Who's Who; Who Knows—and What. Special Int.: Electrochemistry.

BLACKBERG, Solon Nathaniel, Dept. of Med., Chicago Med. Schl., 122 S. Michigan Ave., Chicago 3, Ill. PHARMACOLOGY AND NEUROMUSCULAR DISEASES.

BLACKHAM, Angus Udell, Asst. Prof. of Chem., Brigham Young Univ., Provo, Utah. CHEMISTRY: PHYSICAL, ORGANIC. b. East Ely, Nev., April 16, 1926. s. Angus and Mary Berniece (Christensen) B. Edn.: A.B., Brigham Young Univ., 1949; M.S., Univ. of Cincinnati, 1950; Ph.D., ibid., 1952. m. Lula Belle (Bamgartner) B., June 5, 1946. c. Patricia Lynn; Kathie Lee; Valerie. Exp.: Grad. Rsch. Fellow, Univ. of Cincinnati, Ohio, Cincinnati, Ohio, 1948-52; Asst. Prof., Brigham Young Univ., Provo, Utah, 1952—. Mem.: Am. Chem. Soc.; Sigma Xi; Phi Lambda Upsilon. Contrb. to: Jour. of Amer. Chem. Soc.; Industrial and Engr. Chem.; National Advisory Comm. for Aeronautics Technical Note Series. Special Int.: Combustion Chem.

BLACKMON, Gullie Hargrove, Horticulturist and Hd. Dept., Univ. of Fla., Agril. Expt. Station, Gainesville, Fla. HORTICULTURE.

BLACKSTONE, Donald LeRoy, Jr., Assoc. Prof. of Geol., Univ. of Wyo., Laramie, Wyo. STRUCTURAL GEOLOGY.

BLACKWELDER, Eliot, Emer., Head of Dept. of Geol., Stanford Univ., Stanford, Calif. GEOLOGY.

BLACKWELDER, Richard E., Assoc. Curator, Div. of Insects, U. S. Natl. Museum, Washington 25, D.C. SYSTEMATIC ZOOLOGY. b. Madison, Wis., Jan. 29, 1909. s. Eliot and Jean (Bowersock) B. Edn.: A.B., Stanford Univ., 1931; Ph.D., ibid., 1934. m. Ruth MacCoy, Jan. 3, 1935. Exp.: Walter Rathbone Bacon Travelling Scholar, Smithsonian Inst., Washington, D. C., 1935-38; Asst. Curator in Chg. of Coleoptera, Amer. Museum of Natural Hist., New York, N. Y., 1939-40; Asst. Curator of Insects, U. S. Natl. Museum, Washington, D. C., 1940-42; Assoc. Curator of Insects, ibid., 1942—. Mem.: A.A.A.S.; Soc. of Systematic Zool.; Pacific Coast Entomol. Soc.; N. Y. Entomol. Soc.; Societe linneenne de Lyon; Sociedad Brasileira de Entomologia. Contrb. to: Amer. Zool. Jours. Special Int.: Principles of Systematic Zool.; Zoological Nomenclature; Classification of Beetle Family Staphylinidae.

BLACKWELL, Ashby Carlyle, Dean and Prof. of Chem., Morris Harvey Coll., Charleston, W. Va. ORGANIC CHEMISTRY.

BLACKWELL, Otto Bernard, Asst. Vice-Pres., Am. Telephone and Telegraph Co., 195 Broadway, N. Y., N. Y. COMMUNICATION ENGINEERING.

BLACKWELL, Richard Quentin, Asst. Prof. of Chem., Northwestern Univ. Dental Schl., 311 E. Chicago Ave., Chicago 11, Ill. BIOCHEMISTRY. b. Wichita, Kans., Sept. 5, 1918. s. Virgil Richard and Ina LaVerne (Paisley) B. Edn.: A.B., Univ. of Wichita, 1942; Ph.D., Northwestern Univ., 1949. m. Anna Banfield Wren, Apr. 7, 1945. c.: Richard Quentin, Jr.; Mary Frances. Exp.: Rsch. Biochemist, Gauer and Black, Chicago, Ill., 1949-50; Lectr. of Chem., Northwestern Univ., 1949-50; Instr. of Chem., Northwestern Univ. Dental Schl., Chicago, Ill., 1950-51; Asst. Prof. of Chem., ibid., 1951—. Mem.: Amer. Chem. Soc.; Internatl. Assn. for Dental Rsch.; Alpha Chi Sigma; Phi Lambda Upsilon. Contrb. to: Jour. Amer. Chem. Soc.; Jour. Dental Rsch.; Sci.; Jour. Chem. Edn. War Record; U. S. Navy, 1944-46. Special Int.: Biochem. of Dental Caries; Dental Biochem.

BLACKWOOD, Oswald, Prof. of Physics, Univ. of Pittsburgh, Pittsburgh, Pa. PHYSICS.

BLAIN, Alexander W., Prof. of Clinical Surgery, Wayne Univ. 2201 Jefferson Ave., Detroit, Mich. SURGERY.

BLAIN, Walter Leroy, Prof. of Biol. and Hd., Sci. Dept., Southeastern State Coll., Durant, Okla. BIOLOGY.

BLAIR, Francis Wesley, Dir., Chem. Div., Procter and Gamble Co., Ivorydale, Ohio. CHEMISTRY.

BLAIR, James Stuart, Rsch. Chem., Am. Can Co., 903 S. Seventh Ave., Maywood, Ill. CHEMISTRY.

BLAIR, John Edward, Bacteriologist, Hosp. for Joint Diseases, 1919 Madison Ave., N. Y., N. Y. BACTERIOLOGY.

BLAIR, Julian M., 1101 Pennsylvania Ave. Boulder, Colo. PHYSICS, CHEMISTRY.

BLAIR, Marion W., 2131 S Center St., Terre Haute, Ind. CERAMICS.

BLAIR, Thomas Arthur, retired, 426 Marine St., La Jolla, Calif. METEOROLOGY.

BLAIR, V. P., 400 Metropolitan Bldg., St. Louis, Mo. MEDICINE.

BLAIR, William Reid, Dir. Emer., N. Y. Zool. Park, 271 College Rd., Riverdale, N. Y., N. Y. ZOOLOGY.

BLAKE, Archie, Hd. of the I.B.M. Computing Section, Cornell Aeronautical Lab., Buffalo 25, N. Y.

APPLIED MATHEMATICS. b. Washington, D. C., Nov. 24, 1906. s. John Charles and Jean (Archibald) B. Edn.: Ph.D. Univ. of Chicago, 1937. m. Bernice Lawrence, Jan., 1947. c.: Beverly. Exp.: Mathematician, U. S. Dept. of Commerce, 1931-44; Statistician, U. S. War Dept., 1944-50; Consultant in Applied Math., Mechanical Rsch. Corp., 1950-52; Hd. of the I.B.M. Computing Section, Cornell Aeronautical Lab., Buffalo, N. Y., 1952—. Mem.: Phi Beta Kappa.

Special Int.: Applied Math.; Inverse Probability; Digital Computing Machinery.

BLAKE, Charles Henry, Assoc. Prof. of Zool. Mass. Inst. of Tech., Cambridge, Mass. ENTOMOLOGY.

BLAKE, Edwin Mortimer, retired, P. O. Box 210, Mount Kisco, N. Y. GEOMETRIC DESIGN.

BLAKE, Frederick C., 1581 N. Grand Oakes Ave., Pasadena, Calif. PHYSICS.

BLAKESLEE, L. Robert, Prof. and Chm., Dept. of Arch. Engrng., Univ. of Detroit, 18218 Stoepe Ave., Detroit 21, Mich.

ARCHITECTURAL ENGINEERING: ARCHITECTURAL PRACTICE. b. Detroit, Mich., Dec. 21, 1905. s. Bert Norwood and Bessie Emma (Hall) B. Edn.: B.S. Univ. of Mich., 1928; M.S., ibid., 1939. m. Margaret Elizabeth Grozner, June 22, 1935. c. James Robert; Elaine Louise; Marie Margaret. Exp.: with R. S. Gerganoff, Architect, 1928-29; Prof. and Chmn., Dept. of Architectural Engrng., Univ. of Detroit, 1928—; In private practice of architecture, 1936—; Industrial Architect, Plymouth Div., Chrysler Corp., 1944-46. Mem.: Am. Soc. for Engrng. Edn.; Am. Inst. of Architects; Mich. Soc. of Architects; Mich. Engrng. Soc.; Engrng. Soc. of Detroit. Special Int.: Bldg. Construction and Design.

1936—; Industrial Architect, Plymouth Div., Chrysler Corp., 1944-46. Mem.: Am. Soc. for Engrng. Edn.; Am. Inst. of Architects; Mich. Soc. of Architects; Mich. Engrng. Soc.; Engrng. Soc. of Detroit. Special Int.: Bldg. Construction and Design.

BLAKE, Irving Hill, Prof. of Zool. and Anatomy, and Chmn. Dept., Univ. of Nebr., Lincoln, Nebr. ZOOLOGY.

BLAKE, John Twiss, Dir. of Rsch., Simplex Wire and Cable Co., 79 Sidney St., Cambridge, Mass. RUBBER, DIELECTRICS.

BLAKESLEE, Albert Francis, Smith Coll., Northampton, Mass.

BLALOCK, Alfred, Prof. of Surgery and Dir., Dept. of Surgery, The Johns Hopkins Univ., Surgeon-in-Chg., Johns Hopkins Hosp., Baltimore 5, Md. SURGERY. b. Culloden, Ga., Apr. 5, 1889. s. George Zaddock and Martha (Davis) B. Edn.: A.B. Univ. of Ga., 1918; M.D., Johns Hopkins Univ. Schl. of Med., 1922. Hon. Deg.: ScM., Yale Univ., 1946; M.D., Honoris Causa, Univ. of Turin, 1951; Sc.D., Univ. of Rochester, 1951; Sc.D., Univ. of Chicago, 1951; Sc.D., Lehigh Univ., 1953. m. Mary O'Bryan, October 27, 1930. c.: William Rice; Mary Elizabeth; Alfred Dandy. Exp.: Intern and Assistant Resident Surgeon, Johns Hopkins Hosp., Baltimore, Md., 1922-25; Resident Surgeon, Vanderbilt Univ. Hosp., Nashville, Tenn., 1925-26; Instr. in Surgery, ibid., Schl. of Med., 1925-27; Asst. Prof. of Surgery, ibid., 1928-30; Assoc. Prof., ibid., 1930-38; Prof., ibid., 1938-41; Prof. of Surgery and Dir., Dept. of Surgery, Johns Hopkins Univ., Schl. of Med., Baltimore, Md., 1941—; Surgeon-in-Chf., Johns Hopkins Hosp., ibid., 1941—. Hon. Pos.: Hon. Assoc. Consultant Surgeon to Guy's Hosp., London, 1947. Mem.: Natl. Acad. of Sci.; Royal Coll. of Surgeons of England, Hon. Fellow; Royal Soc. of Med., Hon. Fellow; Royal Faculty of Physicians and Surgeons of Glasgow, Hon. Fellow; Soc. of Thoracic Surgeons of Great Britain and Ireland, Hon. Mem.; British Cardiac Soc., Hon. Mem.; Amer. Clin. and Clin. Assn., Hon. Mem.; Chicago Surgical Soc., Hon.; Greek Surgical Soc., Hon. Fellow; Harvey Soc., Hon.; Horse Shoe Club, Hon. Mem.; Soc. Brasileira de Cardiologia, Hon.; Soc. of Univ. Surgeons; Acad. de Chirurgie; L'Acad. Natl. de Med.; Argentine Acad. of Surgery; Belgian Soc. of Surgery; Coll. Brasileiro de Cirurgioes; Royal Acad. of Med. of Belgium; A.A.A.S.; Amer. Assn. for Thoracic Surgery; Amer. Bd. of Surgery; Amer. Coll. of Surgeons; Amer. Med. Assn.; Amer. Soc. for Clin. Investigation; Amer. Surgical Assn.; Bd. of Thoracic Surgery; Internatl. Soc. of Surgery; Soc. of Clin. Surgery; Soc. for Vascular Surgery; Southern Med. Assn.; Southern Surgical Assn.; Alpha Omega Alpha; Nu Sigma Nu; Sigma Chi; Phi Beta Kappa. Author: Prin. of Surgical Care: Shock and Other Considerations, 1940. Contrb. to: Sci. Articles on Traumatic Shock, Hypertension, Myasthenia Gravis, Congenital Heart Disease, Acquired Heart Disease; Annals of Surgery; Arch. of Surgery; Surgery; Surgery, Gynecol., and Obstetrics; Jour. of Thoracic Surgery; Jour. of Amer. Med. Assn. Gen. Int.: Rsch. Medal, Southern Med. Assn., 1940; Chevalier de La Republique Francaise Order Natl. de la Legion de Honneur, 1947; Charles Mickle Fellowship, 1947; Passano Award, 1948; Rene Leriche Award, 1949; Matas Award, 1950; A.M.A. Distinguished Service Award, 1953.

BLANCHARD, Arthur A., Prof. Emer., Mass. Inst. of Tech., Cambridge, Mass. INORGANIC CHEMISTRY.

BLANCHARD, Kenneth Clark, Assoc. Prof. of Pharmacol., Johns Hopkins Med. Schl., Baltimore, Md. BIOCHEMISTRY.

BLANCHARD, Phyllis, Psychologist, Philadelphia Child Guidance Clinic, 1711 Fitzwater St., Philadelphia, Pa. PSYCHOLOGY.

BLANCK, Fred C., Mellon Inst. for Indus. Rsch., 203 Hoodridge Dr., Pittsburgh, Pa. CHEMISTRY.

BLANDAU, Richard J., Prof. of Anatomy, Schl. of Med., Univ. of Wash., Seattle, Wash. EMBRYOLOGY; PHYSIOLOGY OF REPRODUCTION. b. Aug. 5, 1911, Erie, Pa. s. Richard Albert and Kate (Lubbers) B. Edn.: A.B., Linfield Coll., 1935; Ph.D., Brown Univ., 1939; M.D., Univ. of Rochester, 1948. m. Olive Lewellen, Oct. 10, 1942. c.: Richard Lewellen. Exp.: Instr. in Biol., Brown Univ., Providence, R. I., 1939-42; Instr. in Anatomy,

Harvard Univ., Cambridge, Mass., 1942-43; Instr. in Anatomy, Univ. of Rochester, 1944-48; Asst. Prof., *ibid.*, 1948; Assoc. Prof. Anatomy, Univ. of Wash., Seattle, Wash., 1949-51; Prof. of Anatomy, *ibid.*, 1951—. Mem.: Sigma Xi; Amer. Assn. Anatomists; Soc. for Exptl. Biol. and Med.; Alpha Omega Alpha; Amer. Soc. for Study of Sterility. Special Int.: Mammalian Embryology; Physiol. of Reproduction; Physiol. of Eggs and Sperm.

BLANKENHORN, Marion Arthur, Prof. of Med., Univ. of Cincinnati, 6 Rural Lane, Cincinnati, Ohio. INTERNAL MEDICINE.

BLANKS, Robert Franklin, Vice-Pres. and Gen. Mgr., Great Western Aggregates, Inc., 510 Denver



Natl. Bldg., Denver 2, Colo. CIVIL ENGINEERING AND ENGINEERING MATERIALS. b. Maplehill, Kans., Sept. 4, 1900. s. Thomas F. and Vida (Fairbanks) B. Edn.: B.S., Kans. State Coll., 1924; C.E., *ibid.*, 1936. Hon. Deg.: D.Sc., Kans. State Coll., 1949. m. Laura Denman, May 26, 1922. c.: Robert F., Jr. Exp.: Municipal Engrng., Burley, Idaho, 1921; Cons. Engrng., Carey, Idaho, 1921; Instr., Sci. and Math., H. S. Burley, Idaho, 1921-22; Asst. Supt., *ibid.*, 1922-23; Instr., Sci. and Math., Athletic Coach, H. S. Hollister, Idaho, 1924-25; Asst. Supt. and Engr., Salmon River Canal Co., Hollister, Idaho, 1925-27; Hydraulic Investigations, State of Idaho, Idaho Falls, Idaho, 1928; Design Engrng., U. S. Indiana Irrigation Service, Blackfoot, Idaho, 1928-29; Investigation and Design Engrng., U. S. Corps of Engrs., Seattle, Wash., 1929-30; Design Investigation and Rsch. in All Branches of Engrng., U. S. Bureau of Reclamation, Denver, Colo., 1930-51; Vice-Pres. and Gen. Mfg., Great Western Aggregates, Inc., and Rsch. Consultant, Ideal Cement Co., Denver, Colo., 1951—. Mem.: A.S.C.E.; Natl. Rsch. Council; Amer. Soc. for Testing Material; Amer. Concrete Inst.; Amer. Soc. of Civil Engrs.; Natl. Soc. of Prof. Engrs.; Colo. Soc. of Engrs.; Sigma Tau; Sigma Xi. Author: Cement and Concrete Tech., 1952. Contrb. to: Civil Engrng.; Engrng. News-Record; Western Construction News; Proc., A.S.C.E.; Proc., A.C.I. Special Int.: Rsch., Engrng. and Engrng. Materials.

BLANTON, Franklin Sylvester, Lt. Col., C. O., 25th PMSD and Malaria Control Force, Fort Clayton, Canal Zone. MEDICAL ENTOMOLOGIST AND PARASITOLOGIST. b. Jones Mill, Ala., Dec. 12, 1902. s. Franklin H. and Martha (Lambert) B. Edn.: B.S.A., Univ. of Fla., 1929; M.S., Cornell Univ., 1941; Ph.D., *ibid.*, 1951. m. Audrey Quevedo, Jan. 8, 1941. c.: Virginia; Martha; Franklin. Exp.: Rsch. on Insects Affecting Agricultural Corps. Bureau of Entomol. and Plant Quarantine, 1929-42; Rsch. on Insects of Med. Importance, Philippine Islands, Japan, Alaska and Panama, 1942—; Preventive Med. Survey Dept., Ft. Clayton, Canal Zone, 1951—. Mem.: A.A.A.S.; Amer. Assn. Econ. Entomologists; Entomol. Soc. Amer.; N. Y. Entomol. Soc.; Wash. Entomol. Soc.; Fla. Entomol. Soc.; Isthmian Med. Soc.; Alpha Gamma Rho; Phi Sigma; Sigma Xi. Contrb. to: Jour. N. Y. Entomol. Soc.; Jour. Wash. Acad. Sci.; Jour. Parasitol.; Jour. Econ. Entomol.; Entomol. News; Canadian Entomologist. War Record: Private to Lt. Col., M.S.C., 1942—; Commendation Ribbon; Typhus Commission Medal. Gen. Int.: Studies on Drug Therapy for Control of Malaria in Panama; Studies on Jungle Yellow Fever.

BLASDALE, Walter Charles, Prof. Emer., 2514 College Ave., Berkeley, Calif. CHEMISTRY.

BLATHERWICK, Norman Robert, Dir. of Biochem. Lab., Metropolitan Life Ins. Co., 1 Madison Ave., N. Y., N. Y. BIOCHEMISTRY.

BLAU, Henry H., Federal Glass Co., E. Innis Ave., Columbus 7, Ohio. CERAMICS.

BLAU, Ludwig Wilhelm, Rsch. Consultant, Humble Oil and Refining Co., Houston, Tex. OIL EXPLORATION AND PRODUCTION.

BLAYDES, Glenn William, Prof. of Botany, Ohio State Univ., Columbus, Ohio. BOTANY.

BLAYNEY, J(ames) Roy, Prof. of Dental Surg. and Dir., Walter G. Zoller Mem. Dent. Clin., 950 E. 59th St., Chicago, Ill. DENTISTRY. b. July 28, 1889, Alexis, Ill. s. James Albert and Emma C. (Mead) B. Edn.: Knox Coll., Galesburg, Ill., 1908-10; D.D.S., Northwest Univ. Dent. Schl., 1913; B.S., Lewis Inst., 1924; M.S., Univ. of Chicago, 1928. m. Alice E. Crain, Augusta, Ill., Mar. 18, 1914. Exp.: Private Dentist, Tallula, Ill., 1913-18; Instr. in Dental Pathol., Univ. of Ill. Coll. of Dentistry, 1918-23; Assoc. Prof., *ibid.*, 1923-31; Prof., *ibid.*, 1931-36; Prof. of Dental Surgery and Dir., Walter G. Zoller Memor. Dental Clin., Univ. of Chicago, 1936—. Mem.: Amer. Dental Assn.; Chicago Dental Soc.; Ill. State Dental Soc.; Internatl. Assn. for Dental Resch.; A.A.A.S.; A.A.O.P.; Inst. of Med. of Chicago; Chicago Pathol. Soc.; Chicago Odontographic Soc.; Amer. Assn. Endodontists; Sigma Xi; Xi Psi Phi; Omicron Kappa Upsilon; Quadrangle Club. Author: Dental Materia Medica and Pharmacol., 1934-36. Contrb. to: Dental Jours. Listed in: W.W.A.; A.M.S.

BLESS, Arthur Aaron, Prof. of Physics, Univ. of Fla., Gainesville, Fla. PHYSICS.

BLEW, Michael James, Chf., Water Supply and Sanitary Services Section, R and U Div., Office, Chf. of Engrs., Dept. of the Army, 3405 Tulane Dr., West Hyattsville, University Hills, Md. SANITARY ENGINEERING. b. Wabash, Ind., Nov. 9, 1891. s. James Madison and Hannah (Blew) B. Edn.: A.M., Ind. Univ., 1915. m. Dairy McAlister, Aug. 21, 1917. c.: Mary Anna. Exp.: Instr. in Chem., Ind. Univ., 1914-17; Assoc. Prof. of Chem., Louisville Univ., 1919-20; Instr., Grad. Schl., Yale Univ., 1920-21; In Chg. Expt. Plant, Dorr Co., Rochester, N. Y., 1921-23; Rsch. Engr. in Chg. of Sewage Treatment Expts., City of Philadelphia, Pa., 1923-41; Chem. Engr., Schuylkill River Pollution Bd., 1923-30; Instr., Drexel Inst., Philadelphia, Pa., Municipal Sanitation Dept., 1925-40; Chf., Water Supply and Sanitary Services Section, Repair and Utilities Div., Office of Chf. of Engrs., Dept. of the Army, 1947—. Hon. Pos.: Chmn., Extension Com., Natl. Soc. of Professional Engrs. Mem.: Sigma Xi; A.A.A.S.; Amer. Waterworks Assn.; Assn. Amer. Military Engrs.; Amer. Ordnance Assn.; Sewage and Industrial Wastes Assn.; Natl. Soc. Professional Engrs.; Amer. Public Works Assn.; Alpha Chi Sigma; Lions; Mason; Shrine. Author: Sanitary Bacteriol., 1937; Sanitary Chem., 1939. Contrb. to: Public Works Mag. War Record: Lt. and Capt., Sanitary Corps, World War I; Lt. Col. and Col., Sanitary Corps, World War II. Special Int.: Water Supply and Sewage Treatment; Stream Pollution Abatement and Industrial Waste Treatment.

BLEWETT, John F., Brookhaven Natl. Lab., Upton, L. I., N. Y. PHYSICS.

BLINCOE, Homer Raymond, Assoc. Prof. of Anatomy, N. Y. Med. Coll., 1 E. 105th St., N. Y. 29, N. Y. ANATOMY.

BLINKS, Lawrence Rogers, Prof. of Biol. and Dir. Hopkins Marine Station, Stanford Univ., Stanford, Calif. PLANT PHYSIOLOGY.

BLISH, Morris Joslin, Supvr. of Organic and Biochem. Rsch., Internatl. Minerals and Chem. Corp., 5401 Harrison St., Skokie, Ill. CHEMISTRY OF PROTEINS AND AMINO ACIDS. b. Lincoln, Nebr., Apr. 21, 1889. s. Frank M. and Louise (Joslin) B. Edn.: B.Sc., Univ. of Nebr., 1912; M.A., *ibid.*, 1913; Ph.D., Univ. of Minn., 1915. m. Vera Buell, Apr. 21, 1921. c.: Mary Louise. Exp.: Asst. Chemist, Mont. Agril. Expt. Station, Bozeman, Mont., 1916-22; Prof. of Agril. Chem. and Chemist, Agril. Expt. Station, Univ. of Nebr., Lincoln, Nebr., 1922-39; Chf., Protein Div., Western Regional Rsch. Lab., U. S. Dept. Agri., Albany, Calif., 1939-43; Supvr. of Organic and Biochem. Rsch., Inter-

natl. Minerals and Chem. Corp., Skokie, Ill., 1943—. Hon. Pos.: Pres., Amer. Assn. Cereal Chemists, 1923-25; Editor, Cereal Chem., 1938-43. Mem.: Amer. Chem. Soc.; Amer. Soc. Biological Chemists; N. Y. Acad. Sci.; Amer. Inst. Chem.; Amer. Assn. Cereal Chemists; Inst. Food Tech.; Sigma Xi; Alpha Chi Sigma; Phi Gamma Delta. Contrb. to: Cereal Chem.; Jour. Biol. Chem.; Jour. Amer. Chem. Soc.; Indus. and Engrng. Chem. War Record: 2nd Lt., Sanitary Corps, World War I. Special Int.: Proteins; Amino Acids; Cereal Tech.

BLISS, Allen Douglass, Assoc. Prof. of Chem. Simmons Coll., 300 The Fenway, Boston 15, Mass. ANALYTICAL CHEMISTRY AND PUBLISHING.

BLISS, Cornelius N., Rm. 4000, 1 Wall St., N. Y. N. Y. SOCIAL AND ECONOMIC SCIENCES.

BLISS, Donald Everett, Assoc. Plant Pathologist, Univ. of Calif. Citrus Expt. Sta., Riverside, Calif. PLANT PATHOLOGY.

BLISS, Gilbert Ames, Prof. Emer. of Math., Univ. of Chicago, Chicago, Ill. MATHEMATICS.

BLISS, Ittner Chester, Biometrician, Conn. Agri. Expt. Station, P. O. Box 1106, New Haven, Conn. BIOMETRICS.

BLISS, Mary Campbell, Prof. Emer. of Botany, Wellesley Coll., 18 Allen St., Newburyport, Mass. BOTANICAL SCIENCES.

BLISS, Robert Woods, retired, 1537 28th St., N. W., Washington, D. C. SOCIAL AND ECONOMIC SCIENCES.

BLIXT, John E., District Geologist, The Texas Co. P. O. Box 405, Shelby, Mont. PETROLEUM GEOLOGY.

BLOCH, Bernard, Yale Univ., New Haven, Conn. LINGUISTICS.

BLOCH, Felix, Prof. of Physics, Stanford Univ., Stanford, Calif. ATOMIC AND NUCLEAR PHYSICS.



b. Zurich, Switzerland, Oct. 23, 1905. s. Gustav and Agnes (Mayer) B. Edn.: Ph.D., Univ. of Leipzig, Germany, 1928. m. Lore Misch, Mar. 14, 1940. c. George; Daniel; Frank; Ruth. Exp.: Lectr., Univ. of Leipzig, 1932-33; Acting Assoc. Prof., Stanford Univ., Stanford, Calif., 1934-35; Prof. of Physics, ibid., 1935—. Mem.: Fellow Am. Physical Soc.; Natl. Acad. Sci. Nobel Prize for Physics 1952; Contrb. to: Physical Rev. War Record: Work for Manhattan District, Los Alamos, Radio Rsch. Lab. Special Int.: Electrical Conductivity; Ferro-Magnetism; Stopping Power; Radiation Theory; Magnetic Scattering and Polarization of Neutrons; Magnetic Moment of the Neutron and of Atomic Nuclei.

BLOCH, Robert Gustav, Prof. of Med., Univ. of Chicago, 950 E. 59th St., Chicago, Ill. PULMONARY DISEASES.

BLOCKER, Truman Graves, Jr., Prof. of Plastic and Maxillofacial Surgery, Univ. of Tex. Med. Branch, Galveston, Tex. b. West Point, Miss., Apr. 17, 1909. s. Truman Graves and Mary Anne (Johnson) B. Edn.: B.A., Austin Coll., 1929; M.D., Univ. of Tex., Schl. of Med., 1933. m. Virginia Irvine, 1938. c.: Truman Graves, III; Anne Singleton; Stirling Howard. Exp.: Asst. Prof. Surgery, Univ. of Tex. Schl. of Med., Galveston, Tex., 1936-42; Assoc. Prof. of Surgery, ibid., 1942-46; Prof. of Plastic and Maxillofacial Surgery, ibid., 1946—. Mem.: Alpha Omega Alpha; Amer. Assn. of Military Surgeons; Amer. Coll. of Surgeons; A.M.A.; Internatl. Soc. of Surgeons; etc. Contrb. to: Amer.

Jour. Plastic and Reconstructive Surg.; Surgery; Amer. Jour. Surgery. War Record: U. S. Army, 1942-46. Special Int.: Burn Rsch.; Metabolism Rsch.

BLOCHER, John M., Jr., Asst. Supvr., Div. of Non-ferrous Extractive Metallurgy, Battelle Memorial



Inst., 505 King Ave., Columbus, Ohio. PHYSICAL CHEMISTRY. b. Baltimore, Md., Jan. 6, 1919. s. John M., Sr. and Sallie (Garland) B. Edn.: B.S., Baldwin-Wallace Coll., 1940; Ph.D., Ohio State Univ., 1946. m. Phyllis Burke, July 12, 1941. c.: Joan Elizabeth; John David; Kathryn Jean; Mary Susan. Exp.: Asst., Dept. of Chem., Ohio State Univ., 1941-43; Instr. in Phys., Capital Univ., Columbus, Ohio, 1943-44; Chem., Tenn. Eastman Corp., Oak Ridge, Tenn., 1944-45; Rsch.

Engr. and Asst. Supvr., Battelle Mem. Inst., Columbus, Ohio, 1946—. Mem.: Amer. Chem. Soc.; Sigma Xi; Electrochem. Soc.; Alpha Tau Omega. Contrb. to: Jour. Amer. Chem. Soc.; Jour. Electrochem. Soc. Special Int.: Extractive Metallurgy of Titanium; Thermodynamics of Metal Halides.

BLODGETT, Katherine Burr, Rsch. Worker, General Electric Co., 18 N. Church St., Schenectady, N. Y. SURFACE FILMS, PHYSICS.

BLOEDORN, Walter Andrew, Dean and Prof. of Med., George Washington Univ. Schl. of Med., 4617 Hawthorne Lane, N. W., Washington, D. C.

BLOMQUIST, Hugo Leander, Prof. and Chmn., Dept. of Botany, Duke Univ., Durham, N. C.

BLOMQUIST, Richard Frederick, Rsch. Chemist, Forest Products Lab., 560 Gately Terrace, Madison 5, Wis. ORGANIC CHEMISTRY; ADHESIVES FOR WOOD, METALS AND PLASTICS. b. Mankato, Minn., Nov. 25, 1912. s. H. F. and Mathilda (Meile) B. Edn.: B.A., Coe Coll., 1934; M.S., Univ. of Iowa, 1936; Ph.D., ibid., 1937. m. Helen M. Ogburn, Aug. 28, 1937. c.: John Allen; Patricia Louise; Frederick Charles. Exp.: Prof. of Chem., Hd. Dept., Doane Coll., 1937-42; Rsch. Chemist, Forest Products Lab., 1942—. Mem.: Sigma Xi; Amer. Chem. Soc.; Forest Products Rsch. Soc.; Amer. Soc. for Testing Materials; Delta Phi Epsilon. Special Int.: Evaluation and Development of Adhesives and Bonding Processes for Wood, Metals, Plastics and Related Materials; Related Studies of Wood Products; Methods of Using and Evaluating Adhesives.

BLOOD, Heber Loran, Plant Pathologist, U. S. D. A., 261 N. Fourth East, Logan, Utah. PLANT PATHOLOGY.

BLOOMER, H. Harlan, SPEECH AND HEARING.

BLOOMFIELD, Leonard, Sterling Prof. of Linguistics, Yale Univ., New Haven, Conn. LINGUISTICS.

BLOOR, Walter Ray, Prof. of Biochem., Med. Schl., Univ. of Rochester, Rochester, N. Y. BIOCHEMISTRY.

BLOSSER, Timothy Hobert, Assoc. Prof., Dept. of Dairy Sci., State Coll. of Wash., Pullman, Wash. DAIRY HUSBANDRY (NUTRITION AND PHYSIOLOGY). b. Nappanee, Ind., Jan. 7, 1920. s. Timothy Henry and Ivy E. (Stahly) B. Edn.: B.S.A., Purdue Univ., 1941; M.S., Univ. of Wis., 1948; Ph.D., ibid., 1949. m. Dorothy Elaine Mattingley, Dec. 2, 1945. c.: Patrick Alan; Douglas Gregory; Susan Diane. Exp.: Rsch. Asst., Univ. of Wis., Madison, Wis., 1941-42, 1946-48; U. S. Army, 1942-46; Asst. Prof. and Asst. Dairy Husbandman, State Coll. of Wash., 1948-52; Assoc. Prof. and Assoc. Dairy Husbandman, ibid., 1952—. Mem.: Amer. Dairy Sci. Assn.; Amer. Soc. of

Animal Production; Sigma Xi; Alpha Gamma Rho; Gamma Alpha; Alpha Zeta; Kiwanis. Contbr. to: Jour. Dairy Sci.; Jour. Animal Sci. War Record: 2nd Lt., Med. Administrative Corps, U. S. Army, 1945-46. Special Int.: Nutrition, Physiology and Diseases of Dairy Cattle, more specifically, Rsch. on the Value of Dehydrated Forages for Dairy Cattle, studies on Parturient Paresis and Ketosis in Dairy Cattle, and Physiological Changes Associated with Parturition.

BLOUNT, Mary Putman, retired, Byron, Ill. ZOOLOGY.

BLOUNT, Raymond Frank, Prof. of Anatomy, Univ. of Tex., Med. Branch, Galveston, Tex. ANATOMY.

BLUEMEL, Charles Sidney, SPEECH AND HEARING.

BLUESTONE, E. Michael, Consultant, Montefiore Hosp., 3725 Henry Hudson Parkway West, N. Y.



63, N. Y. MEDICAL CARE AND PUBLIC HEALTH. b. N. Y., N. Y., Dec. 26, 1891. s. Joseph and Sarah Rachel (Bluestone) B. Edn.: B.S., Columbia Univ., 1913; M.D., ibid., 1916. b. Bertha Rodetsky, July 7, 1922. Exp.: Asst. Dir., Mt. Sinai Hosp., 1920-26; Dir., Hadassah Med. Organization, Palestine, 1926-28; Dir., Montefiore Hosp., N. Y., N. Y., 1928-51; Consultant, ibid., 1951—, Lectr., Schl. of Pub. Health, Columbia Univ., 1945—, Hon. Pos.: Certified,

Amer. Bd. of Preventive Med. and Public Health; Pres., Hosp. Conference of the City of N. Y., 1935-37; Pres., Amer. Assn. of Hosp. Consultants, 1951—; Citation, Greater N. Y. Fund, 1951; Mem., Editorial Bd., The Modern Hosp., 1929—; Mem., Advisory Editorial Bd., Jour. Gerontology, 1945—; Mem., Editorial Council, Jour. Amer. Hosp. Assn.; Pres., Hosp. Conf. of the City of N. Y.; Chmn., Med. Reference Bd., Hadassah and Hebrew Univ., 1939-50; Professional Advisory Com., Office of Vocational Rehabilitation, Washington, D. C.; Delegate, Internatl. Hosp. Congress, Vienna, 1931, Paris, 1937, and London, 1953; Principal Speaker, Seventh Internatl. Hosp. Congress, Brussels, 1951; Mem. House of Delegates, Amer. Hosp. Assn., 1937-42; Trustee, N. Y. State Hosp., Assoc., 1937-40; Mem., Med. Com., Rosenstock Memorial Foundation, Inc., 1946-48; etc. Mem.: Fellow, A.A.A.S.; Charter Fellow, Amer. Coll. of Hospital Administrators; Fellow, Amer. Public Health Assn.; Hon. Mem., Amer. Acad. Dental Med.; Hon. Mem., Alpha Omega. Contbr. to: The Modern Hosp.; Hygeia; Bull. Amer. Coll. of Surgeons; etc. Bibliography—300 titles. Consultant to numerous hospitals. Author of Home Care Program. War Record: Ist. Lieut., M. C. U. S. Army, 1918-19. Special Int.: Social Med.

BLUM, George Walter, Assoc. Prof. of Chem. Engrng., Case Inst. of Tech., Cleveland, Ohio. PLASTICS AND POLYMERS; ATMOSPHERIC POLLUTION CONTROL. b. Pittsburgh, Pa., Aug. 13, 1912. s. Louis P. and Clara (Mandel) B. Edn.: B.S., Univ. of Pittsburgh, 1934; M.S., Pa. State Coll., 1940. m. Ruth Pennington, June 22, 1940. c.: Margaret; Paul; Phyllis. Exp.: Asst. Chem. Engr., Gulf Oil Corp., Philadelphia, Pa., 1934-38; Rsch. Asst., Pa. State Coll., 1938-40; Chem. Engr., Hoadly Process Corp., Marcus Hook, Pa., 1940-44; Lab. Dir., Hawley Products Co., St. Charles, Ill., 1944-46; Project Engr., Standard Oil (Ind.), Whiting, Ind., 1946-47; Staff, Case Inst. of Tech., Cleveland, Ohio, 1947—. Mem.: Alpha Chi Sigma; Phi Lambda Upsilon; Sigma Xi; Rotary Internatl. Contbr. to: Indus. and Engrng. Chem.; Chem. Engrng.; Chem. Engrng. Progress. Special Int.: Plastics and Rubber.

BLUM, Harold Francis, Physiologist, Natl. Cancer Inst. and Visiting Lectr., Dept of Biol., Princeton Univ., Princeton, N. J. PHYSIOLOGY.

BLUM, Theodor, 101 E. 79th St., N. Y., N. Y. ORAL SURGERY.

BLUM, William, Chemist, Natl. Bureau of Standards, 215 Elm St., Chevy Chase, Md. ELEC-TROCHEMISTRY.

BLUMBERG, Harold, Rsch. Labs., Endo Products, Inc., 8440 101st St., Richmond Hill, N. Y. NU-TRITION.

BLUMENFELD, Charles Morris, Assoc. Dir. of Labs., Sutter Hosp., 28th and L Sts., Sacramento, Calif. HUMAN PATHOLOGY.

BLUMER, George, David P. Smith Clinical Prof. of Med. Emer., Yale Univ., 573 Los Arboles Lane, San Marino, Calif. INTERNAL MEDICINE.

BLUMGART, Herrman, Assoc. Prof. of Med., Harvard Univ., 330 Brookline Ave., Boston, Mass. MEDICINE.

BLUNN, Cecil T., Asst. Prof. of Animal Husbandry, Univ. of Nebr., Lincoln Nebr. ANIMAL GENETICS.

BLUNT, Katharine, Pres. Emer., Conn. Coll., 38 Glenwood Ave., New London, Conn. CHEMISTRY.

BLUNT, Royden A., Buck Glass Co., Fort Ave. and Lawrence St., Baltimore 30, Md. CERAMICS.

BLY, Chauncey G., Asst. Prof. of Pathol. and Oncology, Univ. of Kans. Med. Center, Kansas City 12, Kans. PATHOL-



OGY; CANCER RE-SEARCH. b. Kikungshan, Honan, China, June 14, 1920. s. John M. and Minnie (Saboe) B. Edn.: B.A., St. Olaf Coll., 1941; M.S., Univ. of Rochester, 1946; M.D., Univ. of Rochester Schl. of Med., 1946; Ph.D., ibid., 1953. m. Ruth Henion, June 1, 1946. c.: Susan Jean; John Charles; Judith Anne. Exp.: Grad. Rsch. Asst., Univ. of Rochester, 1941-42; Instr. in Phys. and in Theory of Flight, U. S. Navy Flight, 1943; Intern and Asst. Resident in Pathol., Strong Mem. Hosp., Rochester, N. Y., 1946-47; Asst. in Pathol., Univ. of Rochester Schl. of Med., 1947; Pathol., Med. Nutrition Lab., Army, Chicago, Ill., 1947-49; Clin. Instr. in Pathol., Univ. of Ill. Med. Schl., 1949; Postdoctoral Fellow in Pathol., Univ. of Rochester Schl. of Med., 1949-51; Asst. Prof. of Pathol. and Oncology, Univ. of Kans. Med. Schl., Kansas City, Kans., 1951—. Hon. Pos.: Postdoctoral Fellow, Atomic Energy Comm., 1949-51; Amer. Cancer Soc. Scholar in Cancer Rsch., 1951-54. Mem.: A.A.A.S.; Amer. Assn. Pathologists and Bacteriologists; Amer. Soc. Exptl. Pathologists; Internatl. Assn. of Med. Museums; Radiation Rsch. Soc.; Christian Med. Soc.; N. Y. Acad. Sci.; Kans. Soc. of Pathologists; Alpha Omega Alpha; Sigma Xi; Amer. Cancer Soc. Contbr. to: Jour. of Exptl. Med.; A.M.A. Archives of Pathol.; Science; Arch. of Biochem. and Biophys.; Federation Proceedings; Jour. of Nutrition. War Record: U. S. Army, M.C., 1947-49. Special Int.: Cancer Rsch.; Radioisotopes; Protein Chem.

BOARDMAN, Harry Clow, Dir. of Rsch., Chicago Bridge and Iron Co., 1305 W. 105th St., Chicago, Ill. STORAGE OF VOLATILE PETROLEUM PRODUCTS.

BOATMAN, Claude Earnest, Prof. of Chem. and Hd., Dept. of Sci., Central State Coll., Edmond, Okla. INORGANIC CHEMISTRY. b. Green Ridge, Mo., Feb. 23, 1905. s. Samuel Henry and Amma Elizabeth (DeWitt) B. Edn.: B.S., Central State Coll., 1929; M.S., Okla. A. and M. Coll., 1937; Ph.D., Ohio State Univ., 1951. m. Helen Inez Thomas, July 24, 1926. c.: Marilyn Gene; Thomas Ernest; James Claude; Charles Eldon. Exp.: Tehr., Jr.

High Math., Tonkawa, Okla., 1926-27; Tchr., Rural Schl., Okla. Co., Edmond, Okla., 1927-28; Hd., Sci. Dept., Dewey H. S., Dewey, Okla., 1929-37; Tchr. of Biol., Chem. and Phys., Tulsa Central H. S., Tulsa, Okla., 1937-42, 1943-46; Asst. Chf. Chem. of Shell Oil Co., Inc., Production Lab., Tulsa, Okla., 1942-43; Rsch. Consultant, The Carter Oil Co., Tulsa, Okla., 1944-46; Asst. Prof. of Phys. Sci., Peru State Tehrs. Coll., Peru, Nebr., 1946; Asst. Prof. of Chem., Wittenberg Coll., Springfield, Ohio, 1946-51; Assoc. Prof. of Chem., East Tenn. State Coll., Johnson City, Tenn., 1951-52; Prof. of Chem. and Hd., Dept. of Sci., Central State Coll., Edmond, Okla., 1952—. Mem.: Phi Lambda Upsilon; Sigma Xi; Theta Chi Delta; Amer. Chem. Soc.; Lambda Chi Alpha. Contrb. to: Jour. Amer. Chem. Soc. Special Int.: Nitrogen Chem., especially Hydrazine and Related Compounds, also Amine Salts of Imidodisulfuric Acids.

BOBB, Newton, Prof. and Chmn., Sci. Div., Northland Coll., Ashland, Wis. **BIOLOGY**.

BOBBITT, Blanche Gauthier, Supvr. of Health Edn., Health Edn. and Health Services Branch, Auxiliary Services Division and



Editor of the Health Education Jour., Los Angeles City Schls., Los Angeles 12, Calif. **BIOCHEMISTRY**. b. Hopkinton, N. H., June 20, 1901. d. Napoleon and Alice (Champagne) G. Edn.: A.B., Univ. of So. Calif., 1922; M.S., ibid., 1927; Ph.D., ibid., Schl. of Med., 1941. Exp.: Asst. and Instr. in Chem., Univ. of Southern Calif., Los Angeles, Calif., 1920-22, 1926-27; Tchr. of Gen. Sci. and Biol., Los Angeles City Schls., Los Angeles, Calif., 1927-31; Tchr. of

Physics and Physiology, ibid., 1931-37; Asst. in Biochem., Univ. of Southern Calif., Schl. of Med., 1937-39; Tchr. of Chem. and Grade Couns., Los Angeles City Schls., 1939-45; Supvr. of Examinations for Certificated Personnel, Personnel Div., ibid., 1945-46; Supvr. of Sci., Math., Health Coordination, and Aviation Edn., Div. of Second. Edn., ibid., 1946-52; Edn. Supvr., Radiological Services, Calif. State Of. of Civil Defense, 1951; Supvr. of Health Edn., Health Edn. and Health Services Branch, Auxiliary Services Div., Los Angeles City Schls., 1952—; Lectr. and Consultant in Nutrition, 1941—; Mem., Vice-Chmn. of Schl. Com. for Los Angeles Co. X-ray Survey, 1950; Official U. S. Delegation to 15th Internatl. Conf. on Pub. Edn. in Geneva, 1952. Mem.: Phi Beta Kappa; Phi Kappa Phi; Phi Sigma; Iota Sigma Pi; Sigma Xi; Delta Kappa Gamma; Amer. Assn. of Phys. Tehrs.; Natl. Coun. of Admin. Women in Edn.; Amer. Schl. Health Assn.; Amer. Chem. Soc.; Calif. Assn. of Second. Schl. Curriculum Coordinators; Calif. Schl. Supvrs. Assn.; Pacific South West Assn. of Chem. Tehrs.; Dir.-at-large of Natl. Sci. Tehrs. Assn. Contrb. to: Amer. Jour. Physiol.; Health Edn. Jour.; Jour. of Biol. Chem.; Jour. Edn. Res.; The Clearing House; The Sci. Tchr.; The L. A. Schl. Jour.; Ednl. Outlook. Author: A Manual on Gas Warfare, 1942; The 'S' in UNESCO, 1948, rev., 1950; Atomic Energy and YOU, 1951.

BOBROVNIKOFF, Nicholas Theodore, Dir., Perkins Observatory, Delaware, Ohio. **ASTRONOMY**.

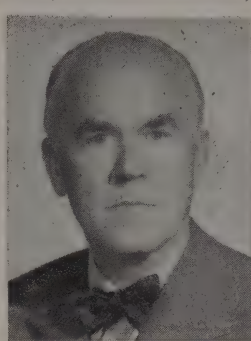
BOCHNER, Salmon, Princeton Univ., Princeton, N. J.

BOCK, Arlie Vernon, Henry K. Oliver Prof. of Hygiene, Harvard Univ., 15 Holyoke St., Cambridge, Mass. **MEDICINE**.

BOCK, Charles Dickens, Development Engr., Ama Corp., 1 Christopher St., N. Y., N. Y. **ORDNANCE ENGINEERING**.

BOCKSTAHLER, Lester Irving, Assoc. Prof. of Physics, Northwestern Univ., Evanston, Ill. **PHYSICS**.

BOCKUS, Henry LeRoy, Prof. and Chmn., Dept. of Med., Grad. Schl. of Med., Univ. of Pa., Philadelphia



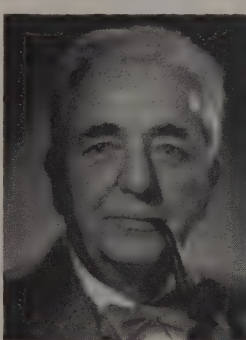
3, Pa. **GASTROENTEROL. AND INTERNAL MEDICINE**. b. Newark, Del., Apr. 18, 1894. s. William Jones and Luella (Whiteman) B. Edn.: B.S., Central H. S., 1913; M.D., Jefferson Med. Coll., 1917. Hon. Deg.: D.Sc., Dickinson Coll., 1946. m. Rosalyn Foss, Jan. 13, 1935. c.: Barbara Ann. Exp.: Organized Stomach Clinic, Grad. Hospital, Philadelphia, Pa., 1921; Prof. of Gastroenterol., Univ. of Pa., 1931-39; Prof. of Med., ibid., 1949—. Mem.: Amer. Gastroenterol. Assn.; Amer. Protol.; A.M.A.; Amer. Anthropol. Assn.; Phi Chi; Alpha Omega Alpha. Author: Gastroenterology (3 vols.), 1942-46; Postgraduate Gastroenterology (1 vol.), 1950; Editorial Bd., Jour. Gastroenterology. Contrb. to: Jour. Amer. Med. Assn.; Amer. Jour. of Med. Sci.; Annals of Med.; Archives of Internal Med. War Record; Lieut. (M.C.) U. S. N., World War I. Recipient: Caldwell Medal, Amer. Roentgen Ray Soc., 1950; Strittmatter Award, Phila. County Med. Soc., 1951. Special Int.: Diseases of Digestive Tract.

BODANSKY, Aaron, 423 W. 120th St., N. Y., N. Y. **MEDICINE, CHEMISTRY**.

BODANSKY, Oscar, Rsch. Assoc. in Pharmacol., Cornell Univ. Med. Coll., 4 E. 74th St., N. Y., N. Y. **PEDIATRICS, BIOCHEMISTRY**.

BODE, Hendrik Wade, 153 Beechwood Rd., Summit, N. J. **MATHEMATICS, ENGINEERING**.

BODECKER, Charles Francis, Prof. Emeritus of Oral Histology and Embryology, Happy Landing,



Hickory, N. C. **RESEARCH IN DENTISTRY AND EDUCATION**. b. N. Y. C., Sept. 2, 1880. s. Carl F. W. and Wilhelmina (Himbeek) B. Edn.: D.D.S., Univ. of Buffalo, 1900; Univ. of Berlin, Germany. m. Florence E. Hohn, June 20, 1928. Exp.: Prof. of Oral Histol. and Embryol., Columbia Univ., Dental Schl., N. Y. C., 1924-46; Mem. of N. Y. State Bd. of Dental Examiners, 1930-50; Editor, N. Y. State Dental Jour., 1948—. Mem.: N. Y. Acad. of Sci.; A.A.A.S.; N. Y.

Acad. of Dentists; N. Y. Acad. of Med.; Amer. Dental Assn.; Amer. Coll. of Dentists; Sigma Xi; Omicron Kappa Ipsilon; Xi Psi Phi. Author: Dental Histol. and Embryol., 1926; Fundamental of Oral Histol. and Embryol. and Clin. Applications, 1934. Contrb. to: Jour. of Dental Rsch.; Jour. of Amer. Dental Assn.; Jour. of Dental Edn.; Zeitschr. f. wissenschaftliche Microscopie; Dental Rev.; Dental Cosmos; Archives f. Zahnheilkunde. Special Int.: Histol. and Physiol. of Dental Tissues. Biologic Approach to Dental Caries Establishing Physiologic Tooth Resistance.

BODENBERG, Emmett Theodore, Prof. of Biol., Wittenberg Coll., Springfield, Ohio. **BOTANY**.

BODIAN, David, Assoc. Prof. of Epidemiol., Johns Hopkins Univ., Schl. of Hygiene and Public Health, Baltimore, Md. **MEDICINE**.

BODINE, Joseph Hall, Prof. and Hd., Dept. of Zool., State Univ. of Iowa, Iowa City, Iowa. **GENERAL PHYSIOLOGY**.

BODMAN, Geoffrey Baldwin, Prof. of Soil Physics, Div. Soils, Univ. of Calif., Berkeley, Calif. **SOIL PHYSICS.**

BODMAN, John Whittlesey, Technical Advisor to the Bd., Lever Brothers Co., 390 Park Ave., N. Y. 22, N. Y. **CHEMICAL ENGINEERING.** b. Knoxville, Tenn., Oct. 4, 1888. s. Joseph D. and Alice M. (Pratt) B. Edn.: B.S., Univ. of Mo. Schl. of Mines and Metallurgy, 1910; Ch.E., Univ. of Mo., 1917. m. Emily Hayward, June 12, 1928. c.: Mary Emily; Joan; John Oramel; George Hayward; Jean. Exp.: Chem., Peet Brothers Mfg. Co., 1910-12; Asst. Rsch. Dir., N. K. Fairbanks Co., 1912-14; Mgr. of Mfg. and Rsch. Dir., *ibid.*, 1914-18; Pres., Wm. Garrigue Co., Consulting Engrs., 1918-25; Rsch. Dir., Lever Brothers Co., 1925-48; Technical Advisor to the Bd., *ibid.*, 1948—. Mem.: Industrial Rsch. Inst.; Inst. of Chem. Engrs.; Amer. Oil Chemists Soc.; Fellow, Inst. of Chemists; Amer. Chem. Soc.; Amer. Soc. of Testing Materials; Mason. Contbr. to: Amer. Oil Chemists Soc. Special Int.: Soap and Synthetic Detergents; Fatty Acid and Glycerine Distillation; Hydrogenation; Edible Oils.

BODMAN, Sister Mary Cecelia, 116 E. Jefferson St., Iowa City, Iowa. **MYCOLOGY.**

BOEDER, Paul A. K., Dir., Bureau of Visual Sci., Am. Optical Co., Southbridge, Mass.

BOELL, Edgar John, Ross Granville Harrison Prof. of Experimental Zoology, Osborn Zoological Lab., Yale Univ., New Haven, Conn. **ZOOLOGY, EXPERIMENTAL EMBRYOLOGY.** b. Rudd, Iowa, Oct. 30, 1906. s. Albert Emil and Gertrude (Van der Las) B. Edn.: B.A., Univ. of Dubuque, 1929; Ph.D., Univ. of Iowa, 1935. Hon. Degrees: M.A., Yale, 1946; D.Sc., Univ. of Dubuque, 1952. m. Mildred E. Cottingham, June 3, 1932. c.: Carl David; Dorothy Eleanor. Exp.: Rsch. Assoc., Univ. of Iowa, Iowa City, Iowa, 1934-37; Fellow Rockefeller Foundation, Cambridge Univ., Cambridge, England, 1937-38; Instr., Yale Univ., New Haven, Conn., 1938-40; Asst. Prof., *ibid.*, 1940-41; Assoc. Prof., *ibid.*, 1941-46; Prof. of Biol., *ibid.*, 1946-47; Ross Granville Harrison Prof., *ibid.*, 1947—. Exec. Comm. of the Soc. for the Study of Dev. and Growth, Pres., 1952-53. Mem.: Amer. Acad. of Arts and Sci.; Amer. Physiological Soc.; Amer. Soc. of Zoologists; Conn. Acad. of Arts and Sci.; Soc. of General Physiologists; Soc. for the Study of Dev. and Growth; Soc. for Cell Biology; Sigma Xi. Contbr. to: Jour. of Experimental Zoology; Jour. of Cellular and Comparative Physiology; Proceedings of the Royal Soc. of London; Physiological Zool; Annals New York Acad. of Sci. Spec. Int.: Metabolism, Enzymes, and Biochemical Changes During Embryonic Dev.

BOESEL, Marion Waterman, Prof. of Zool., Miami Univ., Oxford, Ohio. **ENTOMOLOGY AND ZOOLOGY.**

BOETTCHER, Albert Wesley, Assoc. Prof. of Botany, Ohio Univ., Athens, Ohio. **BOTANY.**

BOEWE, Gideon Herman, Field Botanist, Ill. State Natural History Survey, 913 W. John St. Champaign, Ill. **PHYTOPATHOLOGY.**

BOGARDUS, Emory, S., Prof., Univ. of So. Calif., Los Angeles, Calif. **SOCIOLOGY.**

BOGART, Ralph, Dept. of Animal Husbandry, Ore. State Coll., Corvallis, Ore. **PHYSIOLOGY OF REPRODUCTION.**

BOGEN, Emil, Clinical Prof., Dept. of Infectious Diseases, Univ. of Calif. at Los Angeles, Los Angeles, Calif. **TUBERCULOSIS, BACTERIOLOGY AND PATHOLOGY.**

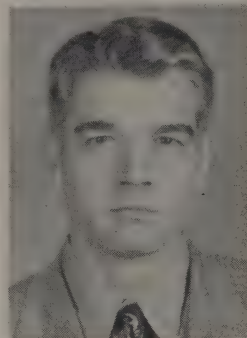
BOGERT, Marston Taylor, 1158 Fifth Ave., Apt. 14B, N. Y. 29, N. Y.

BOGGS, Isabel Nannie, Assoc. Prof. of Physics, Randolph-Macon Woman's Coll., Lynchburg, Va. **PHYSICS.**

BOGGS, Samuel Whittemore, Consultant in Geography, U. S. Dept. State, 1734 New York Ave., Washington, D. C. **GEOGRAPHY AND CARTOGRAPHY.**

BOGIN, Maxwell, Attending Pediatrician, Bridgeport Hosp., 144 Golden Hill St., Bridgeport 3, Conn. **PEDIATRICIAN.**

BOHART, George Edward, Entomologist, Div. Bee Culture and Biol. Control, Bureau Entomol. and Plant Quarantine, U. S. D. A., U. S. Legume Seed Rsch. Lab., U. S. A. C., Logan Utah. **ENTOMOLOGY — POLLINATION BY INSECTS; SYSTEMATICS OF HYMENOPTERA; DISEASE TRANSMISSION BY INSECTS.** b. Palo Alto, Calif., Sept. 21, 1916. s. George Shambaugh and Violet (Mitchell) B. Edn.: B.S., Univ. of Calif., 1938; M.S., *ibid.*, 1939; Ph.D., *ibid.*, 1947. m. Adelaide Simmons, June 16, 1942. c.: William Edward; David Andrew. Exp.: Seasonal Employment, Pea Weevil Control for Libby, McNeil, Libby, 1936-38; Plant Quarantine Inspector, State of Calif., 1939-41; Lab. and Tchng. Asst. in Entomol., Univ. of Calif., 1939-41; Entomologist for U. S. Navy, 1942-47; Entomologist, Div. Bee Culture and Biol. Control, Bureau Entomol. and Plant Quarantine, U. S. D. A., 1947—. Mem.: Phi Sigma; Sigma Xi; Pacific Coast Entomol. Soc.; Entomol. Soc. Amer.; Wash. Entomol. Soc.; Utah Acad. Sci.; Alpha Zeta; etc. Author: The Filth-Inhabiting Flies of Guam, 1951. Contbr. to: Annals Entomol. Soc. Amer.; Jour. Econ. Entomol.; Proc. Wash. Entomol. Soc.; etc. War Record: U. S. N. R., 1942-47. Special Int.: Pollination by Insects.



BOHMONT, Dale W., Hd. Dept. of Agron. and Assoc. Prof. of Agron., Univ. of Wyo., Laramie, Wyo. **FIELD CROP AND WEED CONTROL INVESTIGATIONS.** b. Wheatland, Wyo., June 7, 1922. s. J. E. and Mary (Armstrong) B. Edn.: B.S., Univ. of Wyo., 1948; M.S., *ibid.*, 1950; Ph.D., Univ. of Nebr., 1952. m. June Rains, Dec., 1941. c.: Dennis E.; Craig W. Exp.: Elem. Instr., Rock River, Wyo., 1941-42; U. S. Air Force, 1942-45; Rsch. Asst., Agron. Dept., Univ. of Wyo., 1946-48; Instr. and Asst. Agronomist, *ibid.*, 1948-50; Rsch. Agron., U.S.D.A., Univ. of Nebr., 1950-51; Asst. Assoc. Prof. and Assoc. Agronomist, and Hd. Dept. of Agronomy, *ibid.*, 1953—. Mem.: Sigma Xi; A.A.A.S.; Amer. Soc. Agronomy; Colorado-Wyoming Acad. Sci.; Farm House; Alpha Zeta; Gamma Sigma Delta; Phi Kappa Phi; Alpha Tau Alpha; Lions. Contbr. to: Crops and Soils; Amer. Soc. Agron. Jour.; Wyo. Agril. Exptl. Sta. Pub. War Record: World War II, 1942-45. Gen. Int.: Developed Use of Shale Oil in Agri., De-awning Machine, Co-operative Development of Cody Oats. Special Int.: Cereal Investigations and Weed Control Rsch.

BOHN, J. Lloyd, Prof. of Physics, Chmn. of Dept., Temple Univ., Philadelphia 22, Pa. **PHYSICS.** b. Lieddale, Pa., Nov. 16, 1896. s. Henry and Percida (Bordner) B. Edn.: B.S., Pa. St. Coll., 1924; Ph.D., Calif. Inst. of Tech., 1928. m. Florence Lucy Cushman, Jan. 1, 1926. Exp.: Tchrs. Asst., Pa. State Coll., State Coll., Pa., 1923-24; Rsch. Asst., Harvard Cancer Comm., Cambridge, Mass., 1924-26; Rsch. Physicist, Fogg Art Museum, Harvard Univ., Cambridge, Mass., 1925-26; Tchrs. Asst., Calif. Inst. of Tech., Pasadena, Calif., 1926-27; Rsch. Asst., *ibid.*, 1927-28; Instr., Temple Univ., Philadelphia, Pa., 1928-31; Asst. Prof., *ibid.*, 1931-36; Assoc. Prof., *ibid.*, 1936-43; Prof., *ibid.*, 1943—. Hon. Pos.: Project Supt.



Temple Univ., Philadelphia, Pa., 1928-31; Asst. Prof., *ibid.*, 1931-36; Assoc. Prof., *ibid.*, 1936-43; Prof., *ibid.*, 1943—. Hon. Pos.: Project Supt.

for Air Force Contracts, 1948—; Participated in Atomic Tests, Mercury, Nev., 1952-53. Mem.: Amer. Physical Soc.; Acoustical Soc. of Amer.; Amer. Assn. of Physics Tehr.; A.A.A.S.; A.A.U.P.; Physics Club of Philadelphia; Franklin Inst.; Phi Kappa Phi; Phi Mu Alpha; Kappa Kappa Psi; Blue Key; Pierian Sodality of Harvard Univ. Contrb. to: Physical Review; Amer. Jour. of Physics; Amer. Physics Tehr.; Jour. of the Franklin Inst.; Jour. of the Acoustical Soc. of Amer. War Record: Air Force, 1917-19. Gen. Int.: Wrestling Coach of Temple Univ., 1930-43. Special Int.: Radio-activity; X-Rays; Gas Discharges; Acoustics; Ultrasonics; Electronics; Light Pressure; Old Paintings; and Upper Atmosphere Rsch.

BOHN, Guy Weston, Acting Dir. and Assoc. Pathologist, U. S. D. A., U. S. Torrey Pines Hort. Field Station, P. O. Box 150, La Jolla, Calif. PHYTO-PATHOLOGY.

BOHN, Jacob Lloyd, Prof. of Physics, Temple Univ. Philadelphia, Pa. ELECTRONICS AND X-RAYS.

BOHNENBLUST, Henri Frederic, Prof. of Math., Calif. Inst. of Tech., Pasadena, Calif. MATHEMATICS.

BOHSTEDT, Gustav, Prof. of Animal Husbandry, Univ. of Wis., Madison 6, Wis. LIVESTOCK NUTRITION AND MANAGEMENT.

BOISSEVAN, Charles H., Lab. Dir., Colo. Foundation, Rsch. Tuberculosis, Colo. Coll., Colorado Springs, Colo. MEDICINE.

BOK, Bart Jan, Prof. of Astron., Harvard Observatory, Cambridge 38, Mass. CALACTIC STRUCTURE.

BOLDYREFF, Alexander William, Dept. of Math., Univ. of N. Mex., Albuquerque, N. Mex. MATHEMATICS.

BOLE, George A., Engrng. Expt. Station, Ohio State Univ., Columbus 10, Ohio. CERAMICS.

BOLGER, Henry Joseph, Dept. of Physics, Univ. of Notre Dame, Notre Dame, Ind. PHYSICS.

BOLLAY, Eugene, Pres., North Amer. Weather Consultants, 2420 N. Lake Ave., Altadena, Calif. METEOROLOGY AND INSTRUMENTATION. b. Stuttgart, Germany, May 8, 1912. s. Friedrich J. and Frieda (Kraemer) B. Edn.: B.S., Northwestern Univ., 1935; M.S., Calif. Inst. of Tech., 1936. m. Virginia Lind, Dec. 25, 1936. c.: Barbara Ann; Suzanne Lind; Robert James and Katherine Ann. Exp.: Meteorol. Engr., Los Angeles Co. Flood Control Dist., Calif., 1936-38; Meteorol., U. S. Weather Bur., Washington, D. C., 1938-41; Aerol. Officer, U. S. Navy, 1941-45; Hd., Sci. Section Office of Naval Rsch., Pasadena, Calif., 1945-50; Pres., North Amer. Weather Consultants, Pasadena, Calif., 1950—; Vice-Pres., North Amer. Instruments Inc., 1951 ibid., 1951—; Dir., Aerophysics Rsch. Foundation, ibid., 1951—. Mem.: Amer. Meteorol. Soc.; Amer. Geophys. Union; Sigma Xi. Author: Handbook of Meteorol., 1945. War Record: Commander, U. S. Navy, 1941-49. Special Int.: Cloud Physics Applied to Increasing Precipitation; Upper Air Rsch. Pertaining to High Level Flow Patterns; Basic Rsch. Admin.

BOLLEY, Henry Luke, Botanist and Plant Pathologist, N. Dak. Agri. Coll., Fargo, N. Dak. PLANT PATHOLOGY.

BOLT, Richard Henry, Dir., Acoustics Lab. and Assoc. Prof. of Physics, Mass. Inst. of Tech., 77 Massachusetts Ave., Cambridge, Mass. PHYSICS. ACOUSTICS.

BOLTON, Elmer K., 2310 W. 11th St., Wilmington, Del.

BOLTON, Euri Belle, Prof. of Edn. and Psychol., Ga. State Coll. for Women, Milledgeville, Ga. PSYCHOLOGY.

BOLTON, Frederick E., Dean Emer., Prof. of Edn. and Rsch., Univ. of Wash., 4514 16th Ave., N. E., Seattle, Wash. EDUCATION.

BOLTON, John Henry, Editor, Iowa Engrng. Expt. Station, Iowa State Coll., Ames, Iowa. ENGLISH—TECHNICAL WRITING AND EDITING. b. W. Va., Oct. 1, 1898. s. John O. and Martha May (Triplett) B. Edn.: A.B., W. Va. Wesleyan Coll., 1921; M.A., Univ. of Kans., 1936. m. Eleanor Felt. c.: John T.; Margaret Louise. Exp.: H. S. Tehr., Bristol, W. Va., 1921-22; H. S. Tehr., Ansted, W. Va., 1922-23; H. S. Tehr., Baxter Springs, Kans., 1924-27; City Clerk and City Mgr., Baxter Springs, Kans., 1927-29; H. S. Tehr., J. S. Morton H. S. and Jr. Coll., Cicero, Ill., 1929-42; U. S. Army, 1942-45; In Chg. of Employee Relations and Editor of Employee Publications, The Liquid Carbonic Corp., Chicago, Ill., 1945-48; Dir. of Citizenship Trng., Iowa Wesleyan Coll., Mt. Pleasant, Iowa, 1948-49; Editor and Publisher of Technical MS, Iowa Engrng. Expt. Station, Iowa State Coll., Ames, Iowa, 1949—. Mem.: Amer. Soc. for Engrng. Edn.; Iowa Engrng. Soc.; Rotary. Special Int.: Technical Writing.

BOLTON, Thaddeus Lincoln, Prof. of Psychol., Temple Univ., Philadelphia, Pa. PSYCHOLOGY.

BONAR, Lee, Prof. of Botany, Univ. of Calif., Berkeley, Calif. BOTANY.

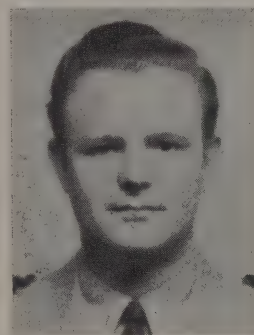
BOND, Austin DeMell, Prof. of Biol. and Chmn. Div. of Sci. and Math., Peru State Tehrs. Coll., Peru, Nebr. GENETICS.

BOND, Francis M., Lt. Col., U. S. Army, 5811 Pimlico Rd., Mount Washington, Baltimore, Md. ENGINEERING.

BOND, Frederic Drew, 211 South 37th St., Philadelphia, Pa. CORPORATE FINANCE.

BOND, Perry Avery, Assoc. Prof. of Inorganic Chem., State Univ. of Iowa, Iowa City, Iowa. CHEMISTRY.

BOND, Victor Potter, Hd., Exptl. Pathol. Branch, Biol. and Med. Sci. Div., Navy Dept., U. S. Naval Radiol. Defense Lab., San Francisco 24, Calif. RADIOBIOLOGY AND MEDICAL PHYSICS. b. Santa Clara, Calif., Nov. 30, 1919. s. George Milton and Lois Edna (Potter) B. Edn.: A.B., Univ. of Calif., 1943; M.D., ibid., 1945; Ph.D., ibid., 1952. m. Mary S. Bond, Feb. 22, 1946. c.: Barbara Ann; Frederick William; Robert Michael. Exp.: Rsch. Asst., Pharmacol., Univ. of Calif., San Francisco, Calif., 1945; Interne, U. S. Navy Hosp., Astoria, Ore., 1946-47; Grad. Trng., Univ. of Calif., Berkeley, Calif., 1947-48; Hd., Exptl. Pathol. Branch, Biol. and Med. Sci. Div., U. S. Naval Radiol. Defense Lab., San Francisco, Calif., 1948—. Mem.: A.A.S.; Alpha Kappa Kappa. Contrb. to: Amer. Jour. Trop. Med.; Amer. Jour. of Physiol.; Proc. Soc. of Exptl. Biol. and Med.; Jour. of Infectious Diseases; Sci.; Fed. Proc., etc. Special Int.: Radiation Biol., Med. and Med. Physics.



BONDE, Reiner, Plant Pathologist, Maine Agri. Expt. Station, Orono, Maine. PLANT PATHOLOGY.

BONER, Charles Paul, Prof. of Physics and Dir. Defense Rsch. Lab., Univ. of Tex., Austin, Tex. ACOUSTICS.

BONISTEEL, William John, Consultant, Amer. Embassy, Ec. Sec., Mex.; Mt. Ross Rd., Pine Plains, N. Y. BOTANY.

BONNER, David Mahlon, Asst. Prof. of Microbiol., Osborn Botanical Lab., Yale Univ., New Haven, Conn. BIOCHEMISTRY.

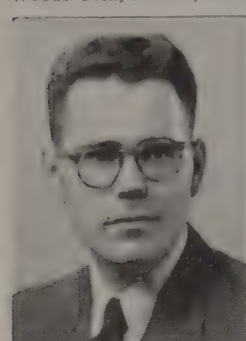
BONNER, Hubert, Assoc. Prof. of Sociol. and Psychol., Ohio Wesleyan Univ., Delaware, Ohio. SOCIAL PSYCHOLOGY.

BONNER, James Frederick, Calif. Inst. of Tech., Pasadena 4, Calif.

BONNER, Robert Nelson, Applied Mathematician, Carter Oil Resch. Labs., 311 E. 46th St., Tulsa, Okla. **APPLIED MATHEMATICS; COMPUTING DEVICES.** b. Salt Lake City, Utah, Dec. 30, 1917. s. Walter D. and Grace (Gaylord) B. Edn.: B.A., Univ. of Utah, 1939; M.S., Univ. of Wis., 1943. m. Sally Hill, Feb. 18, 1948. Exp.: Grad. Tchng. Asst. in Chem., Brown Univ., Providence, R. I., 1939-41; Grad. Tchng. Asst., Univ. of Wis., Madison, Wis., 1941-42; Jr. Resch. Chemist to Applied Mathematician, Carter Oil Resch. Labs., Tulsa, Okla., 1946—. Mem.: Assn. for Computing Machinery; Phi Beta Kappa; Phi Kappa Phi. War Record: Army, 1942-46. Special Int.: Use of Punched Card Calculators and High Speech Digital Computers in Industrial Resch.; Theoretical Studies on Flow and Engrng. Practices in Exploitation of Oil Fields.

BONNER, Tom Wilkerson, Prof. of Physics, Rice Inst., Houston, Tex. **PHYSICS.**

BONNER, Thomas Neville, Academic Dean, William Woods Coll., Fulton, Mo. **HISTORY OF MEDICINE.**



b. Rochester, N. Y., May 28, 1923. s. John and Mary Millicent (McGowan) B. Edn.: A.B., Univ. of Rochester, 1947; M.A., ibid., 1949; Ph.D., Northwestern Univ., 1952. m. Joan Nadine Compton, Oct. 12, 1947. c.: Phillip Lynn. Exp.: Hearst Foundation Fellow in Amer. Hist., Northwestern Univ., 1948-49, 1950-51; Chicago Med. Soc. Fellow in Medical Hist., 1949-50; Academic Dean, William Woods Coll., Fulton, Mo., 1950—. Mem.: Miss. Valley Historical

Assn.; Amer. Historical Assn.; Phi Beta Kappa; Kiwanis. Contrb. to: Miss. Valley Historical Rev.; Bull. Hist. of Med.; Jour. Hist. of Med. and Allied Sci.; Jour. Ill. State Historical Soc. War Record: U. S. Army, 1943-46. Special Int.: History of Med. in Chicago; Amer. Social and Intellectual Hist.

BONNET, Frederic, Jr., Adviser and Asst. Pres., Amer. Viscose Corp., 9 Du Pont St., Ridley Park, Pa. **RAYON.**

BONNOT, B. T., The Bonnot Co., Canton, Ohio. **CERAMICS.**

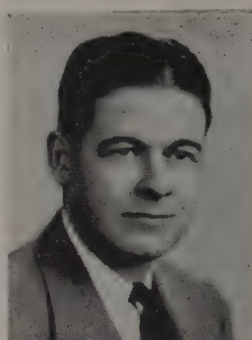
BOOHER, Lela Evangeline, Chf. Nutritionist, General Mills, Inc., Minneapolis, Minn. **BIOCHEMISTRY.**

BOOKER, Henry, Cornell Univ., Ithaca, N. Y. **TROPOSPHERIC RADIO WAVE PROPAGATION.**

BOOKHOUT, Cazlyn Green, Assoc. Prof. of Zool. and Dir., Duke Univ. Marine Lab., Durham, N. C. **MARINE INVERTEBRATE ZOOLOGY; MARINE INVERTEBRATE EMBRYOLOGY.** b. Gilboa, N. Y., Jan. 28, 1907. s. Eugene Anson and Sarah Mae (Green) B. Edn.: A.B., St. Stephen's Coll., 1928; M.A., Syracuse Univ., 1929; Ph.D., Duke Univ., 1934. m. Elizabeth Circle, Aug. 21, 1936. c.: Beverly Ann; Glenn Allen. Exp.: Instr. in Biol. Woman's Coll. of Univ. of N. C., 1929-31; Grad. Asst. in Zool., Duke Univ., 1931-32; Grad. Fellow in Zool., ibid., 1932-34; Assoc. Prof. of Biol., Elon Coll., 1935; Instr., Asst. Prof., Assoc. Prof. of Zool., Duke Univ., 1936—. Mem.: Sigma Xi; Amer. Soc. Zool.; N. C. Acad. Sci.; A.A.U.P.; Amer. Soc. Limnology and Oceanography; Sigma Alpha Epsilon; Phi Sigma. Contrb. to: Biol. Bull.; Jour. Morphology; Jour. Elisha Mitchell Scientific Soc. Special Int.: Marine Invertebrate Zool.; Marine Invertebrate Embryology and Histology.

BOOMHOUR, Joshua Gregory, retired, 3402 Hillsboro St., Raleigh, N. C. **PHYSICS, MATHEMATICS.**

BOOKOUT, Arthur Roscoe, Jr., Chem. Engr., Hercules Powder Co., Brunswick, Ga. **CHEMICAL ENGINEERING.** b. Grover N. C., Jan. 5, 1918. s. Arthur R. and Frances Carrie (Beam) B. Edn.: B.S., High Point Coll., 1939. m. Pelham Whitley, June 21, 1941. c.: Jean; Susan and Anne. Exp.: Text. Chem., Kerr Bleaching and Finishing Works, Concord, N. C., 1940-41; Chemist, War Dept., Radford, Va., 1941-43; Chem. Engr., Hercules Powder Co., Radford, Va., 1943-45; Resch. Chemist, Expt. Station, Hercules Powder Co., Wilmington, Del., 1945-49; Chem. Engr., ibid., 1949-50;



Chem. Engr., Hercules Powder Co., Brunswick, Ga., 1950—. Mem.: Amer. Chem. Soc.; A.A.A.S.; A.I.Ch.E.; Natl. Soc. of Prof. Engrs. Special Int.: High Explosives; Rocket Propellants; Molecular Distillation; High Pressure Syntheses and Tech.; Organic Syntheses Including Plant Design.

BOORD, Cecil Ernest, Prof. of Chem., Ohio State Univ., Columbus, Ohio. **CHEMISTRY, PETROLEUM.**

BOOTHROYD, Samuel Latimer, Prof. Emer. of Astron., Cornell Univ., Warley Place, R. D. 1, Ithaca, N. Y. **ASTRONOMY.**

BOOZE, M. C., Charles Taylor Sons Co., Box 58, Annex Station, Cincinnati, Ohio. **CERAMICS.**

BOPP, Harold F., 67 Gorton St., Corning, N. Y. **CERAMICS.**

BORCHARDT, Lester Ferdinand, Hd., Section Physics and Physical Chem., Resch. Labs., General Mills, Inc., 5508 15th Ave., S., Minneapolis, Minn. **PHYSICS.**

BORDLEY, James III, Mary Imogene Bassett Hosp., Cooperstown, N. Y. **INTERNAL MEDICINE.**

BOREMAN, Robert Wells, Asst. Prof. of Physics, Carnegie Inst. of Tech., 5723 Howe St., Pittsburgh, Pa. **PHYSICS.**

BORG, Sidney Fred, Hd., of Civil Engrng., Stevens Inst. of Tech., Hoboken, N. J. **APPLIED MECHANICS, STRUCTURES, AERODYNAMICS.** b. New York City, N. Y., Oct. 3, 1916. s. Herman L. F. and Pauline (Leibman) B. Edn.: B.S., Cooper Union Inst. of Tech., 1937; M.C.E., Polytechnic Inst. of Brooklyn, 1940. m. Audrey Iva Elliott, April 4, 1944. Exp.: Engr., City of New York, N. Y., 1939-40; War Dept., 1940-41; Turner Construction Co., New York, N. Y., 1942-43; Asst. Prof. Civil Engr., Univ. of Md., Coll. Park, Md., 1943-44; Assoc. Prof., U. S. Naval Post Graduate Schl., Annapolis, Md., 1945-51; Resch. Engr., Grumman Aircraft, Bethpage, N. Y., 1951-52; Hd., Civil Engr., Stevens Inst. of Tech., Hoboken, N. J. Mem.: Amer. Soc. of Civil Engr.; Amer. Soc. of Engr. Edn. Contrb. to: Jour. of Aeronautical Sci.; Amer. Jour. of Physics; Jour. of the Franklin Inst.; Civil Engr.; Engr. News Record; Jour. of the Western Soc. of Engr.; Jour. of Engr. Edn. Gen. Int.: Licensed Professional Engr., New York St. Special Int.: Applied Mechanics, Structures, Aerodynamics.

BORGSTROM, Parry, Supt., Chem. Div., Naval Resch. Lab., 1506 23rd St., S. E., Washington, D. C. **CHEMISTRY.**

BORING, Lucy Day, 21 Bowdoin St., Cambridge, Mass. **PSYCHOLOGY.**

BORNEMANN, Alfred, Prof. of Metallurgy, Director of Pierce Memorial Laboratory for Metallurgy, Stevens Inst. of Tech., Hoboken, N. J. **PHYSICAL METALLURGY.** b. Montclair, N. J., April 6, 1906. s. Emile Louis and Marie (Kidde) B. Edn.: M.E., Stevens Inst. of Tech., 1927; Dr. Ing., Sachsische Technische Hochschule, Dresden, Ger-

many. m. Lieselotte Helene Just of Dresden, Germany, Aug. 2, 1930. d. Johannes and Clara J. c.; Peter; Barbara; Toni Marie. Exp.: Asst. Prof., Engrng. Chem., Stevens Inst., 1930; Dir. of Peirce Metals Lab., 1938; Assoc. Prof. of Engrng. Chem., ibid., 1939; Prof. of Metallurgy and Chmn. of the Dept., ibid., 1948—Hon. Pos.: Pres., Metals Sci. Club of N. Y.; Past Chmn., N. J. Chapt., Amer. Soc. for Metals. Mem.: A.S.M.; Amer. Chem. Soc.; Inst. of Metals (London); A.I.M.M.E.; Beta Theta Pi. Ph.D. Dissertation: A Study of Grinding Metals at Various Speeds. Travel: Europe. Hobbies: Sailing; Hiking; Photography, Music. Listed in: Who's Who in Amer.; Who's Who in Engrng. Special Int.: Heat Treatment of Steel and Low Temperature Testing, and Transformation of Tin.

BORING, Edwin Garrigues, Prof. of Psychol., Harvard Univ., Memorial Hall, Cambridge 38, Mass.



EXPERIMENTAL PSYCHOLOGY. b. Philadelphia, Pa., Oct. 23, 1886. s. Edwin McCurdy and Elizabeth (Garrigues) B. Edn.: M.E., Cornell Univ., 1908; A.M., ibid., 1912; Ph.D., ibid., 1914. Hon. Deg.: A.M., Harvard Univ., 1942; D.Sc., Univ. of Pa., 1946. m. Lucy M. Day, June 18, 1914. c.: Edwin G.; Frank H.; Mollie D.; Barbara (dec.). Exp.: Instr. in Psychol., Cornell Univ., 1913-17; Chf. Psychol. Examiner, U. S. Army, 1918-19; Prof. of Exptl. Psychol., Clark Univ., 1919-22; Assoc. 1922-28; Dir. of Psychol. Lab., ibid., 1924-49; Prof. of Psychol., ibid., 1928—. Hon. Pos.: Pres., Amer. Psychol. Assn., 1928. Mem.: A.A.A.S.; Amer. Psychol. Assn.; Soc. of Exptl. Psychol.; Amer. Acad. of Arts and Sci.; Amer. Phil. Soc.; Natl. Acad. of Sci.; Harvard Club of Boston and N. Y. C. Author: Hist. of Exptl. Psychol., 1929, 2nd ed., 1950; Physical Dimensions of Consciousness, 1933; Sensation and Perception in the Hist. of Exptl. Psychol., 1942. Contbr. to: Amer. Jour. of Psychol.; Psychol. Rev.; Jour. of Exptl. Psychol.; Proc. of Amer. Phil. Soc. Gen. Int.: With Marjorie Van de Water, wrote Psychol. for the Fighting Man, 1943, which sold 380,000 copies. Special Int.: Psychol. of Sensation and Perception, Hist. of Psychol., Psychol. of History.

BORROR, Donald Joyce, Assoc. Prof. of Zool. and Entomol., Ohio State Univ., Columbus, Ohio. **ENTOMOLOGY (ESPECIALLY TAXONOMY AND ECOLOGY OF ODNATA), ORNITHOLOGY (ESPECIALLY BIRD SONG).**

BORTHWICK, Harry, Plant Indus. Sta., Beltsville, Md. **PLANT PHYSIOLOGY.**

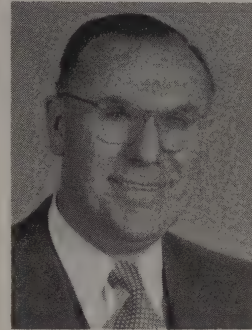
BOSS, Benjamin, Dudley Observatory, Albany, N. Y. **ASTRONOMY.**

BOSS, William, Prof. Emer., Agril. Engrng., Univ. of Minn., 1439 Raymond Ave., St. Paul 8, Minn. b. Oct. 7, 1869, Zumbro Falls, Minn. s. Andrew and Janet (Nisbet) B. Edn.: Univ. of Minn., Schl. of Agri., 1904. m. Edna Florence Rider of Oak Center, Minn., Oct. 2, 1895. d. Mr. and Mrs. Edward A. Rider. c.: Ronald William; Harlan David. Exp.: Instr. in Steam Engrng., Univ. of Minn., 1892-1909; Instr. in Carpentry, 1893-1909; Instr. in Power Machinery, 1895-1909; Prof. of Farm Structures and Farm Mechanics, 1905-09; Prof. of Agri. Engrng., Chief of Div. of Farm Engrng. and Chmn. Agri. Engrng. Group, 1919-38; Prof. Emer., 1938—; Pres., Specialty Mfg. Co., St. Paul, Minn.; Pres., The Boss Engrng. Co., St. Paul; Pres., Boss Foundry, Bayport, Minn. Mem.: Charter Mem. and Past Pres., Amer. Soc. of Agri. Engrs.; Fellow, A.A.A.S.; Soc. for Prom. of Engrng. Edn.; Registered Professional Engr., State of Minn.; Minn. Assn. of Prof. Engrs.; Natl. Assn. Professional Engrs.; Gamma Sigma Delta; Alpha Zeta; St. Paul Assn.; Midway Club. Author: Instructions for Traction and Stationary Engrs., 1906; The Heath Book for Threshermen, 1907; Me-

chanical Trng. (with others), 1932. Contbr. to: Agril. Engr. Travel: U. S.; Canada. Gen. Int.: Awarded John Deere Gold Medal by Amer. Soc. of Agri. Engrs., 1943, for Distinguished Achievement in Application of Sci. and Art to the Soil. Hobbies: Human Engrng. and Labor Saving Devices. Listed in: Who's Who in Amer.; A. M. S.; Who's Who in Commerce and Ind.; Who's Who in Engrng.; Internatl. Blue Book.

BOSTIAN, Carey Hoyt, Asst. Dir. of Instruction, Schl. of Agri. and Prof. of Zool., N. C. State Coll., Raleigh, N. C. **GENETICS.**

BOSTON, Orlan William, Prof., Production Engrng., and Chmn., Dept. of Production Engrng., Coll. of Engrng., Univ. of Mich., Ann Arbor, Mich. **MACHINE TOOLS AND MANUFACTURING.** b. July 16, 1891, Nashville, Mich. s. Wm. Boston and Adaline (Vinkle) B. Edn.: B.S., Mech. Engrng., Univ. of Mich., 1914; M.S. in Engrng., ibid., 1917; Mech. Engrng., ibid., 1926; Registered Profes. Engr., State of Mich. m. Stella Roth of Ann Arbor, Aug. 27, 1916. c.: Filibert Roth. Exp.: Tchr. of Engrng. Mech., Univ. of Mich., 1914-17; U. S. Navy, Lt. (j.g.), 1917-19, Designing Submarine



Mines; Assistant to Vice-Pres., Cleveland Tractor Co., 1919-21; Asst. Prof. in Engrng. Shop, Univ. of Mich., 1921-23; Assoc. Prof., 1923-25; Prof. and Chmn., Dept. of Metal Processing, 1926—; Ednl. Supvr. of Engrng., Sci., and Mgt., Defense, War Trng. Course Sponsored by U. S. Office of Edn., Univ. of Mich., 1942-44; Trng. Ordnance and Aircraft Materials Inspector and Women Engr. Aides to Ordnance Dept., Grad. a Total of 1,376 Students from a 10 Weeks' Course; Fellow, Amer. Soc. of Mech. Engr.; Awarded Worcester Reed Warner Gold Medal, 1950; Honorary Mem. of Pi Tau Sigma, 1950; Metallurgical Advisory Bd. on Titanium of the Metallurgical Rsch. Coun., 1951. Author: Metal Processing, Second Edition in April, 1951. Contbr. to: Articles on Metal Cutting, Cutting Tools, Machine Tools, etc., in Technical Journals; and presented at learned societies. War Record: Lt. (j.g.), U. S. Navy, 1917-19, Designing Submarine Mines. Travel: U. S.; England. Gen. Int.: Development of Courses in Metal Processing at Univ. of Mich.; Author, Educator; and Recog. Authority on Machine Tool Design and Metal Cutting. Hobbies: Swimming; Gardening; Travel. Listed in: Who's Who in Commerce and Industry; Biographical Directory of A.M.S.; Who's Who in Engrng.; Who's Important in Engrng.; Who's Who in Mich.; Who's Who in Amer.; Internatl. Who's Who; Who's Who in the West. Hemisphere; Biographical Encyc. of the World. Special Int.: Machine Tools; Small Tools; Machinability and Mfg.

BOSTWICK, Lee Gordon, Mem. Technical Staff, Bell Telephone Lab., Inc., 436 West St., N. Y., N. Y. **ACOUSTICAL ENGINEERING.**

BOSWELL, Foster Partridge, Prof. of Philos. and Psychol., Hobart Coll., Geneva, N. Y. **PSYCHOLOGY.**

BOSWELL, Victor R., Prin. Horticulturist, Chg. Vegetable Crop Rsch., U. S. D. A., Plant Industry Station, Beltsville, Md.

BOTKIN, Clayton Winfield, Prof. and Hd., Dept. of Chem., N. Mex. Coll. of Agri. and Mechanical Arts, P. O. Box 95, State College, N. Mex. **CHEMISTRY.**

BOTSET, Holbrook Gorham, Prof. of Petroleum Engrng. and Hd., Dept. of Oil and Gas, Univ. of Pittsburgh, Pittsburgh, Pa. **PETROLEUM ENGINEERING.**

BOTSFORD, Emily Frances, Assoc. Prof. of Zool., Conn. Coll., New London, Conn. **MUSCLE PHYSIOLOGY.**

BOTTS, Adelbert Kenneth, Prof. of Geography, State Tchrs. Coll., Trenton, N. J. GEOGRAPHY.

BOTTOM, Frances Ranney, Assoc. Prof. of Biol., George Peabody Coll. for Tchrs., Nashville, Tenn. BOTANY.

BOUCHARD, Harry, Prof., Geodesy and Surveying, Univ. of Mich., Ann Arbor, Mich. CIVIL ENGINEERING. b. February 1, 1889, Michigan City, Ind. s. William and Mary (Zahrn) B. Edn.: B.C.E., Univ. of Mich., 1911. m. Vernona Hutton of Ypsilanti, Mich., Dec. 26, 1913; d. John and Isabelle Hutton. c.: Marybelle; Mrs. Clifford Robins, Jr.; Mrs. Edward A. McLogan. Exp.: Engr. Practice, 1911-18; Asst. Prof. Geodesy and Surveying, Univ. of Mich., 1918-25; Prof., Ry. Engrng., Pei Yang Univ., Tientsin, China, 1925-28; Returned to U. S. via Suez, Europe, England, Ireland; Asst. Prof., Assoc. Prof., Prof., Univ. of Mich., 1928—; Dir., Camp Davis, Univ. of Mich. Summer Surveying Camp, Jackson Hole, Wyo. Mem.: Amer. Congress on Surveying and Mapping; Amer. Geophys. Union; A.A.A.S.; A.S.E.E.; A.S.C.E.; Amer. Soc. of Photogrammetry; Eng. Soc. of Detroit; Triangle. Author: Surveying, 1935. Hobby: Summer Camp. Listed in: A.M.S.; W.W.A.; W. W. in Engr.

BOUCHER, Paul Edward, Prof. of Physics, Colorado Coll., Colorado Springs, Colo. PHYSICS.

BOUCHER, Robert Vaughan, Prof. of Agril. and Biol. Chem., Pa. State Coll., State College, Pa. BIOCHEMISTRY, NUTRITION.

BOUDREAUX, H. Bruce, Assoc. Prof. of Zool., La. State Univ., Baton Rouge, La. ENTOMOLOGY. b. Scott, La., Nov. 12, 1914. s. Joseph and Emelie (Broussard) B. Edn.: B.S., Southwestern La. Inst., 1936; M.S., La. State Univ., 1939; Ph.D., ibid., 1946. m. Rose Mae Guidroz, Aug. 12, 1941. c.: John Philip. Exp.: Asst., Biol. Dept., Southwestern La. Inst., Lafayette, La., 1934-36; Instr. in Biol., ibid., 1936-39; Asst. Prof. Biol., ibid., 1939-47; Asst. Prof., La. State Univ., 1947-52; Assoc. Prof. Zool., ibid., 1952—. Mem.: La. Acad. of Sci.; A.A.A.S.; Entomological Soc. of Amer.; Amer. Assn. Econ. Entomol.; Phi Kappa Phi; Sigma Xi. Contrb. to: Biol. Abstracts; Proc. La. Acad. of Sci.; Fla. Entomologist; Jour. Econ. Entomology. Special Int.: Entomology-Taxonomy of Aphididae; Tetranychid Mites.

BOUGHTON, Willis Arnold, retired, 426 S. W. Second St., Ft. Lauderdale, Fla. CHEMISTRY.

BOURN, Janet Macfarlane, Bacteriologist, Mich. Dept. of Health, Bureau of Labs., 310 W. Grand River Ave., East Lansing, Mich. BACTERIOLOGY.

BOUSCAREN, Anthony Trawick, Assoc. Prof. of Political Sci., Univ. of San Francisco, 733 Walnut Ave., Burlingame, Calif. INTERNATIONAL COMMUNISM. b. Boston, Mass., July 7, 1920. s. Louis Henri Gustave, and Ethel (Trawick) B. Edn.: A.B., Yale Univ., 1943; M.A., Univ. of Calif., 1948; Ph.D., Univ. of Calif., 1951. m. Barbara McNulty, Jan. 20, 1944. c.: Anthony Gustave; Michael Frederic. Exp.: Lectr., Univ. of San Francisco, San Francisco, Calif., 1946-48; Asst. Prof., ibid., 1948-51; Assoc. Prof., ibid., 1951—; Dir. Div. of Soviet and Communist Studies. Mem.: Acad. Pol. Sci.; Commonwealth Club of Calif.; Amer. Pol. Sci. Assoc.; Int. Pol. Sci. Assn.; Northern Calif. Pol. Sci. Author: Soviet Expansion and the West (1949); Imperial Communism (1953); Amer. Faces World Communism, (1953). Contrb. to: Western Political Quarterly; Jour. of Politics; Current History, Thought; Amer. Mercury; New Leader; Freeman; Current History; Jour. of Politics. Gen. Int.: God and Man at Yale Essay Award, 1952; Recipient Christopher Award, 1952. Special Int.: International Communism; Christian Democratic Parties Western Europe.

BOUSFIELD, Weston Ashmore, Prof. of Psychol. and Hd. Dept., Univ. of Conn., Storrs, Conn. PSYCHOLOGY. b. Sao Ching, China, Apr. 22, 1904. s. Cyril E. and Lillie (Snowden) B. Edn.: B.M.E., Northeastern Univ., 1927; A.M., Boston Univ., 1928; A.M., Harvard Univ., 1932; Ph.D., ibid., 1933. m. Thelma Knight, July 4, 1935. c.: Brenda Lee; Aldridge Knight. Exp.: Instr. in Psychol.,

Tufts Coll., 1929-39; Asst. Prof. of Psychol., Univ. of Conn., Storrs, Conn., 1939-41; Assoc. Prof. of Psychol., ibid., 1941-46; Prof. of Psychol., ibid., 1946—; Hd., Dept. of Psychol., ibid., 1939—. Mem.: Amer. Psychol. Assn.; Eastern Psychol. Assn.; Conn. State Psychol. Soc.; Conn. Valley Assn. of Psychologists; A.A.A.S.; Conn. Acad. Arts and Sci.; Sigma Xi; Phi Kappa Phi. Special Int.: Motivation; Sleep; Development Psychol.; Verbal Behavior.

BOUSLOG, John Samuel, Assoc. Prof. of Radiology, Univ. of Colo. Schl. of Med., 4200 E. Ninth St., Denver, Colo. RADIOLOGY.

BOUTWELL, John Mason, Consulting Mining Geologist, Private Practice, Trust Dept., Continental National Bank, Salt Lake City, Utah. ECONOMIC GEOLOGY.

BOUTWELL, Paul Winslow, Prof. Emeritus of Chem. and Hd. Dept., Beloit Coll., 1875 Riverside Dr., Beloit, Wis. BIOCHEMISTRY. b. Lyndeborough, N. H., Feb. 6, 1888. s. Benjamin Jones and Elizabeth (Knight) B. Edn.: B.S., Beloit Coll., 1910; M.A., Univ. of Wis., 1912; Ph.D., ibid., 1916. m. Clara G. Brinkhoff, June 12, 1915. c.: Roswell Knight; Clara Barnes; Paul Winslow, Jr. Exp.: Asst. in Chem., Univ. of Wis., 1912-16; Instr. in Chem., Univ. of Del., 1916-17; Instr. in Biochem., Univ. of Wis., 1917-18; Asst. Prof. of Biochem., ibid., 1918-20; Assoc. Prof. of Chem., Beloit Coll., Beloit, Wis., 1920-21; Prof. and Hd., Dept. of Chem., ibid., 1921-53; Retired, 1953—. Mem.: Fellow, A.A.A.S.; Wis. Acad. Sci., Arts and Letters; (Vice-Pres., 1936-39, Pres., 1939-42); Sigma Xi; Phi Beta Kappa; Delta Sigma Rho; Omicron Delta Kappa; Gamma Alpha; Sigma Chi. Special Int.: Organic and Biol. Chem.

BOUYOCOS, George J., 210 Agril. Bldg., E. Lansing, Mich. SOIL MOISTURE.

BOVARD, John Freeman, Prof. of Physical Edn. and Acting Chmn. Dept., Univ. of Calif., 405 Hilgard Ave., Los Angeles, Calif. PHYSIOLOGY.

BOWEN, Charles Franklin, retired, 1231 E. Fourth South, Salt Lake City, Utah. GEOLOGY.

BOWEN, Ira Sprague, Dir., Mount Wilson and Palomar Observatories, 813 Santa Barbara St., Pasadena, Calif. ASTRONOMY. b. Seneca Falls, N. Y., Dec. 21, 1898. s. James H. and Philinda (Sprague) B. Edn.: A.B., Oberlin Coll., 1919; Ph.D., Calif. Inst. of Tech., 1926. Hon. Deg.: Sc.D., Oberlin Coll., 1948; Ph.D., Univ. of Lund, 1950. m. Mary Howard, July 12, 1929. Exp.: Instr., Calif. Inst. of Tech., 1921-26; Asst. Prof., ibid., 1926-28; Assoc. Prof., ibid., 1928-31; Prof., ibid., 1931-45; Dir., Mount Wilson Observatory, 1946-48; Dir., Mount Wilson and Palomar Observatories, 1948—. Mem.: Astron. Soc. of the Pacific; Amer. Astron. Soc.; Natl. Acad. Sci.; Amer. Philos. Soc.; Amer. Acad. Arts and Sci.; Assoc. Royal Astron. Soc.; Corresponding Mem., Societe Royale des Sciences de Liege. Contrb. to: Physical Rev.; Astrophys. Jour.; etc. War Record: S.A.T.C., 1918. Gen. Int.: Recipient Draper Medal, Natl. Acad. Sci.; Potts Medal, Franklin Inst.; Rumford Medal, Amer. Acad. Arts and Sci.; Ives Medal, Optical Soc. Amer. Special Int.: Ultraviolet and Nebular Spectroscopy; Optics.

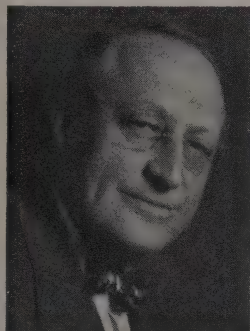
BOWEN, Norman Levi, 2801 Upton St., N. W., Washington, D. C.

BOWEN, Wilfrid Wedgwood, Curator of Museum, Dartmouth Coll., Hanover, N. H. ZOOLOGY.

BOWEN, William Harold, Supt., Guggenheim Aeronautics Lab., Calif. Inst. of Tech., 2067 Paloma St., Pasadena 7, Calif. AERONAUTICS RESEARCH. b. Pilot Oak, Ky., Sept. 27, 1903. s. Berry and Belle (Murchison) B. Edn.: B.S., Univ. of Calif., 1928; M.S., Calif. Inst. of Tech., 1932; M.S., ibid., 1938. m. Ruth DeWitt, July 27, 1929. c.: Stuart W.; Louise E. Exp.: Automotive Engr. in Detonation Rsch. with Basic Cycle Changes, Calif. Inst. of Tech., Pasadena, Calif., 1928-29; Rsch. Asst. in Aeronautics, Guggenheim Aero. Labs., Calif. Inst. of Tech., 1929-41; Supt., ibid., 1941—. Mem.: Inst. of Aero. Sci.; A.A.A.S.; Sigma Xi; Calif. Professional Engr. War Record: 1927-42, Organized

Reserve Corps. Special Int.: Wind Tunnel Testing and Equipment Design.

BOWER, Albert Gordon, Clin. Prof. Med., Univ. of So. Calif.; Clin. Prof. of Pub. Health and Preventive Med., Coll. of Med.



Evangs. Address: 1243 Armada Dr., Pasadena 3, Calif. INTERNAL MEDICINE WITH SPECIAL EMPHASIS ON COMMUNICABLE DISEASES AND TROPICAL DISEASES. b. Feb. 5, 1890, Salt Lake City, Utah. s. Dr. Albert S. and Jessie Buckner (Gordon) B. Edn.: A-B., Stanford, 1912; M.S., Univ. of Chicago, 1914; M.D., Rush Med. Coll., 1916. m. Elizabeth Munger of Palo Alto, Calif., July 22, 1914. d. Mr. and Mrs. Arthur L. Munger. c.:

Elizabeth Kitch (Mrs. Loran); Mary Roden (Clyde); Albert G. Jr. Exp.: Fellow, Bacteriol., 1913-14; Instr., Bacteriol., 1915-16; Instr. Anat. and Preventive Med., 1914-15; Univ. of Chicago; Instr., Asst. Prof., and Assoc. Prof. of Med., Coll. of Med. Evangelists, 1925-33; Univ. of Sou. Calif., 1934—; Coll. Med. Evangelists, 1946—; Medical Corps. U. S. Army, 1916-20; Reserve, 1922-37; Nav. Med. Res., 1937-50; Chief Staff Communicable Disease Unit, L. A. Co. Hosp. at present. Mem.: Hollywood Acad. of Med. (Pres., '39); A.A.A.S.; A.C.P., Life Fellow; A.M.A.; Sigma Chi; Phi Chi; Alpha Omega Alpha; Mason; Pasadena Univ. Club. Author: Numerous med. papers; Communicable Diseases for Nurses, 1925-50, VI Ed., VII Ed., pending. War Record: World War I; 89th Div.; Adv. G. H. Q., Army Occupation; 1917-19; Letterman Gen. Hosp., 1919-20; World War II: Active Duty, Capt., M. C., Naval Reserve, 1941-46; retired as Capt., 1950. Travel: Europe; Hawaii. Hobbies: Hunting; Fishing; Gardening. Listed in: A.M.S.; Who's Who in Amed. Med.; etc.

BOWER, Ernest Clare, Rsch. Analyst Aeronautics, Douglas Aircraft Co., 1494 Pepper Dr., Pasadena, Calif. ASTRONOMY.

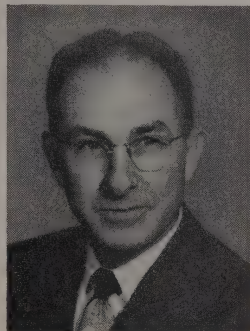
BOWER, John Lindsay, Rsch. Specialist, Automatic Control Systems, North American Aviation, Inc., 12214 Lakewood Blvd., Downey, Calif. AUTOMATIC CONTROL SYSTEMS; SERVOMECHANISMS; AIRCRAFT FIRE CONTROL; THEORY OF PREDICTION; AUTOMATIC TRACKING RADAR; INFORMATION THEORY; HYDRAULICS. b. Tolono, Ill., October 15, 1914. s. Robert Allan, Jr. and Ella (Beaton) B. Edn.: B.S., U. S. Military Academy, 1936; Ph.D., Yale Univ., 1949. m. Georgianna Wheaton, September 13, 1947. c.: John Lindsay, Jr.; Samuel. Exp.: Design and Development Engr., Aeronautics and Marine Engrng. Dept., General Electric Co., 1936-45; Chf. Development Engr., Control Instrument Co., 1945-46; Asst. Prof., Assoc. Prof. of Electrical Engrng., Yale Univ., 1946-50; Group Leader, Automatic Fire and Flight Control, North Amer. Aviation, Inc., 1950-52; Rsch. Specialist, ibid., 1952—. Mem.: Sigma Xi; Inst. of Radio Engrs.; Amer. Inst. of Electrical Engrs. Contrb. to: Amer. Institute of Electrical Engrs.; Institute of Radio Engrs. Special Int.: Theory and Design of Feedback Control Systems and Servomechanisms; Automatic Fire Control; Theory of Prediction; Information Theory; Synthesis of Resistor-Capacitor Networks; Theory and Design of Hydraulic and Pneumatic Control Systems.

BOWER, Julia Wells, Chmn., Dept. of Math., Conn. Coll., New London, Conn. MATHEMATICS.

BOWER, William Clayton, Prof. Emer., Univ. of Chicago, 658 N. Broadway, Lexington, Ky. EDUCATION.

BOWERMAN, Mary Leolin, Rsch. Assoc. in Botany, Herbarium, 2025 L. S. B., Univ. of Calif., Berkeley, Calif. TAXONOMY.

BOWERMAN, Ernest William, Sect. Hd., Rsch. and Development Div., Humble Oil and Refining Co., Baytown, Tex. PROCESS DEVELOPMENT IN PETROLEUM REFINING. b. Mitchell, S. Dak., Mar. 11, 1905. s. Frank P. and Florence Ella (Baggerly) B. Edn.: B.S., Northern State Tchrs. Coll., 1929; B.S., S. Dak. State Schl. of Mines and Tech., 1933; Ph.D., Ohio State Univ., 1937. m. Margaret Jenkins, June 30, 1934. c.: Emil F.; Ernest W., Jr.; Mary Elizabeth. Exp.: Prin., H. S. Mellette, S. Dak., 1929-30; Fellow in Chem., S. Dak. State Schl. of Mines and Tech., Rapid City, S. Dak., 1930-33; Grad. Asst. in Chem., Ohio State Univ., Columbus, Ohio, 1933-34; Asst. in Chem., ibid., 1934-36; Special Asst. in Chem., ibid., 1936-37; Rsch. Chem., Sr. Rsch. Chem., Asst. Sect. Hd., Sect. Hd., Humble Oil and Refining Co., Baytown, Tex., 1937—. Mem.: Amer. Chem. Soc.; Amer. Inst. of Chem. Engrs.; Sigma Tau; Pi Kappa Delta; Sigma Xi; Kappa Delta Pi. Contrb. to: Schl. Sci. and Math.; Jour. of Amer. Chem. Soc.; Indus. and Engrng. Chem.; Chem. Engrng. Progress. Special Int.: Application of Chem. Kinetics to Process Development; Process Development Work on the Production of Aviation and Motor Gasolines; Rsch. on Catalytic Processes Involving Polymerization of Olefins, Alkylation of Isoparaffins with Olefins, Isomerization of Normal Paraffins, Hydrogenation of Olefins, Catalytic Cracking of Process Gas Oils, Hydroforming Napthenes to Aromatics; Fluidization of Solids in Liquids and Gases; Reactions of Zirconium Tetrabromide in Liquid Ammonia.



BOWERMAN, Walter Gregory, Asst. Actuary, N. Y. Life Ins. Co., 51 Madison Ave., N. Y. 10, N. Y. ACTUARIAL SCIENCE. b. Nov. 16, 1893, N. Y. C. s. Judah Philip and Edith (Gregory) B. Edn.: A.B., Haverford Coll., 1914; A.M., Univ. of Mich., 1915; Assoc. Fellow, N. Y. Acad. of Med., 1930. m. Evelyn Haynor of Bayonne, N. J., 1923. d. Geo. Haynor and Cynthia Hotaling. c.: John Haynor. Exp.: Actuary and Exam., W. Va. Dept. of Ins., 1917; Act. Dept., N. Y. Life Ins. Co., 1919—; Asst. Act., 1929—. Hon. Pos.: Pres. Police Pension Comm., Leonia, N. J.; Chmn. Roll Call, Amer. Red Cross; Fellow, Society of Actuaries; Phi Beta Kappa; Founders Club, Haverford Coll.; Actuaries, New York City. Author: Studies in Genius, 1947, Contrb. to: Many Educational and Sci. Jour., War Record: Treas. for France of Amer. Friends Service Comm., 1917-19; Civilian Relief Worker with Am. Red Cross in Europe and French Service de Santé. Travel: N. Amer.; England; Europe; Cuba; W. Indies. Hobbies: Internat. Language; World Calendar; Sports; Philately. Listed in: Who's Who in the East; Amer. Men of Sci.; Who Knows and What; Dict. of Amer. Scholars.



BOWERS, Alston Gordon, Vice-Pres., Rsch. and Production, Gerson-Stewart Corp., 4209 Bushnell Rd., University Hgts., Cleveland, Ohio. CHEMISTRY.

BOWES, Urban E., Owens-Illinois Glass Co., Box 1035-1036, Toledo 1, Ohio. CERAMICS.

BOWIE, Robert, 550 Fifth Ave., c/o Sylvania Elec. Products, N. Y., N. Y. PHYSICS.

BOWERS, Clement Gray, Professorial Lectr. in Botany, Harpur Coll., The State Univ. of N. Y.



and Rsch. Assoc., Cornell Univ., Box 181, Maine, N. Y. **HYBRIDIZATION OF ORNAMENTAL PLANTS**. b. Binghamton, N. Y., Dec. 22, 1893. s. LaMont M. and Fanny A. (Gray) B. Edn.: B.S., Cornell Univ., 1923; M.S., *ibid.*, 1925; Ph.D., Columbia Univ., 1930. m. Janet R. Whitney, Oct. 12, 1925. c.: Janet W. Exp.: Rsch. in Plant Breeding and Cytology, N. Y. Botanical Garden, 1926-30; Private Work and Consultant in Horticulture Trade, 1930-41; Lectr. in Botany, Triple Cities Coll., Syracuse Univ., 1947-51; Professional Lectr. in Botany, Harpur Coll., State Univ. of N. Y., 1951—; Rsch. Assoc. in Ornamental Horticulture, Cornell Univ., 1948—. Hon. Pos.: Vice-Chmn., Plant Breeding Methods and Chmn. Floriculture Exhibits, 6th Internat. Congress of Genetics, 1932; Mem., Internat. Com. on Horticultural Nomenclature, London, 1952. Mem.: Fellow, A.A.A.S.; Life Fellow, R. H. S.; Charter Dir., Amer. Horticultural Council; Botanical Soc. Amer.; Torrey Botanical Club; Amer. Genetic Assn.; Amer. Soc. for Horticultural Sci.; Amer. Rhododendron Soc.; Internat. Dendrol. Union; Amer. Horticultural Soc.; Pi Alpha Xi. Author: Rhododendrons and Azaleas, 1936; Winter-Hardy Azaleas and Rhododendrons, 1953. Contrb. to: Jour. N. Y. Botanical Garden; Natl. Horticulture Mag.; Bull. Torrey Botanical Club; etc. War Record: War Transportation Administrator for Broome Co., N. Y., and Mem. of the Co. War Council, 1941-46. Gen. Int.: Internat. Pres., Torch Clubs Assn., 1940-41; Silver Medalist, Fed. Garden Clubs of N. Y. State, 1951; Bronze Medalist, Men's Garden Clubs of Amer., 1953; Distinguished Service Citation, Broome Co. Civil Service Employees, 1953; Hon. Life Mem., Univ. of Wash. Arboretum Assn. Special Int.: Plant Breeding and Hybridization, with special Reference to Ornamental and Floral Materials; General Botany; History of Plants and Garden Design.

BOWLER, Edwin Sinclair, Senior Lab. Mechanician, 5030 Enfield Ave., Encino, Calif. **ELECTRON MICROSCOPY**. b. Shoshone, Idaho, Aug. 9, 1912. s. Edwin Archibald and Bernice (Champaign) B. Edn.: Boeing Schl. of Aeronautics, Grad. 1938, National Radio and Electrical Schl. Grad. 1937. m. Flora Ann Bland, July 29, 1939. c.: Sabin Mallory; Thayer Maynard. Exp.: Rsch. Technician, Lockheed Aircraft Co. Rsch. Lab., Los Angeles, Calif., 1939-50; Lab. Mechanician, Atomic Energy Comm. Project, *ibid.*, 1950-51; Senior Lab. Mechanician, Univ. of Calif., Los Angeles, Calif., 1951-53. Mem.: Electron Microscopy Soc. of Amer.; Electron Microscopy Soc. of Southern Calif. Contrb. to: Protoplasma. Special Int.: Electron Microscopy with Respect to Fog Studies, Air Pollution and Metallurgy.

BOWLER, John Pollard, Prof. of Surgery, Dartmouth Med. Schl., Hanover, N. H. **SURGERY**. b. Cambridge, Mass., Jan. 3, 1895. s. John William and Ellen (Pollard) B. Edn.: A.B., Dartmouth Coll., 1915; M.D., Harvard Med. Schl., 1919; M.Sc., Univ. of Minn., 1924. Hon. Deg.: D.Sc., Dartmouth Coll., 1952. m. Madeline Gile, May 28, 1928. c.: Patricia and Janet. Exp.: Instr. in Pharmacol., Dartmouth Med. Schl., Hanover, N. H., 1924-25; Instr. in Anatomy, *ibid.*, 1925-38; Dean, *ibid.*, 1927-45; Prof. of Surgery, *ibid.*, 1939—; Mem., Surgical Staff, Mary Hitchcock Mem. Hosp., Hanover, N. H., 1924—; Mem., Prof. Staff, Hitchcock Clinic, Hanover, N. H., 1927—. Mem.: A.M.A.; Amer. Coll. of Surgeons; Amer. Urol. Assn.; Gamma Alpha; Theta Delta Chi; Alpha Kappa Kappa; Amer. Goiter Assn.; Amer. Bd. of Urology; Amer. Bd. of Surgery; Eastern Surgical Soc.; New Eng. Surg. Soc.; Rotary. Contrb. to: Surgery; Gynecol. and Obstetrics; Annals of Surgery; Jour. of Amer. Med. Assn.; Boston Med. and Surgical Jour.; New England Jour. of Med.; Jour. of Urol.

BOWLES, Edward Lindley, Prof. of Elec. Communications, Mass. Inst. of Tech., Cambridge, Mass. **ELECTRICAL COMMUNICATION**.

BOWMAN, Ethel, Prof. Emer., Goucher Coll., 15 Border St., Cohasset, Mass. **PSYCHOLOGY**.

BOWMAN, Howard H. M., Prof. and Hd., Dept. of Biol., Univ. of Toledo, Toledo, Ohio. **BIOLOGY**.

BOWMAN, Jay, Rsch. Information Service, John Crerar Library, 86 E. Randolph St., Chicago, Ill. **PACKINGHOUSE BY-PRODUCTS**.

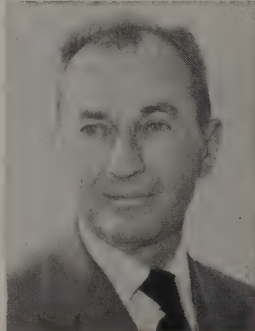
BOWMAN, Norman J., Rsch. Chemist, Std. Oil Co. (Ind.), 6359 Forest Ave., Hammond, Ind. **ORGANIC NITROGEN COMPOUNDS; ROCKET FUELS**. b. Chicago, Ill., August 13, 1918. s. Reginald G. and Lelah B. (Browne) B. Edn.: A.B., Cornell Univ., 1941; M.S., *ibid.*, 1942; Ph.D., *ibid.*, 1944. Exp.: Rsch. Chem., Eastman Kodak Co., 1944-45; Rsch. Chem., Std. Oil Co. (Ind.), 1945—; Lectr. in Chem., Ind. Univ. Ext. Div., 1946-49; Purdue Univ. Ext. Div., 1950-51; Lectr., Ind. Univ. Ext., 1952—. Hon. Pos.: Pres., Chicago Rocket Soc., 1949-51. Mem.: Amer. Chem. Soc.; British Interplanetary Soc.; New York Academy of Science; Chicago Rocket Soc.; Sigma Xi. Author: A Handbook of Space Flight, 1950. Contrb. to: Jour. Amer. Chem. Soc.; Analytical Chem.; Jour. of Space Flight. Ph.D. Dissertation: Some New Derivatives of 6-methoxy-8-aminoquinoline. Gen. Int.: Asst. Ed., Jour. Space-Flight, 1948—; Assoc. Ed., Industrial Lab., 1950—. Hobbies: Music; Photography; Philately. Listed in: Amer. Men of Sci.; Who Knows and What Among Authorities.

BOWMAN, Paul William, Chmn. and Prof., Dept. of Biol., George Washington Univ., Washington, D. C. **CYTOLOGY**.

BOWN, Ralph, Dir. of Rsch., Bell Telephone Labs., Murray Hill, N. J. **ELECTROMAGNETICS**.

BOWYER, Vernon, Dir. of Adult Edn., Bd. Edn., City of Chicago, 228 N. LaSalle St., Chicago, Ill. **EDUCATION**.

BOYCE, Alfred Mullikin, Prof. of Entomol., Entomologist in Agri. Expt. Sta., Dir. of Citrus Expt. Sta., Univ. of Calif., Riverside, Calif. **AGRICULTURAL ENTOMOLOGY**. b. Centreville, Md., May 2, 1901. s. Zell C. and Della (Sparks) B. Edn.: B.S., Cornell Univ., 1926; M.S., *ibid.*, 1927; Ph.D., Univ. of Calif., 1931. m. Janet E. Mabry, Aug. 11, 1939. c.: Barry S.; Allen W.; Karen. Exp.: Extension Specialist in Entomol., Cornell Univ., Ithaca, N. Y., 1926-27; Jr. Entomol., Univ. of Calif., Citrus Expt. Sta., *ibid.*, 1927-31; Asst. Prof. of Entomol. and Asst. Entomol., *ibid.*, 1931-39; Assoc. Prof. of Entomol. and Assoc. Entomol., *ibid.*, 1939-43; Prof. of Entomol., Entomol. and Chmn., Dept. of Entomol., *ibid.*, 1943-52; Prof. of Entomol., Entomol. and Dir. of Citrus Expt. Sta., *ibid.*, 1952—. Hon. Pos.: 1st Vice-Pres., and Pres., Amer. Assn. of Econ. Entomol., 1948-49. Mem.: A.A.A.S.; Amer. Assn. Econ. Entomol.; Entomol. Soc. of Amer.; Phi Sigma Kappa; Phi Kappa Phi; Sigma Xi; Rotary. Contrb. to: Jour. Econ. Entomol.; Hilgardia. Special Int.: Biol. and Control of Insects and Mites of Citrus and Other Subtropical Fruits.



BOYCE, John Shaw, Prof. of Forest Pathol., Yale Univ., New Haven, Conn.

BOYCE, Joseph C., Prof. and Chmn., Dept. of Physics, N. Y. Univ., Univ. Hgts., N. Y., N. Y. **PHYSICS**.

BOYD, Catherine E., Prof. of Hist., Carleton Coll., Northfield, Minn. **ITALIAN AND MEDIEVAL**

HISTORY. b. Stoneham, Mass., Feb. 9, 1904. d. Joseph William and Annie Seward (Huestis) B. Edn.: A.B., Radcliffe Coll., 1926; A.M., *ibid.*, 1929; Ph.D., *ibid.*, 1934. Exp.: Instr., Univ. of Colo., Boulder, Colo., 1930-32; Rsch. Assoc., Museum of Fine Arts, Boston, Mass., 1937-42; Tchr., Wells Coll., Aurora, N. Y., 1942-43; Assoc. Prof., Cedar Crest Coll., Allentown, Pa., 1943-44; Prof., *ibid.*, 1944-46; Chmn. Dept., 1944-46; Asst. Prof. of Hist., Univ. of N. C., Greensboro, N. C., 1946-47; Assoc. Prof. of Hist., Carleton Coll., Northfield, Minn., 1947-53; Prof., 1953—. Mem.: Amer. Historical Assn.; Mediaeval Acad. of Amer.; Amer. Soc. for Reformation Rsch.; Phi Beta Kappa. Author: *The French Renaissance*, 1940; *A. Cistercian Nunnery in Mediaeval Italy*, 1943; *Tithes and Parishes in Medieval Italy*, 1952. Contrb. to: Amer. Historical Review; *Speculum*. Special Int.: Italian History; Mediaeval History; Agrarian Tenures; Comparative Legal Systems.

BOYD, Edith, 4200 E. Ninth Ave., Denver, Colo. **MEDICINE, ANTHROPOLOGY.**

BOYD, George Edward, Assoc.-Dir., Chem. Div., Oak Ridge Natl. Lab., Oak Ridge, Tenn. **PHYSICAL CHEMISTRY.** b. Evansville, Ind., Sept. 1, 1912. s. Herbert H. and Minnie (Deusner) B. Edn.: B.S., Univ. of Chicago, 1933; Ph.D., *ibid.*, 1937. m. Valborg Richter, Feb. 20, 1942. c.: Monica. Exp.: Rockefeller Found. Rsch. Inst., Univ. of Chicago, Chicago, Ill., 1933-38; Rohm and Haas Rsch. Inst., *ibid.*, 1938-39; Instr. in Chem., *ibid.*, 1939-42; Asst. Prof. of Chem., *ibid.*, 1942-45; Assoc. Prof. of Chem., *ibid.*, 1945-48; Section-Chf., Metallurgical Lab., Univ. of Chicago and Clinton Lab., Oak Ridge, Tenn., 1942-48; Assoc.-Dir., Chem. Div., Oak Ridge Natl. Lab., Oak Ridge, Tenn., 1949—; Guggenheim Memorial Foundation Fellow, Europe, 1952-53; Fulbright Advanced Rsch. Scholar, The Netherlands, 1952-53. Honors: Southern Chemist Award, 1951, Amer. Chem. Soc. Mem.: Amer. Phys. Soc.; Amer. Chem. Soc.; Phi Beta Kappa; Sigma Xi; Gamma Alpha. Contrb. to: Jour. Amer. Chem. Soc.; Phys. Rev.; Jour. Phys. Chem.; Analytical Chem.; Indus. and Engrng. Chem.; Sci. Special Int.: Surface and Colloid Chem.; Nuclear Chem.; Inorganic Analytical Chem.

BOYD, George Hugh, Hd., Dept. of Biol. and Dean, Grad. Schl., Univ. of Ga., Athens, Ga. **PARASITOLOGY.**

BOYD, Harold. **SPEECH AND HEARING.**

BOYD, Ivan Louis, Prof. and Hd., Biol. Dept., Baker Univ., Baldwin, Kans. **BIOLOGY.** b. Aug. 4, 1904. Rt. 1, Spaulding, Ia. s. Alfred Leo and Mary Elizabeth (Wilson) B. Edn.: A.B., Simpson Coll., 1931; M.S., Ia. State Coll., 1939; Ph.D., *ibid.*, 1944. m. Margaret Frances Kohlman of Dubuque, Ia., June 13, 1942. d. L. O. F. and Maude M. Kohlman. Exp.: Instr., Rural Schl., Indianola, Ia., 1927-28; Instr., Jr. H. S., Atlantic, Ia., 1928-37; Instr., H. S., Shelby, Ia., 1937-38; Rsch. Asst., Soil Conservation Service, U. S. Dept. of Agri., 1938-44; Asst. Prof. of Biol., 1941-45; Prof. of Biol., 1945—; Hd. of Dept.,



Baker Univ., 1941—. Hon. Pos.: Scout Commr.; Pres., Atlantic Bird Club; Pres., Baldwin Bird Club; President, Atlantic Faculty Club; Treas., Baker Faculty Club. Mem.: Ia. Acad. of Sci.; Kans. Acad. of Sci.; A.A.A.S.; Gamma Delta Sigma; Sigma Xi; Alpha Delta Sigma; Baker Faculty Club; Scoutmaster; Ia. Ornithol. Union; Kans. Ornithol. Soc.; Pres., 1949, Ed., 1950—; Wilson Ornithol. Club. Ph.D. Dissertation: *An Ecological Study of Native Species of Sumac in Relation to Devel. and Growth on Eroded Land and to Utilization as a Source of Tannin*. Travel: N. Amer. Gen. Int.: Dir. an Exptml. Project on Harvesting Iowa Sumac for Commercial Consumption, 1943-44. Hobbies: Ornithol.; Philately. Listed in: A.M.S.; Who's Important in Sci. Special

Int.: Tannin Production in Plants. Growth of Prairie Grasses.

BOYD, James, New York, N. Y. **GEOLOGY.**

BOYD, James Harrington, 250 Park Ave., N. Y. 17, N. Y. **CHEMICAL ENGINEERING, PETROLEUM HYDROCARBONS, EMULSION POLYMERS AND SYNTHETIC RUBBER.** b. Portland, Maine, Nov. 29, 1902. s. James Harrington and Susan (Adams) B. Edn.: B.S., Kenyon Coll., 1924; M.S., Mass. Inst. of Tech., 1926; Sc.D., *ibid.*, 1930. m. Henrietta Hammond, Jan. 25, 1926. Exp.: Asst. Mgr. Rsch. and Dev., Atlantic Refining Co., Philadelphia, Pa., 1929-37; Supvr. Process Dev., Ammonia Dept., E. I. du Pont de Nemours and Co., Wilmington, Del., 1937-39; Asst. Mgr., Spec. Prod., Phillips Petroleum, Bartlesville, Okla., 1939-47; Asst. to Pres., Hycar Chem. Co., Akron, Ohio, 1940-45; Visiting Prof., Chem. Engrng., Columbia Univ., N. Y. C., 1951—. Mem.: Amer. Chem. Soc.; Amer. Inst. Chem. Engrg.; Chem. Mkt. Rsch. Assn.; Com. Chem. Dev. Assn.; Delta Kappa Epsilon; Phi Beta Kappa. Contrb. to: Jour. of Indus. Chem.; Chem. Indus.; Phys. Rev.; Petroleum Refiner. Special Int.: Petroleum Chem., Chem. Engrng. Econ., Prod. and Mkt. Dev., Rubber Reclaiming.

BOYD, Mark Frederick, Mem. Field Staff, Internatl. Health Div., Rockefeller Foundation, N. Y., N. Y. **MALARIOLOGY.**

BOYD, Paul Prentice, Dean Emer., Coll. of Arts and Sci., Univ. of Ky., 119 Waller Ave., Lexington, Ky. **MATHEMATICS.**

BOYD, Robert Allen, Rsch. Physicist, Dept. of Engrng. Rsch., Univ. of Mich., Ann Arbor, Mich. **ILLUMINATION.**

BOYD, Robert C., Amer. Radiator and Standard Sanitary Corp., 1541 S. Seventh St., Louisville 8, Ky. **CERAMICS.**

BOYD, Thomas Alvin, Hd., Fuel Dept., Rsch. Div., General Motors Corp., Detroit, Mich. **INTERNAL COMBUSTION ENGINE FUELS.**

BOYDEN, Alan Arthur, Prof. of Zool.; Dir. of Serological Museum, Rutgers Univ., N. Brunswick, N. J. **COMPARATIVE SEROLOGY; GENETICS, EVOLUTION AND SYSTEMATICS.** b. Milwaukee, Wis., June 16, 1897. s. Arthur Wellesley and Carrie Elizabeth (Wheeler) B. Edn.: A.B., Univ. of Wis., 1921; Ph.D., Univ. of Wis., 1925. m. Mabel J. Gregg, Sept. 15, 1923. c.: Alan, Jr.; Douglas Gregg; Mabel Maxon; Cornelia Wheeler. Exp.: Asst. Zool. Wis., 1921-25; Instr., Rutgers, 1925-26; Asst. Prof., 1926-30; Assoc. Prof., 1930-44; Prof., 1944—; Lectr., Univ. of Calif., 1929-30; Acting Chmn., Zool., Rutgers, 1947-48; Chmn., Bur. of Biological Rsch., Rutgers, 1936-39; Dir., Serological Museum, 1948—. Mem.: A.A.A.S.; Amer. Soc. Zool.; Amer. Soc. Naturalists; Amer. Assn. Immunologists; Genetics Soc. Amer.; Soc. Study of Evolution; Soc. Systematic Zool.; Systematics Assn. (British); N. Y. Acad. of Sci.; N. Y. Zool. Soc.; Phi Beta Kappa; Sigma Xi; Phi Sigma; Gamma Alpha. Contrb. to: Biological Bull.; Amer. Naturalist; Physio. Zool.; Jour. of Immunol.; Sci.; Nature; Systematic Zool.; Sci. Amer.; Zoologica; Amer. Midland Naturalist; Quart. Rev. of Biology; Amer. Jour. Physiology. War Record: Pvt., U. S. A., World War I. Special Int.: Blood Relationships; Principles of Systematics; Primitive Evolution.

BOYDEN, Boyd Lester, Sr. Entomologist, U. S. Bureau of Entomol. and Plant Quarantine, P. O. Box 70, Whittier, Calif. **ZOOLOGY.**

BOYDEN, Edward Allen, Prof. and Chmn., Dept. of Anatomy, Univ. of Minn., Minneapolis, Minn. **ANATOMY.**

BOYDEN, Mabel Gregg, Rutgers Univ., New Brunswick, N. J. **ZOOLOGY.**

BOYER, Carl Benjamin, Assoc. Prof. of Math., Brooklyn Coll., Brooklyn 10, N. Y. **HISTORY OF MATHEMATICS AND SCIENCE.**

BOYER, Lee Emerson, Prof. of Math., S. T. C., Millersville, Pa. MATHEMATICS. b. July 27, 1900, Gratz, Pa. s. Jacob M. Boyer and Carrie Boyer. Edn.: A.B., Susquehanna Univ., 1926; Ed.M., Harvard, 1933; Ed.D., Pa. State Coll., 1939. m. Laura Henninger, Elizabethville, Pa., 1921. d. Mr. and Mrs. I. M. Henninger. c.: Romaine Evelyn and Dolores Elaine. Exp.: Tchr. of Rural Schls., Dauphin Co., Pa., 1918-23; Tchr. of Math. and Sci. Berryburg H. S., 1926-27; Asst. Supt. in Highway Construction, 1927-28; Prin. and Tchr. of Math., Tressler H. S., Pa., 1928-34; Prof. of Math., S. T. C., Millersville, Pa., 1934—; Hd. of Math. Dept., 1946—; Part-time Math. Prof. at Franklin and Marshall Coll., Lancaster, Pa., 1945. Part-time Hd. of Math. Dept. at Lancaster Coll. Center, 1946-48. Mem.: Phi Delta Kappa; Natl. Coun. of Tchrs. of Math.; Math. Assn. of Amer.; Pa. Edn. Rsch. Assn., Millville Branch, A.A.U.P.; Past Dir., Natl. Coun. Tchrs. of Math.; Lancaster Branch, Amer. Assn. for Adv. of Sci. Author: The Story of Tressler Orphans Home in Word and Picture, 1931; C. Gen. Math. of Prospective Sec. Schl. Tchrs., 1939; Elem. Approximate Computation, 1939; An Introduction to Math. for Tchrs.; Math., A Historical Development. Co-Author: A Source Book of Mathematics Application. Contrb. to: The Math. Tchr.; Schl. Sci. and Math.; Pa. Schl. Jour.; The Jour. of Expt. Edn.; Edn. Method; Tchr. Edn. Jour. Ed.D. Dissertation: Coll. Gen. Math. for Prospective Sec. Schl. Tchrs. Recreations and Hobbies: Study of Stars, Birds, and Mechanical Inventions Around Home. Listed in: Amer. Men of Sci.



BOYER, Robert L., 1115 Portland St., Pittsburgh, Pa. PHYSICS.

BOYLE, Robert William, Retired, Dir., Physics and Elec. Engrng. Div., Natl. Rsch. Coun., Can., Rideau Club, Ottawa, Ont., Can. ELECTRICAL PHYSICS AND ULTRASONICS. b. Carbonear, Nfld., Oct. 2, 1883. s. Albert D. and Sophie (Maddock) B. Edn.: B.Sc., McGill Univ., 1905; M.Sc., ibid., 1906; M.A., ibid., 1909; Ph.D., ibid., 1911. Hon. Deg.: LL.D., 1933. Exp.: Demost. of Phys., McGill Univ., Montreal, Que., Can., 1905-06; Sr. Demontst., ibid., 1906-09; Lectr. of Physics, ibid., 1911; Asst. Prof., ibid., 1912; Prof. of Physics, Univ. of Alta, Can., 1912; War Rsch. Asst. at Admin., Great Britain, 1916-19; Prof., Univ. of Alta, Can., 1919; Dean, Faculty of Applied Sci., Alta, 1921-29; Dir. of Phys. and Engrng. Div., Natl. Rsch. Coun., Ottawa, Ont., Can., 1929-35; Dir. of Physics and Elec. Engrng. Div., ibid., 1935-48; Retired, 1948. Mem.: Royal Soc. of Can.; Prof. Engrs. of Ont.; Engrng. Inst. of Can.; Can. Assn. of Physicists; A.A.A.S.; Amer. Phys. Soc.; Amer. Acoustical Soc. Contrb. to: Phil. Mag.; Le Radium; Phys. Rev.; Trans. Royal Soc. of Can.; Can. Jour. of Physics; Can. Military Jour. War Record; W. W. I. Special Int.: Radioactivity and Ultrasonics.

BOYLE, Robert William, Chf., Professional Serv., V. A. Hosp., Ft. Thomas, Ky. PHYSIOLOGY, PHYSICAL MEDICINE AND REHABILITATION. b. Feb. 11, 1903, St. Paul, Minn. s. Wm. H. and Gertrude (Ritsch) B. Edn.: Hamline Univ., 1924-26; Grad., Y.M.C.A.C., 1929; Ph.B., Univ. of Chicago, 1930; M.S., C. C. of Detroit, 1932; Ph.D., Univ. of Minn., 1936; M.D., Univ. of Ark., 1940. Exp.: Biol. Asst., Y. M.C.A.C., Chicago, Ill., 1929-30; Phys. Dir., Y.M.C.A., Eau Claire, Wis., 1930-31; Spec. Lectr. in Physiol., Coll. of City of Detroit, 1931-32; Tchng. Fellow, Physiol., Univ. of Minn., 1933-36; Asst. Prof., Physiol., Univ. of Ark. Med. Schl., 1936-39; Intern, Evangelical Deaconess Hosp., Milwaukee, 1940-41; Assoc. Prof., Physiol. and Pharmacol. and Act. Hd. Dept., Univ. of Ark. Med. Schl., 1941-42; ibid., 1942-44; Med. Corps, U. S. Military Acad., West Point, N. Y., 1944-46; Baruch Fellow, Mayo Clinic, Rochester, Minn.; Bellevue Hosp., N. Y. C., 1946-47; Mass. Inst. Tech., Cambridge, Mass., 1946-47; Vet. Admin. Hosp., Chf.

Phys. Med., Ft. Thomas, Ky., 1947—; Vet. Admin. Hosp., Chf. Prof. Serv., 1948—. Mem.: A.A.A.S.; A.A.U.P.; Co. Med. Soc.; Ark. State Med. Soc.; Amer. Cong. of Phys. Med.; Amer. Soc. Phys. Med.; A.R.A.; A.M.A.; Sigma Xi; Alpha Omicron Alpha; Theta Kappa Psi. Contrb. to: Med. Jours. Ph.D. Dissertation: Some Observations on the Effect of Exercises on the Blood, Lymph and Muscle in Its Relation to Muscle Soreness. War Record: See above. Hobbies: Sports; Gardening. Listed in: Dir. of Amer. Med. Specialists; A.M.S.; Who's Who in Fed. Admin. Special Int.: Physiol. of Exercise.

BOYLE, Paul Edmund, Prof. of Oral Histology and Pathol., Univ. of Pa., Philadelphia, Pa. ORAL PATHOLOGY.

BOYLSTON, Arthur Clarence, Pres., Mallinckrodt Chemical Works, 3600 N. Second St., St. Louis, Mo.

BOYNTON, Henry Cook, Consulting Metallurgist in Rsch. Inst. and Lectr., Metall. Temple Univ., Philadelphia 22, Pa. METALLOGRAPHY OF WIRE AND WIRE PRODUCTS. b. April 16, 1874, Willsboro, Essex Co., N. Y. s. Orville A. and Martha Luella (Cook) B. Edn.: A.B., Harvard Coll., 1900; S.M., Harvard Univ., 1901; Sc.D., ibid., 1904. m. Mary Allison Manter of Plymouth, Mass., June 11, 1902. d. Pelham E. and Sarah Dunn Manter. c.: Rosamond; Paul Manter; Henry Cook, Jr. Exp.: Austin Tchng. Fellow in Geol., Harvard, 1900-01; Austin Tchng. Fellow in Metallurgy, ibid., 1901-02; Instr. in Metallurgy, 1902-06; Metallurgist, John A. Roebling's Sons Co., Trenton, N. J., 1906-30; Chf., ibid., 1931-40; Consulting Metallurgist, 1941-47; Consulting Metallurgist, Rsch. Inst., Temple Univ., Phila., Pa., 1947—; Hd. Metallurgy Dept., 1947-49; Lectr., 1947—; Carnegie Scholar, Brit. Iron and Steel Inst., 1904-06; Chmn., Phila. Chapt., A.S.M., 1932-33. Mem.: A.I.M.M.E.; A.S.T.M.; Amer. Soc. for Metals; Engr. Club Phila.; N. J. Prof. Engr.; F. and A.M., 32° Mason; Shriner; Cadwalader Assn., Trenton. Author: Articles on Sci. Subjects. Sc.D. Dissertation: Metallography of Steel and Influence of Its Heat Treatment. Travel: N. Amer.; Cuba; British Columbia. Hobbies: Sports; Color Photography. Listed in: Who's Who in the East; A.M.S.; Who's Who in Engr. Special Int.: Thermal Conductivity of Ferrous Alloys at Elevated Temperatures at Rsch. Inst. of Temple Univ.

BOYNTON, Ruth Evelyn, Dir. of Students Health Service and Prof. of Public Health, Univ. of Minn., Minneapolis, Minn. PUBLIC HEALTH.

BOYNTON, William Hutchins, Prof. of Veterinary Sci., Univ. of Calif., Berkeley, Calif. VETERINARY SCIENCE.

BOYNTON, William Pingry, Prof. Emer. Physics, Ore. State Coll., 546 W. Beverly Blvd., Whittier, Calif. KINETIC THEORY, DIGIT ELECTRIC FREQUENCY.

BOZLER, Emil, Assoc. Prof. of Physiol., Ohio State Univ., Columbus, Ohio. PHYSIOLOGY.

BOZORTH, Richard Milton, Rsch. Physicist, Bell Telephone Lab., Murray Hill, N. J. FERROMAGNETISM.

BRAATEN, Arthur M., Rsch. Engr., RCA Labs. Div., Box 626, Riverhead, L. I., N. Y. RADIO ENGINEERING. b. St. Paul, Minn., Nov. 30, 1901. s. Peter T. and Louise M. (Pitra) B. Edn.: B.E.E., Univ. of Minn., 1928; E.E., ibid., 1950. m. Louise F. Herman, June 29, 1930. c.: Arthur Peter. Exp.: Rsch. Engr., Radio Communications Rsch. and Development Lab., RCA, Riverhead, L. I., N. Y., 1929—; Mem.: Inst. Radio Engrs.; A.A.A.S.; Radio Soc. Great Britain; Amer. Radio Realy League; Amer. Forestry Assn.; Natl. Rifle Assn.; Tau Beta Pi; Eta Kappa Nu; Scabbard and Contrb. to: Proc. I.R.E.;

BRAATEN, Arthur M., Rsch. Engr., RCA Labs. Div., Box 626, Riverhead, L. I., N. Y. RADIO ENGINEERING. b. St. Paul, Minn., Nov. 30, 1901. s. Peter T. and Louise M. (Pitra) B. Edn.: B.E.E., Univ. of Minn., 1928; E.E., ibid., 1950. m. Louise F. Herman, June 29, 1930. c.: Arthur Peter. Exp.: Rsch. Engr., Radio Communications Rsch. and Development Lab., RCA, Riverhead, L. I., N. Y., 1929—; Mem.: Inst. Radio Engrs.; A.A.A.S.; Radio Soc. Great Britain; Amer. Radio Realy League; Amer. Forestry Assn.; Natl. Rifle Assn.; Tau Beta Pi; Eta Kappa Nu; Scabbard and Contrb. to: Proc. I.R.E.;

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BRAATEN, Arthur M., Rsch. Engr., RCA Labs. Div., Box 626, Riverhead, L. I., N. Y. RADIO ENGINEERING. b. St. Paul, Minn., Nov. 30, 1901. s. Peter T. and Louise M. (Pitra) B. Edn.: B.E.E., Univ. of Minn., 1928; E.E., ibid., 1950. m. Louise F. Herman, June 29, 1930. c.: Arthur Peter. Exp.: Rsch. Engr., Radio Communications Rsch. and Development Lab., RCA, Riverhead, L. I., N. Y., 1929—; Mem.: Inst. Radio Engrs.; A.A.A.S.; Radio Soc. Great Britain; Amer. Radio Realy League; Amer. Forestry Assn.; Natl. Rifle Assn.; Tau Beta Pi; Eta Kappa Nu; Scabbard and Contrb. to: Proc. I.R.E.;

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BRAATEN, Arthur M., Rsch. Engr., RCA Labs. Div., Box 626, Riverhead, L. I., N. Y. RADIO ENGINEERING. b. St. Paul, Minn., Nov. 30, 1901. s. Peter T. and Louise M. (Pitra) B. Edn.: B.E.E., Univ. of Minn., 1928; E.E., ibid., 1950. m. Louise F. Herman, June 29, 1930. c.: Arthur Peter. Exp.: Rsch. Engr., Radio Communications Rsch. and Development Lab., RCA, Riverhead, L. I., N. Y., 1929—; Mem.: Inst. Radio Engrs.; A.A.A.S.; Radio Soc. Great Britain; Amer. Radio Realy League; Amer. Forestry Assn.; Natl. Rifle Assn.; Tau Beta Pi; Eta Kappa Nu; Scabbard and Contrb. to: Proc. I.R.E.;

BRAATEN, Arthur M., Rsch. Engr., RCA Labs. Div., Box 626, Riverhead, L. I., N. Y. RADIO ENGINEERING. b. St. Paul, Minn., Nov. 30, 1901. s. Peter T. and Louise M. (Pitra) B. Edn.: B.E.E., Univ. of Minn., 1928; E.E., ibid., 1950. m. Louise F. Herman, June 29, 1930. c.: Arthur Peter. Exp.: Rsch. Engr., Radio Communications Rsch. and Development Lab., RCA, Riverhead, L. I., N. Y., 1929—; Mem.: Inst. Radio Engrs.; A.A.A.S.; Radio Soc. Great Britain; Amer. Radio Realy League; Amer. Forestry Assn.; Natl. Rifle Assn.; Tau Beta Pi; Eta Kappa Nu; Scabbard and Contrb. to: Proc. I.R.E.;



Blade; Pi Tau Pi Sigma.

Jour. Terrestrial Magnetism and Atmospheric Electricity; Bull. Radio Soc. Great Britain; QST. Special Int.: Ionospheric and Tropospheric Radio Wave Propagation.

BRACKETT, Frank Parkhurst, Prof. Emer. of Astron., Pomona Coll., P. O. Box 433, Balboa Island, Calif. ASTRONOMY.

BRACKETT, Frederick Sumner, Prin. Physicist, Natl. Inst. of Health, Bethesda, Md. PHYSICS.

BRADBURY, Norris Edwin, Dir., Los Alamos Scientific Lab., Box 1663, Los Alamos, N. Mex. PHYSICS. b. Santa Barbara, Calif., May 30, 1909. s. Edwin P. and Elvira (Norris) B. Edn.: B.A., Pomona Coll., 1929; Ph.D., Univ. of Calif., 1932. Hon. Deg.: D.Sc., Pomona Coll., 1951. m. Lois Platt, Aug. 5, 1933. c.: James N.; John Platt; David Edwin. Exp.: Natl. Rsch. Coun. Fellow in Physics, 1932-34; Asst. Prof. of Physics, Stanford Univ., Stanford, Calif., 1934-37; Assoc. Prof., ibid., 1937-42; Prof., ibid., 1942-51; Prof. of Physics, Univ. of Calif., 1951—; Dir., LASL, Los Alamos, N. Mex., 1945—. Mem.: Amer. Phys. Soc.; Natl. Acad. of Sci.; Phi Beta Kappa; Sigma Xi. War Record: Comdr. U.S.N.R., 1941-45.

BRADBURY, Ora Clare, Prof. and Hd., Dept. of Biol., Wake Forest Coll., Wake Forest, N. C. EMBRYOLOGY.

BRADBURY, Robert Hart, 2114 Chestnut Ave., Ardmore, Pa. CHEMISTRY.

BRADDOCK-ROGERS, Kenneth, Hd., Chem. Dept., State Tchrs. Coll., West Chester, Pa. INORGANIC CHEMISTRY.

BRADFIELD, Richard, Prof. of Soil Technology and Hd., Dept. of Agron., Cornell Univ., Ithaca, N. Y. AGRONOMY, SOIL SCIENCE.

BRADFORD, James McClellan, Prof., Dept. of Physics, Beloit Coll., Beloit, Wis. PHYSICS.

BRADLEY, Amos Day, Asst. Prof. of Math., Hunter Coll., 66 Villard Avenue, Hastings on Hudson 6, New York. MECHANICAL CARTOGRAPHY. b. Wakefield, Pa., Oct. 9, 1905. s. Joseph Henry and Harriet Rachael (Wood) B. Edn.: B.A., Pa. State, 1927; M.A., Columbia, 1929; Ph.D., ibid., 1933. m. Gladys Mary Barker of Oscego, Mich., Sept. 15, 1929. d. Frank and Eva Barker. c.: Ann. Exp.: Tchrs., Drumore, Pa., 1923-24; Asst. Prin. of H. S., Drumore, Pa., 1924-25; Hunter Coll. of the City of N. Y., Instr., 1929-40; Asst. Prof., 1940—; Summer session Instr., Tchrs. Coll., Columbia, 1938, 41, 42, 47, 49. Mem.: Natl. Coun. of Tchrs. of Math.; Math. Assn. of Amer.; Amer. Math. Soc.; Hist. of Sci. Soc.; Kappa Delta Pi; Kappa Phi Kappa; Pi Mu Epsilon. Author: Math. of Air and Marine Navigation, Amer. Book Co., 1942; Air Navigation Workbook (co-author) with C. B. Upton, 1943. Contrb. to: Math. Tchrs.; Amer. Math. Monthly; Scripta Math.; Geog. Review. Ph.D. Dissertation: The Geometry of Repeating Design. War Record: Active duty as Lt. (jg) and Lt. USNR, 1943-45. Listed in: Amer. Men of Sci.

BRADLEY, George Hirst, Chf. Entomologic Consultant, Bureau State Services, U. S. Public Health Service, 50 7th St., N. E., Atlanta, Ga. PUBLIC HEALTH ENTOMOLOGY. b. Patch Grove, Wis., July 14, 1893. s. John and Ann Jane (Charlesworth) B. Edn.: B.S., Cornell Univ., 1916; Ph.D., ibid., 1949. m. Nancy McMurry. Dec. 30, 1922. c.: George H., Jr.; John Bryan. Exp.: Asst. in Biol., Cornell Univ., 1916-17; Scientific Asst., U. S. Dept. of Agri., Bureau of Entomol., 1917; 1st Lt. and Capt., Infantry, U. S. Army, 1917-19; Asst. to Sr. Entomologist, Bureau of Entomol., U. S. Dept. of Agri., 1919-42;

Sr. Entomologist, U. S. Public Health Service, 1943-48; Scientist Dir., ibid., 1948—. Hon. Pos.: Pres., Natl. Malaria Soc., 1944; Dir., ibid., 1950; Councillor, Amer. Soc. Tropical Med. and Hygiene, 1951; Pres., C.D.C. Chapter Scientific Rsch. Soc. of Amer., 1952; Delegate of the U. S. to 8th Internatl. Congress on Entomology, Stockholm, Sweden, 1948. Mem.: Fellow, A.A.A.S.; Fellow, Entomol. Soc. Amer.; Amer. Soc. Tropical Med. and Hygiene; Amer. Assn. Econ. Entomologists; Wash. Entomol. Soc.; Fla. Entomol. Soc.; Ga. Acad. Sci.; Amer. Public Health Assn.; Amer. Mosquito Control Assn.; Amer. Soc. Professional Biologists; Sigma Xi; Sci. Res. Soc. Amer. Contrb. to: Jour. Econ. Entomol.; Annals Entomol. Soc. Amer.; Amer. Jour. Tropical Med.; Proc. N. J. Mosquito Extermination Assn.; etc. Special Int.: Control of Insects of Public Health Importance; Malaria and Mosquito Rsch. and Control.

BRADLEY, Charles Dunklin, Pres., Bradley Lab., Inc., New Haven, Conn. PHYSICS.

BRADLEY, Harold Cornelius, Service Memorial Institutes Bldg., Univ. of Wis., Madison, Wis. CHEMISTRY, MEDICINE.

BRADLEY, James Chester, Prof. of Entomol., Emer., Cornell Univ., Ithaca, N. Y. INSECT TAXONOMY, HYMENOPTERA, ZOOLOGICAL NOMENCLATURE.

BRADLEY, Muriel Virginia, Rsch. Assoc. in Botany, Univ. of Calif., Berkeley, Calif. CYTOGENETICS.

BRADLEY, R. S., A. P. Green Fire Brick Co., Rsch. Dept., Mexico, Mo. CERAMICS.

BRADLEY, Wilmot Hyde, U. S. Geol. Survey, Washington 25, D. C.

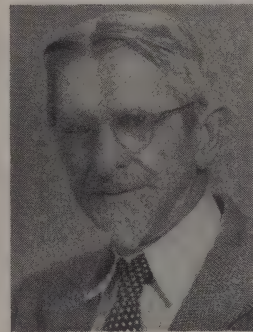
BRADNER, Donald B., Consultant, Development Dept., E. I. du Pont de Nemours & Co., Wilmington, Del. CHEMICAL ENGINEERING.

BRADSHAW, John William, Prof. of Math., Univ. of Mich., Ann Arbor, Mich. MATHEMATICS.

BRADT, Paul, National Bureau of Standards, 6626 First St., N. W., Washington, D. C. PHYSICS.

BRADY, Frederick Jonathon, Surgeon, U. S. P. H. S. and Asst. Chf., Zool. Lab., Natl. Inst. of Health, 16 Woodhaven Blvd., Bethesda, Md. MEDICAL ZOOLOGY.

BRADY, Lionel F., Curator of Geol., Museum of Northern Ariz., Flagstaff, Ariz. GEOLOGY AND PALEONTOLOGY OF THE PLATEAU OF NORTHERN ARIZONA; METEORITIC PHENOMENA. b. Dovercourt, England, Jan. 24, 1880. s. Henry and A. M. C. (Kinder) B. Edn.: B.A., Cambridge Univ., 1902; M.A., ibid., 1905. m. Linden Van Every (dec.), Apr., 1914. Exp.: Taught, Evans Schl., Mesa, Ariz., 1910-20; Headmaster, Mesa Ranch Schl., 1921-42; Asst., Ariz. State Coll., 1942-45; Curator of Geol., Museum of Northern Ariz., Flagstaff, Ariz., 1945—; Trustee, Museum of Northern Ariz., 1923—; Pres., The Meteoritical Soc., 1950—; Fellow, A.A.A.S.; G.S.A.; Meteoritical Soc. Pal. Soc.



BRADY, James J., Prof. of Physics, Physics Dept., Ore. St. Coll., Corvallis, Ore. PHYSICS. b. Ore. City, Ore., Nov. 24, 1904. s. Edward and Mary (Reilly) B. Edn.: A.B., Reed Coll., 1927; M.A., Ind. Univ., 1928; Ph.D., Univ. of Calif., 1931. m. Mary Contratto of Bakersfield, Calif., Sept. 3, 1932. d. Mr. and Mrs. Peter Contratto. c.: Mary Ann; Margaret Elizabeth. Exp.: Grad. Asst. in Physics, Ind. Univ., 1927-28; Tchgr. Fellow, Univ. of Calif., 1928-30; Whiting Fellow, 1930-31; Instr., St. Louis Univ.,

1932-36; Asst. Prof., *ibid.*, 1936-37; Asst. Prof., Assoc. Prof., Ore. State Coll., 1937-41; Assoc. group leader, Rad. Lab., M.I.T., 1942-46; Prof. at O.S.C., 1946—. Mem.: Amer. Phys. Soc.; A.A.U.P.; Sigma Xi; Amer. Assn. of Phys. Tchrs.; A.A.A.S.; Phi Kappa Phi; Sigma Pi Sigma; Knights of Columbus. Author: Introduction to Modern Physics. Contrb. to: Phys. Rev.; Amer. Jour. of Phys.; Rev. of Sci. Instrn. Ph.D. Dissertation: Photoelectric Effect of Thin Alkali Metal Films. War Record: Radar Scientist, Radiation Lab., M.I.T. Listed in: Amer. Men of Sci.; Who's Who in Ore.; Cath. Who's Who; Who's Who on the Pacific Coast. Special Int.: Photoelectricity; Microwaves; Nuclear Physics.

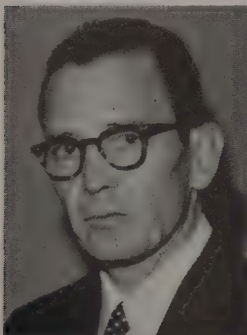
BRAGG, Arthur N., Assoc. Prof. of Zool. and Herpetologist, Biol. Survey, Univ. of Okla., Norman, Okla. **HERPETOLOGY**.

BRAGG, Francis Coolidge, Assoc. Prof. of Engrng. Drawing and Mech., Georgia Tech., Atlanta, Ga. **ENGINEERING**. b. Watertown, Mass., July 1, 1901. s. Frank A. and Mary F. (Davenport) B. Edn.: B.S., Worcester Polytechnic Inst., 1924; M.S., Syracuse Univ., 1943. m. Annabelle Howland, Sept. 14, 1929. Exp.: Specification Engr., U. S. Rubber Co., Wire Division, Bristol, R. I., 1925-38; Instr. in Tech. Drawing, Syracuse Univ., Syracuse, N. Y., 1938-40; Instr. in Mechanical Engrng., N. C. State Coll., Chapel Hill, N. C., 1940-44; Sales Manager, U. S. Rubber Co., Wire Division, New York, N. Y., 1944-46; Assoc. Prof., Ga. Inst. of Tech., Atlanta, Ga., 1946—. Mem.: Amer. Soc. for Engrng. Edn.; Amer. Soc. of Mech. Engrs.; Soc. for Experimental Stress Analysis; N. C. Soc. of Engrs.; Sigma Xi; Tau Beta Pi; Phi Gamma Delta; Atlanta Civic Theater. Contrb. to: Jour. of Engrng Drawing; Jour. of Engrng. Edn.

BRAMHAM, Joseph M., Dr. Development, Allied Chem. and Dye Corp., Rm. 3201, 61 Broadway, N. Y., N. Y. **CHEMISTRY**.

BRAMHAM, Roscoe R., Jr., Chicago Midway Labs., 6240 S. Drexel Ave., Chicago 37, Ill. **METEOROL-OGY**.

BRAILS福德, Harrison Dudley, Pres., Brailsford and Co., Inc., 670 Milton Rd., Rye, N. Y. **INSTRU-MENTATION, ELEC-TRONICS AND METE-OROLOGY**.



b. Louisville, Ky., July 7, 1898. s. James Harrison and Alice Ella (Dudley) B. Edn.: B.S.M.E., Univ. of Ky., 1923; E.E., *ibid.*, 1938. m. Juanita Messmore, July 19, 1929. c.: Elizabeth Susan. Exp.: Assoc. Engr., Underwriters Labs., New York, N. Y., 1923-42; Consulting Engr., *ibid.*, 1942—; Pres., Brailsford and Co., Inc., Rye, N. Y., 1944—. Mem.: Amer. Inst. of Physics; Acoustical Soc. of Amer.; Amer. Meteorol.

Soc.; N. Y. State Prof. Engr.; Alpha Tau Omega; Tau Beta Pi. Contrb. to: Electronics; Jour. of Amer. Meteorol. Soc.; Jour. of Acoustical Soc. of Amer. War Record: U. S. Navy, 1917-19. Gen. Int.: Rsch. Leading to Standards for Sound and Vibration Alarm Systems, Transients Measurements in Elec. Circuits; Publications Relative Thereto; Invented First Successful Code Transmitting Radiosonde; Ionization Type Fire Detector System, Patents on New Type of Miniature Elec. Motor; Subminiature High Voltage Generator, Radiosonde Recorder; Instrument for Measuring Gas Pressures to 0.05 Millibar and Telemetering Same; Developed Compression Hygrometer and Other Meteorol. Instruments and Components; New Type Blood Pump. Special Int.: Gen. Applied Physics; Instrumentation, Signalling Systems and Telemetering Systems and Components.

BRAININ, Clement S., Mgr., C. S. Brainin Co., 233 Spring St., N. Y., N. Y. **PHYSICS**.

BRAKEL, Henry Louis, 4734; Thackeray Pl., Seattle, Wash. **PHYSICS**.

BRALLIAR, Floyd, Prof. of Biol., Madison Coll., Madison Coll., Tenn. **BIOLOGY**.

BRAMANN, Geo. Misher, Asst. to the Director of Research, Mathieson Chemical Corp., 1216 Norwood Ave., Niagara Falls, N. Y. **ORGANIC CHEMISTRY**. b. Bridgeport, Conn., July 15, 1904. s. Geo. A. and Winifred Clyde (Mosher) B. Edn.: B.S., Wesleyan Univ., 1925; M.S., *ibid.*, 1926; M.S., Harvard Univ., 1928. m.: Sara Bowman of Akron, Ohio, Sept. 2. d. D. W. Bowman. c.: Susan. Exp.: Instr., Organic Chem., Wesleyan Univ., 1924-26; Instr., Organic Chem., Harvard Univ., 1926-28; Resch. Chemistry and Rubber Technology, B. F. Goodrich Company, Akron, Ohio,



1928-34; Assistant to Sales Manager, Niacet Chemical Corp., Niagara Falls, N. Y., 1934-42; Plant Investment Engr., Mathieson Magnesium Corp., Lake Charles, La., 1942-44; Asst. to Dir. of Rsch., Mathieson Chem. Corp., Niagara Falls, N. Y. Hon. Pos.: Chem. Adv. Comm., N. Y. State Inst. of Applied Arts and Sci. at Buffalo, N. Y., 1946—. Mem.: Alpha Chi Rho; Alpha Chi Sigma; Masons; Torch Club. Gen. Int.: Specialist in bus. management of rsch. labs. Hobbies: Philately; Color Photography. Listed in: Amer. Men of Sci.; Who Knows—and What; Chem. Who's Who; Wesleyan and Harvard Grad. Dirs. Special Int.: Research Management.

BRAMBLE, Charles Clinton, Dir. of Rsch., Naval Proving Ground, Dahlgren, Va. **MATHEMATICS, INTERIOR BALLISTICS, EXTERIOR BALLISTICS**.

BRAMHALL, Ervin Hicks, Physicist, Rt. 1, Box 433, Annandale, Va. b. Jan. 14, 1905, Palo Alto, Calif. **GEOPHYSICS**.



i. George B. and Emma (Hicks) B. (dec). Edn.: A.B., Stanford Univ., 1926; S.M., M. I. T., 1928; Ph.D., Cantab., 1931. m. Mary Walker of Sun City, Kans., 1936. d. Mr. and Mrs. Geo. Walker. c.: John Hicks; Chas. Thomas; Mary Christine. Exp.: Physicist, Byrd Antarctic Expedition, 1933-35; Prof. Phys., Univ. of Alaska, 1935-41; Physicist-in-Chg., Geophys. Obs., Coll. of Alaska, 1941-43; Operation Analyst, U.S.A.F., Pacific Area, 1944-45; Assoc. Prof. of Phys., Univ. of Hawaii, 1945-48; Physicist, Operations Rsch. Office, U. S. Army, 1948-50; Dept. Chf., Sci. Rsch. Div., State Dept., 1950-52; Chf. Phys. Sci. Br., Ordnance Dept., Army, 1952—. Ph.D. Dissertation: Gaseous Discharges. Mem.: I.R.E.; O.R.S.; A.A.A.S.; A.P.S.; A.S.S.; A.G.U.; A.I.P.T.; Cosmos Club, Washington, D. C. Travel and Study in Europe; Work in Antarctic and Pacific Area and Alaska. Gen. Int.: Ionospheric; Auroral and other Geophys. Rsch. Hobbies: Archery; Chess. Listed in: Amer. Men of Sci. Special Int.: Operative Research.

BRAMKAMP, Richard Allen, Asst. Chf. Geologist, Arabian Amer. Oil Co., 200 Bush St., San Francisco, Calif. **PETROLEUM GEOLOGY**.

BRANCH, E. Arnold G., Chf. of Service, Lab. Service, Lancaster Hosp., St. John, New Brunswick, Can. **PATHOLOGY**. b. Antigua, B.W.I., July 25, 1896. s. Samuel and Susan (Hutson) B. Edn.: M.D., McGill Univ., 1920. m. Marion Noxon of Ingersoll, Ont., July 14, 1926. d. Stephen and Jessie Noxon. c.: Stephen Noxon, Edmund Allister.

Exp.; Path., Rockefeller Inst. Hosp., 1922-26; Harvard Med. Schl., Faculty Instr., 1928-34; Acting Dir. Provincial Labs., N. B., 1940-45; Chf. of Lab. Service, Lancaster Hosp., 1945—. Hon. Pos.: Rsch. Comm. Hosp. Mem.: Amer. Soc. Expt. Path.; C.M.A.; Alpha Omega Alpha; Nu Sigma Nu; Theatre Guild of St. John. Contrb. to: C.M.A. Jour. War Record. Surgeon, R.N.V.R. Travel: Great Britain, France, Germany, Austria, Scotland, Switzerland, U. S. A. Hobbies: Beagle Hounds. Listed in: A.M.S.

BRANCH, Gerald Eyre Kirkwood, Prof. of Chem., Univ. of Calif., Berkeley 3, Calif. **PHYSICAL ORGANIC CHEMISTRY.** b. Basseterre, St. Kitts, B. W. I., Apr. 16, 1886. s. William John and Wilhelmina Marian (Branch) B. Edn.: B.Sc., Univ. of Liverpool, 1911; M.Sc., *ibid.*, 1912; Ph.D., Univ. of Calif., 1915. m. Harriot Esther Hudson, July 14, 1915. Exp.: Instr., Univ. of Calif., Berkeley, Calif., 1915-21; Asst. Prof., *ibid.*, 1921-24; Assoc. Prof., *ibid.*, 1924-31; Prof., *ibid.*, 1931—. Mem.: A.C.S.; A.A.A.S.; Amer. Geographical Soc. Author: Methods of Organic Chem., with Porter and Stewart, 1920; The Theory of Organic Chem., with Calvin, 1941. Contrb. to: Jour. of Amer. Chem. Soc.; Jour. of Organic Chem. War Record: Canadian Army, 1917-18; Rsch. Chemist, British Ministry of Munition, 1918-19. Special Int.: Phys. Organic Chem.

BRANCH, Hazel Elisabeth, Prof. of Zool., Hd., Dept. of Zool., Univ. of Wichita, Wichita 14, Kans. **ENTOMOLOGY.**

BRAND, Donald D., Prof. of Anthropogeography and Hd., Dept. of Anthropol., Univ. of N. Mex., Albuquerque, N. Mex. **HUMAN GEOGRAPHY.**

BRAND, Erwin, Assoc. Prof. of Biochem., Coll. of Physicians and Surgeons, Columbia Univ., 630 W. 168th St., N. Y. N. Y. **CHEMISTRY.**

BRAND, Louis, Prof. and Hd., Dept. of Math., Univ. of Cincinnati, Cincinnati, Ohio. **MATHEMATICS.**

BRANDES, Walter William, Dir. of Lab., Roosevelt Hosp., 59th and Ninth Aves., N. Y., N. Y. **MEDICINE.**

BRANDHORST, Otto William, Dean, Wash. Univ. Schl. of Dentistry, St. Louis, Mo. **ORTHODONTICS.**

BRANDLY, Carl A., Prof. of Veterinary Sci. and Agri. Bacteriol., Univ. of Wis., Madison, Wis. **ANIMAL DISEASES.**

BRANDT, Bartholomew Brandler, Prof. of Zool., N. C. State Coll., Raleigh, N. C. **ZOOLOGY, HERPETOLOGY, ICHTHYOLOGY.**

BRANDT, Rudolph J., Psychiatric Inst. of Beverly Hills, 450 N. Bedford Dr., Beverly Hills, Calif. **PSYCHOANALYTIC PSYCHOLOGY.**

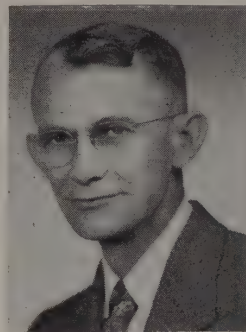
BRANDT, William O., Gladding, McBean and Co., 2901 Los Feliz Blvd., Los Angeles 39, Calif. **CERAMICS.**

BRANHAM, Sara Elizabeth, Sr. Bacteriologist, Natl. Inst. of Health, Bethesda, Md. **BACTERIOLOGY.**

BRANOM, Frederick K., Chmn., Dept. of Social Sci., Chicago Tchrs. Coll., 10325 Leavitt St., Chicago 43, Ill. **GEOGRAPHY AND THE SOCIAL STUDIES.** b. Waverly, Ill., July 27, 1891. s. John Douglas and Ella Mae (Canatsey) B. Edn.: B.E., Ill. Normal Univ., 1915; M.S., Univ. of Chicago, 1916; Ph.D., Clark Univ., 1923. m. Laurana E. Edgerton, Aug. 2, 1922. c.: Elsie Arline; Shirley Ann; Curtis Douglas. Exp.: Tehr. in Country Schl., Minier, Ill., 1908-10; Supt., Hopedale, Ill., 1910-12; Supt., Golden, Ill., 1913-14; Supt., Ashland, Ill., 1914-15; H. S. Tehr., Chicago, Ill., 1917-19; Prof. of Geography and the Social Studies, Chicago Tchrs. Coll., Chicago, Ill., 1919—. Mem.: Sigma Xi; Natl. Council of Geography Tchrs.; Natl. Council for the Social Studies; State Acad. of Sci.; Natl. Soc. for the Study of Edn.; Ill. State Ednl. Assn.; Natl. Geographic Soc.; Geographic Soc. of Chicago. Author: The Use of Maps; The Use of Globes; The Tehng. of Geography; The Tehng. of the Social

Studies in a Changing World, 1942; Co-author of the Social Series of Geographies and the Catholic Geography Series; Editor of Various Atlases. War Record: Pvt., World War I. Special Int.: Geography; Social Studies.

BRANHORST, Carl Theodore, Prof. of Biol. Sci., 920 N. Columbia, Seward, Neb. **BIO-ECOLOGY.** b. Lincoln, Neb., Aug. 24, 1898.



s. Charles W. and Alvina (Backhaus) B. Edn.: Grad., Concordia Tchrs. Coll., 1917; Univ. of Neb., Univ. of Denver, Fort Hays, Kans. State Coll., S. in Ed., 1939; M.Sc., 1942; Art, Univ. of Neb. and Terrence Duren. m. Louise Koenke of Bremen, Kans., June 28, 1922. d. Ernst and Auguste Koenke. c.: Dorothy; Adeline; Olivia; Carl; Ellen; Charlotte; Curt; Mark. Exp.: Prin., Zion Luth. Schl., Okla. City, 1917-18; Prin., Immanuel Luth. Schl., Bremen, Kans., 1920-30; Tehr., Bethlehem Luth. Schl., Sylvan Grove, Kans., 1930-38; Prof., Concordia Tchrs. Coll., Seward, Neb., 1938—. Chmn., Bd. for Audio-Visual Edn., Luth. Ch.-Missouri Synod. Mem.: The Entomological Soc. of Amer.; The Natl. Assn. of Biol. Tchrs.; A.A.A.S.; Amer. Nature Study Soc.; Internatl. Lions; Kans. Acad. of Sci.; Neb. Acad. of Sci.; Neb. Ornithol. Union; Sigma Xi; Kans. State Coll. Honor Soc. Contrb. to: See and Hear Mag. Symposium on Utilization of Audio-Visual Aids; Plant-Insect Relations, Kans. Acad. of Sci. Transactions. Hobbies: Photography; Philately. Special Int.: Plant-Insect Relation, Especially Gail Wasps.

BRANSFORD, Thomas Leroy, Assoc. Prof. of Civil Engrng., 1536 N. W. 7th Ave., Gainesville, Fla. **HIGHWAY ENGINEERING.** b. Union City, Tenn., Jan. 19, 1904. s. Howell A. and Florence (Skardon) B. Edn.: B.E., Vanderbilt Univ., 1925; C.E., *ibid.*, 1948. m. Martha Hurn, August 27, 1928. c.: Mary Ann. Exp.: Instrumentman, Tenn. Highway Dept., Nashville, Tenn., 1926-27; Materials Inspector, *ibid.*, 1927-28; Div. Materials Engr., *ibid.*, 1928-42; Asst. Div. Const. Engr., *ibid.*, 1946-48; Assoc. Prof. of Civil Engrng., Univ. of Fla., Gainesville, Fla., 1948—. Hon. Pos.: Chmn., Civil Engr. Comm., Fla. Engr. Soc. Mem.: Amer. Soc. of Civil Engr.; Soc. of Amer. Military Engr.; Amer. Soc. for Engrng. Edn.; Amer. Congress on Surveying and Mapping; Nation Soc. of Professional Engr.; Tau Beta Pi. Contrb. to: Fla. Engr. Soc. Jour. War Record: U. S. Army Corps of Engr., 1942-46. Special Int.: Highway Engr.; Portland Cement Concrete Paving, Flexible Pavements, Sub-grade Stabilization.

BRANSON, Carl Colton, Prof. of Geol., Dept. of Geol., Univ. of Okla., Norman, Okla. b. Oberlin, Ohio, Sept. 15, 1906. s. Edwin Bayer and Grace Muriel (Colton) B. Edn.: B.A., Univ. of Mo., 1926; M.A., *ibid.*, 1927; Ph.D., Univ. of Chicago, 1929. m. Ila Irene B., Apr. 3, 1948. c.: Derick Edwin; Deborah Elizabeth. Exp.: Ill. Geol. Survey. Assoc. Geol. and Instr. in Geol., State Coll. of Wash., 1929-30; Asst. Prof. of Geol., Brown Univ., 1930-40; Visiting Asst. Prof., Northwestern Univ., 1940-41; Assoc. Prof. of Geol., Univ. of Ky., 1941-44; Rsch. Geol., Shell Oil Co., 1944-50. Mem.: G.S.A.; P.S.A.; A.A.P.G.; S.E.P.M.; S.V.P.; A.A.A.S.; Phi Beta Kappa; Sigma Xi; Gamma Alpha; Sigma Gamma Epsilon; Delta Tau Delta. Author: Bibliographic Index of Permian Invertebrates, 1948. Contrb. to: Bull. Geol. Soc.; Amer. Jour. of Paleontology; Jour. of Geol.; Sci.; Bull. A.A.P.G. Ph.D. Dissertation: Paleontology and Stratigraphy of the Phosphoria Formation. Listed in: A.M.S.; Who Knows What.

BRANSON, Edwin B., Prof. and Chmn., Dept. of Geol. and Geography, Univ. of Mo., Columbia, Mo. **GEOLOGY, GEOGRAPHY.**

BRANSON, Herman, Prof. of Physics, Howard Univ., Washington, D. C. **PHYSICS.**

BRANSON, John William, Hd., Dept. of Math. and Dean of Coll., N. Mex. A. and M. Coll., State Coll., N. Mex. MATHEMATICS.

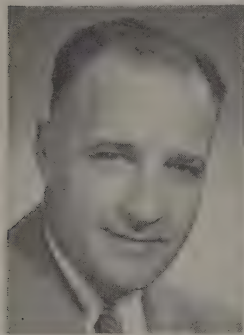
BRANT, Joseph H., Dir. of Rsch., Toni Co. Merchandise Mart, Chicago 54, Ill. ORGANIC CHEMISTRY, TEXTILE AND HAIR FIBERS.

BRANT, Laura, 33 Capwell Ave., West Warwick, R. I. PHYSICS, MATHEMATICS.

BRANTING, Briant Ferdinand, Chem. Economist, Solvay Process Co., Hopewell, Va. CHEMISTRY, ECONOMICS.

BRASEFIELD, Charles J., Physicist, Signal Corps Labs., Belmar, N. J. METEOROLOGY.

ERASHER, Eugene Paul, Prof. of Horticulture and Chmn. of Dept., Univ. of Delaware, Newark, Del. HORTICULTURE.



b. Orrick, Mo., Dec. 29, 1908. s. Claud Dowin and Maude (Hamilton) B. Edn.: B.S., Univ. of Mo., 1930; M.S., Pa. State Coll., 1932. m. Helen Covert, Aug. 17, 1935. c.: Eugene Paul, Jr. Exp.: Grad. Asst., Pa. State Coll., State Coll., Pa., 1930-32; Field Rep., Mo. Relief Commn., 1933-35; Co. Agent, Univ. of Mo., Columbia, Mo., 1935-36; Asst. Prof. of Horticulture, W. Va. Univ., Morgantown, W. Va., 1936-41; Prof. of Horticulture and Chmn. Dept.,

Univ. of Del., Newark, Del., 1941—. Mem.: Amer. Soc. for Hort. Sci.; Amer. Inst. of Biol. Sci.; Peninsula Horticultural Soc.; Alpha Gamma Rho; Sigma Kappa Zeta. Contrb. to: Proc., Amer. Soc. for Horticultural Sci.; Proc., Peninsula Horticultural Soc. Special Int.: Vegetable Nutrition and Vegetable Breeding.

BRASSFIELD, Charles Roosevelt, Assoc. Prof. of Physiol., Univ. of Mich. Med. Schl., Ann Arbor, Mich. PHYSIOLOGY.

BRATTAIN, Walter Houser, Mem. Technical Staff, Bell Telephone Lab., Inc., Murray Hill, N. J. PHYSICS.

BRAUER, Alfred Charles, Prof. of Zool., Univ. of Ky., Lexington, Ky. EMBRYOLOGY.

BRAUER, Alfred T., Prof. of Math., Univ. of N. C., Chapel Hill, N. C. MATHEMATICS.

BRAUER, Oscar Leo, Prof. of Chem. and Physics, San Jose Coll., San Jose 12, Calif. ORGANIC CHEMISTRY.

BRAUN, A. C., Rockefeller Inst., N. Y. C. PHYTOPATHOLOGY.

BRAUN, Annette Frances, Box 41C, Rt. 13, Cincinnati, Ohio. ENTOMOLOGY.

BRAUN, Daniel Carl, Med. Dir., Industrial Hygiene Foundation of Amer., Inc., Mellon Inst. of Industrial Rsch., 4400 Fifth Ave., Pittsburgh 13, Pa. OCCUPATIONAL AND ADMINISTRATIVE MEDICINE.



b. San Diego, Calif., July 2, 1905. s. Daniel J. and Frida (Lorch) B. Edn.: B.S., Univ. of Pittsburgh, 1935; M.D., ibid., 1937. m. Hazel Beekley, Aug. 10, 1929. Exp.: Chf. Med. Examiner, Pittsburgh Coal Co., 1938-44; Med. Dir., ibid., 1944-51; Lectr. in Industrial Hygiene, Schl. of Med., Univ. of Pittsburgh, 1945—; Lectr. in Occupational Health, Grad. Schl. of Public

Health, Univ. of Pittsburgh, 1950—; Med. Dir.,

Industrial Hygiene Foundation of Amer., Inc., Sr. Fellow, Mellon Inst., Pittsburgh, Pa., 1951—. Hon. Pos.: Co-Chmn., Commn. on Industrial Health and Hygiene, Med. Soc. of the State of Pa.; Chmn., Com. on Industrial Health and Hygiene, Allegheny County Med. Soc.; Vice-Chmn., Com. on Public Health, Pittsburgh C. of C. Mem.: A.M.A.; Med. Soc. of the State of Pa.; Allegheny County Med. Soc.; Amer. Trudeau Soc.; Amer. Public Health Assn.; Amer. Industrial Hygiene Assn.; Amer. Assn. of Mining and Metallurgical Engrs.; Fellow, Amer. Coll. of Chest Physicians; Amer. Acad. of Occupational Med.; Indus. Med. Assn.; Pittsburgh Acad. of Med.; Mason. Contrb. to: Sight Saving Rev.; Jour. Amer. Public Health Assn.; Trans. Saranac Lake Symposium. Special Int.: Administrative Med. and Occupational Diseases of the Chest.

BRAUN, Emma Lucy, Prof. of Plant Ecology, Univ. of Cincinnati, Cincinnati, Ohio. FOREST ECOLOGY.

BRAUN, Milton Lau, Prof. and Hd., Dept. of Physics, Catawba Coll., Salisbury, N. C. PHYSICS.

BRAY, William L., Prof. Emer. and Dean Emer., Grad. Schl., Syracuse Univ., 863 Ostrom Ave., Syracuse, N. Y., PLANT ECOLOGY.

BRAZDA, Daniel Steven, retired Physician, Blossburg, Pa. MEDICINE.

BREAKEY, Edward Paul, Assoc. Entomologist, Wash. Agril. Expt. Sta., West. Wash. Expt. Sta., Puyallup, Wash. ENTOMOLOGY. b. Phillipsburg, Kans., July 5, 1900. s. John R. and Winifred (McManus) B. Edn.: B.S., Univ. of Kans., 1924; M.A., ibid., 1927; Ph.D., Ohio State Univ., 1932. m. Edith Caroline Woollett, Jan. 1, 1928. c.: Edward Paul, Jr.; Ellen Jean. Exp.: Tehr., H. S., Williamsburg, Kans., 1922-23; Assistant, Kans. Univ., Biol. Survey, 1924; Field Entomol., Kans. Entomol. Commn., 1924-25; State Dept. of Agri., Wis., 1927-30; Asst., Ohio Biol. Survey, 1930-32; Fellow in Entomol., Ohio State Univ., Columbus, Ohio, 1932-36; Indus. Fellow, Mellon Inst., Pittsburgh, Pa., 1936-37; Sr. Indus. Fellow, ibid., 1937-38; Entomologist, West. Wash. Expt. Sta., Puyallup, Wash., 1938—; Assoc. Entomol., Wash. Agri. Exptl. Stas., ibid., 1946—. Mem.: A.A.A.S.; Amer. Assn. of Econ. Entomol.; Entomol. Soc. of Amer.; Kans. Entomol. Soc.; Puget Sound Entomol. Soc.; Sigma Xi; Gamma Sigma Delta; Phi Sigma. Contrb. to: Jour. of Econ. Entomol.; Annals of Entomol. Soc. of Amer.; Phytopathol.; Pan-Pacific Entomol.; Mededelingen van de Landbouwhogeschool en de Opzoekings-stations van de Staat te Gent; Sci.; The Botanical Gazette; La Hacienda; A Fazenda; etc. Special Int.: Control of Insect Pests by Insecticides; Control of Virus Diseases of Plants by Controlling the Insect Vectors; Biol. Control of Insect Pests; Oil Soluble Toxins as Insecticides.

BRECHT, Edward Armond, Jr., Prof. and Dean, Schl. of Pharmacy, Univ. of N. C., Chapel Hill, N. C. PHARMACY.

BREDER, Charles Marcus, Jr., Amer. Museum of Natural History, Central Park West at 79th St., N. Y., N. Y. ZOOLOGY.

BREDIG, Max Albert, Assoc. Dir. of Chem. Div., Oak Ridge Natl. Lab., P. O. Box P, Oak Ridge, Tenn. PHYSICAL AND INORGANIC CHEMISTRY. b. Heidelberg, Germany, June 20, 1902. s. Georg and Rosa (Fraenkel) B. Edn.: D.Eng., Technical Univ. of Berlin-Charlottenburg and Kaiser Wilhelm Institut f. Physik. Chem., Berlin-Dahlem, Germany, 1926. m. Lydia R. Levy, July 11, 1944. c.: George Maurice. Exp.: Rsch. Chemist, Central Rsch. Lab. of Bavarian Nitrogen Works, Berlin, Germany, 1929-37; Rsch. Fellow, Dept. of Chem. and Met. Engrng., Univ. of Mich., Ann Arbor, Mich., 1937-38; Mgr., Applied Chem. Div., Vanadium Corp. of Amer., N. Y., N. Y., 1938-46; Problem Leader, Chem. Div., Oak Ridge Natl. Lab., Oak Ridge, Tenn., 1946-49; Section Chf., Phys. Div., ibid., 1949-50; Assoc. Dir., Chem. Div., ibid., 1950—. Mem.: Amer. Chem. Soc.; Electrochem. Soc.; Amer. Soc. for Metals; Amer. Phys. Soc.; A.A.A.S.; etc. Contrb. to: Jour. Phys. Chem.; Jour. Amer. Ceramic Soc.; Trans. Amer. Soc. of Metals; etc. Special Int.:

Crystal Chem.; X-ray Diffraction; High-temperature Chem.; Nuclear Reactor Technol.

BREED, Frederick Stephen, Assoc. Prof. Emer. of Edn., Univ. of Chicago, Dunes Acres, Chesterton, Ind. **PHILOSOPHY OF EDUCATION.**

BREED, Robert Stanley, Emeritus, Prof. Bacteriol., Cornell Univ., Geneva, N. Y. **BACTERIOLOGY**



ESPECIALLY DAIRY AND TAXONOMIC BACTERIOLOGY. b. Brooklyn, Susq. Co., Pa., Oct. 17, 1877. s. Robert Fitch and Emma Marie (Beers) B. Edn.: B.S., Amherst Coll., 1898; M.S., Univ. of Colo., 1899; Ph.D., Harvard Univ., 1902. m. Emma Margaret Edson, July 2, 1913. c.: Alice Fitch. Exp.: Instr. in Biol., Univ. of Colo., Boulder, Colo., 1898-99; Asst. in Zool., Harvard Univ., Cambridge, Mass., 1900-02; Prof. Biol., Allegheny Coll., Meadville, Pa., 1902-13; Bacteriologist, N. Y. State Expt. Sta., Cornell Univ., Ithaca, N. Y., 1913-47; Prof. Bacteriol., Emer. Cornell Univ., *ibid.*, 1947—. Hon. Pos.: Appointed Official Delegate to following Internatl. Congresses: Dairy, Berne, 1914; Washington, D. C., 1923; London, 1928; Rome, 1934; Microbiol., London, 1936; N. Y. City, 1939; Copenhagen, 1947; Rio de Janeiro, 1950. Mem.: Amer. Pub. Health Assn., fellow; Amer. Dairy Sci. Assn.; Internatl. Assn. Milk Sanitarians; British Soc. Applied Microbiol.; Cuban Soc. Microbiol.; Assn. of Microbiologists; Phi Beta Kappa; Sigma Xi; Phi Gamma Delta; Rotarian; Univ. Club; Geneva Hist. Soc.; Fellow, A.A.A.S. Author: Determinative Bacteriol., Lehmann, Neumann, Breed, 1929. Contbr. to: Bacteriol., Dairy and Public Health Jour. Special Int.: Taxonomic and Dairy Bacteriol.

BREEN, Ruth Schornherst, Prof. of Bot., Fla. State Univ., Tallahassee, Fla. **BOTANY.** b. Detroit, Mich., Feb. 27, 1905. d. Edward and Harriet (Hovey) S. Edn.: B.S., Fla. State Coll. for Women, 1926; M.S., Univ. of Chicago, 1929; Ph.D., Univ. of Mich., 1941. m. W. H. Breen. Exp.: Instr. of Bot., Asst. Prof., Assoc. Prof., Prof., Fla. State Coll. for Women; Fla. State Univ. Mem.: Phi Beta Kappa; Sigma Xi; Phi Sigma; Mortar Board. Author: Papers published in various journals. Contbr. to: Torrey Bull.; The Bryologist; Proc. Fla. Acad. Sci.; Amer. Midl. Nat. Ph.D. Dissertation: Bryogeography of the mosses of northern Fla. Gen. Int.: Bryophytes Rsch. grant, Fla. Acad. of Sci.; Rsch. grant from Women's Rsch. club, Univ. of Mich.; Sigma Xi grant-in-aid of Rsch. Listed in: A.M.S.; Who's Who in the Southeast.

BREGER, Thomas, Physiologist, Everglades Expt. Station, Belle Glade, Fla. **ZOOLOGICAL AND BOTANICAL SCIENCES.**

BREHM, Cloide Everett, Pres., Univ. of Tenn., Knoxville, Tenn. **AGRICULTURE.** b. Newville, Pa., Mar. 23, 1889. s. John Joseph and Tirzah (Heffelfinger) B. Edn.: B.S., Pa. State Coll., 1911. Hon. Deg.: D.Sc., Clemson Univ., 1936; LL.D., Gettysburg Coll., 1948. m. Ruth Dapp, Dec. 25, 1912. c.: J. Fred; Alice (Mrs. W. Perry Williamson). Exp.: Dir. of Agri. Expt. Serv., Univ. of Tenn., Knoxville, Tenn., 1917-43; Dean, Coll. of Agri. and Dir. of Expt. Sta., *ibid.*, 1943-46; Acting Pres., *ibid.*, 1946; Pres., *ibid.*, 1948—. Mem.: Phi Kappa Phi; Delta Sigma Phi; Alpha Zeta.

BREIT, Gregory, Prof. of Physics, Sloane Physics Lab., Yale Univ., New Haven, Conn. **THEORETICAL AND NUCLEAR PHYSICS.** b. Russia, July 14, 1899. s. Alfred and Alexandra (Smirnova) B. Edn.: The Johns Hopkins Univ., A.B., 1918; A.B., *ibid.*, 1920; Ph.D., *ibid.*, 1921. m. Marjorie MacDill of Wash., D. C., Dec. 30, 1927. Exp.: Asst. Prof. Physics Univ. of Minn., 1923-23; Math. Physicist, Dept. of Terr. Mag., Carnegie Inst., Wash., 1924-29; Prof. Physics, N. Y. Univ., 1929-34; Prof. Physics,

Univ. Wis., 1934-37; Prof. of Physics, Yale Univ., 1947—; Rsch. Assoc., Carnegie Inst., Wash., 1929-44; War Work: Degaussing, Naval Ord. Lab.; Orgn. and Rsch., Uranium Fission, Natl. Bur. Standards and Metall. Lab., Chicago, 1941-42; Mem., Com. on Uranium and N.D.R.C., Sect. S. of O.S.R.D., Oct., 1940-July, 1942; Proximity Fuse, Sect. T. O.S.R.D., 1942-43; Related Work at Ballistic Rsch. Lab., Aberdeen Proving Ground, 1943-45. Hon. Pos.: Mem. at Large, Div. Phys. Sci. of Natl. Rsch. Coun., 1932-33; Rep. of Amer. Phys. Soc. in Div. Phys. Sci. of Natl. Rsch. Coun., 1938-41; Coun. Amer. Phys. Soc., 1935-38; Assoc. Ed., Phys. Rev., 1927-29; 1930-41. Mem.: Natl. Acad. Sci.; N. Y. Acad. of Sci.; Fellow, Amer. Phys. Soc.; Inst. Radio Engrng.; Amer. Acad. Arts and Sci.; Wash. Acad. Sci.; A.A.A.S.; Phys. Soc. London; Phi Beta Kappa; Sigma Xi. Gen. Int.: Co-discoverer of Previously Hypothesized Kennelly-Heaviside Layer; Inventor Magnetic Field Extrapolating Apparatus, A Device for Simulated Magnetic Field of a Vessel; Development of Tesla Coils for Five Million Volts; Development of High Voltage Tubes for Use with Tesla Coils for over a Million Volts. Listed in: A.M.S.; Internatl. Who's Who; Who's Who in Amer. Special Int.: Quantum Theory, Quantum Electrodynamics, Hyperfine Structure, Radio Ionosphere, Resonance Theory of Nuclear Reactions.

BREITNER, Carl, Med. Officer, U. S. Veterans Admin., Cave Creek, Ariz. **PREVENTIVE ORTHODONTICS.** b. Trieste, Italy, Apr. 30, 1901. s. Herman and Gilda B. Edn.: Med. Dr., Univ. of Vienna, 1925; D.D.S., Columbia Univ., 1941. c.: John Carl; Evelyn S. Exp.: Private Practice in Vienna and N. Y. until 1945; Staff, U. S. Veterans Admin., 1948—. Mem.: Fellow, A.A.A.S.; etc. Author: Practical Orthodontics, 1935. Special Int.: Bone Changes Induced by Exptl. Orthodontic Treatment.

BREITWIESER, Joseph Valentine, Dean, Grad. Div., Schl. of Edn., Univ. of N. Dak., Grand Forks, N. Dak. **PSYCHOLOGY.**

BREITZKE, Charles Frederick, Rsch. Engr., N. J. Dept. of Conservation, Div. Navigation, 1060 Broad St., Newark, N. J. **ENGINEERING.**

BREMER, John Lewis, Hersey Prof. Emer. of Anatomy, Harvard Med. Schl., Boston, Mass. **ANATOMY.**

BRENKE, William Charles, Prof. Emer. of Math., Univ. of Nebr., 1250 S. 21st St., Lincoln, Nebr. **MATHEMATICS.**

BRENNAN, J. Norton, Asst. Prof. of Engineering Rsch., Pa. State Coll., State Coll., Pa. **VIBRATIONS AND SOUND.** b. Hastings-on-Hudson, N. Y., June 17, 1915. s. Patrick J. and Nellie (Norton) B. Edn.: B.S., City Coll. of N. Y., 1946; M.S., Pa. State Coll., 1949; Ph.D., *ibid.*, 1952. m. Shirley A. Remillard, March 24, 1948. Exp.: Asst. in Physics, Pa. State Coll., State Coll. Pa., 1946-49; Instr., *ibid.*, 1949-51; DuPont Fellow, *ibid.*, 1951-52; Asst. Prof. of Engr. Rsch., *ibid.*, 1952—. Mem.: Acoustical Soc. of Amer.; Amer. Physical Soc.; Amer. Inst. of Physics; Phi Sigma Kappa; Sigma Pi Sigma; Sigma Xi. Contbr. to: Jour. Acoustical Soc. of Amer. Special Int.: Dynamic Mechanical Properties, Acoustic Impedance, Mechanical Vibrations, Transducers, Dynamic Stress Analysis, Ultrasonics.

BRENNAN, James Ivan, Consulting Engr., 1600 Villanova Rd., East Liberty, Pittsburgh, Pa. **PHYSICS.**

BRENNEMAN, Jesse Lamar, Ankeny, Iowa. **ELECTRICAL ENGINEERING, HORTICULTURE.**

BRENNER, R. F., Anchor Hocking Glass Co., Lancaster, Ohio. **CERAMICS.**

BRENTZEL, Wanda Weniger, N. Dak. Agri. Expt. Station, State College Station, Fargo, N. Dak. **CYTOLOGY, PLANT PATHOLOGY.**

BRENTZEL, William Edward, Hd., Dept. of Plant Pathol. and Plant Pathologist, N. Dak. Agri. Expt. Station, State College Station, Fargo, N. Dak. **BOTANICAL SCIENCES, AGRICULTURE.**

BRETNALL, George Herbert, retired, former Prof. of Biol., Shepherd Coll., Shepherdstown, W. Va. BIOLOGY.

BRETT, Charles Henry, Assoc. Rsch. Prof. of Entomol., N. C. State Coll., Raleigh, N. C. ENTOMOLOGY. b. July 21, 1909, Lincoln, Nebr. s. J. Howard B. and Teresa (Price) B. Edn.: B.S., 1930, M.S., 1938, Univ. of Nebr.; Ph.D., Kans. State Coll., 1946. m. Melba Dolores Durst of Sabetha, Kans., June 10, 1931. d. Mr. and Mrs. C. J. Durst. c.: C. Everett; Dewey H. Exp.: Sci. Tchr., Nebr. City H. S., 1931-43; Asst. Prof. Entomol., Okla. A. and M. Coll., 1943-48; Assoc. Prof. Entomol., 1948-52; Assoc. Rsch. Prof. of Entomol., N. C. State Coll., Raleigh, N. C.



1952— Mem.: Pres., O.A.M.C.; Sigma Xi; Pres., Kans. Entomol. Soc.; Phi Sigma; Gamma Sigma Delta; Phi Kappa Phi; Sigma Xi; Fellow, Okla. Acad. of Sci.; A.A.E.E.; Tau Kappa Epsilon. Contbr. to: J. Kans. Ent. Soc.; J. Econ. Ent.; J. Agri. Res. Ph.D. Dissertation: Interrelated Effects of Food, Temperature, and Humidity on the Development of the Lesser Migratory Grasshopper, *Melanoplus mexicanus* (Saussure), (Orthoptera). Hobbies: Flowers; Working in Yard. Listed in: A.M.S.; Who's Who in South and Southwest.

BRETT, John Roland, Assoc. Scientist, Pacific Biol. Station, Nanaimo, B. C., Can. EXPERIMENTAL BIOLOGY, PARTICULARLY TEMPERATURE RELATIONS IN FISH. b. Toronto, Ont., Can., June 25, 1918. s. George Sidney and Marion Grace (Kernick) B. Edn.: B.A., Univ. of Toronto, 1941; M.A., ibid., 1944; Ph.D., ibid., 1951. m. Phyllis Walls, 1948. Exp.: Summer Field Asst., Ont. Fisheries Rsch. Lab., Can., 1937-41; Med. Assoc., R.C.A.F., 1941-43; Assoc. Scientist, Pacific Biol. Station, Nanaimo, B. C., Can., 1944— Mem.: Amer. Limnol. and Oceanographic Soc.; Professional Inst. of Can. Contbr. to: Fisheries Rsch. Bd. of Can.; Amer. Fisheries Soc. Jour.; etc. Special Int.: Temperature Tolerance in Fish; Phys. Limnology; Pacific Salmon Habits; Sensory Perception.

BRETT, Richard J., Speech Correctionist, Waukegan Township H. S., Waukegan, Ill. SPEECH CORRECTION. b. Chicago, Ill., Sept. 5, 1921. s. Richard J. and Emily (Salter) B. Edn.: B.E., Northern Ill. State Tchrs. Coll., 1943; M.S., Univ. of Ill., 1947. Exp.: Speech Correctionist, Waukegan Twp. H. S., Waukegan, Ill., 1946— Hon. Pos.: Co-Chmn., Internatl. Relations Co., Amer. Federation of Tchrs.; Chmn., Professional Standards Com., Ill. State Federation of Tchrs. Mem.: Ill. Edn. Assn.; Speech Assn. of Amer.; Amer. Speech and Hearing Assn.; Internatl. Council



for Exceptional Children; Central States Speech Assn.; Ill. Speech Assn.; Sigma Zeta; Alpha Delta. Contbr. to: Kans. Speech Jour. War Record: U. S. Army, 1943-45. Special Int.: Speech Correction; Math.; Public Speaking.

BRETZ, J. Harlen, Prof. of Geol., Univ. of Chicago, Chicago, Ill. GEOMORPHOLOGY.

BREUKELMAN, John William, Prof. and Hd., Dept. of Biol., Kans. State Tchrs. Coll., Emporia, Kans. ZOOLOGY.

BREWBAKER, Harvey Edgar, Dir., Agril. Expt. Sta., P. O. Box 539, Longmont, Colo. AGRONOMY.



PLANT GENETICS. b. Bushnell, Ill., May 10, 1895. s. John A. and Adda K. (Angle) B. Edn.: B.S., Univ. of Ill., 1921; M.S., Univ. of Minn., 1923; Ph.D., ibid., 1926. m. Jean Turner, 1921. c.: James L.; Ann. Exp.: Asst. Plant Breeding, Univ. of Minn., 1921-23; Asst. Plant Breeder and Instr., ibid., 1923-27; Asst. Prof., ibid., 1927-30; Assoc. Agronomist, Sugar Plant Invest. Bureau Plant Indus., U. S. Dept. Agri., 1930-37; Agronomist, The Great Western Sugar Co., 1937-45; Dir., Agril. Expt. Station, Longmont, Colo., 1945—; Agricultural Officer, FAO of U. N., Israel, Turkey, and Greece—7 Mo., Temp., 1952. Mem.: Soc. Agron.; Genetics Soc.; Soc. Sugar Beet Tech.; Farm House; Alpha Zeta; Gamma Alpha; Sigma Xi; Rotary. Contbr. to: Sci.; Agron. Jour. War. Record: U. S. Army, 1917-19. Gen. Int.: Silver Beaver Award, Boy Scouts of Amer. Special Int.: Rye, Corn and Sugar Beet Breeding; Sugar Beet Agronomic Rsch.

BREWER, Aubrey Keith, Hd. Physicist, U. S. Navy Dept., Washington, D. C. MASS SPECTRA.

BREWER, George Eugene Francis, Hd. Dept. Chem., Marygrove Coll., Detroit 21, Mich. CHEMISTRY.

b. Jan. 23, 1909, Vienna, Austria. s. Ernst and Sophie (Segalla) B. Edn.: B.A., State Reform Real Gymnasium (Coll.), 1927; Ph.D., Univ. of Vienna, 1932. m. Frances Joan Werner of Vienna, Austria, June 29, 1933. d. Albert and Wilma Werner. Exp.: Asst. Lectr., Lab. of Chem. Technol., Univ. of Vienna, 1931-37; Tech. Mgr., S. Wolf & Co., Textile Refiners, Erlach, Austria, 1936-39; Lectr., Institut de l'Industrie Textile de Brabant, Bruxelles, Belgique, 1939; Prof. of Chem., Rosary Coll., River Forest, Ill., 1940-43; Rsch. Chem., Biochem. Rsch. Lab., Elgin State Hosp., Elgin, Ill., 1944; Prof. of Chem., Marygrove Coll., Detroit, Mich., 1944— Mem.: The Chem. Soc.; Amer. Chem. Soc.; A.A.U.P.; Cath. Austrian Confrat., Vienna, Austria; A.A.A.S.; Natl. Sci. Tchrs. Assn.; Central Assn. Sci. Math. Tchrs., Met. Detroit Sci. Club; Engrng. Soc. of Detroit; Optical Soc. of Amer. Hon. Pos.: Chmn., Edn. Comm. of Detroit Section Amer. Chem. Soc., Dir., Met. Detroit Sci. Club; Abstractor for Chem. Abs.; Secy. Mich. Coll. Chem. Tchrs. Assn.; Councilor, Amer. Chem. Soc. Contbr. to: Acad. of Sci., Vienna; Jour. Chem. Soc.; Schl. Sci. and Math., Sci. Coun., Jour. of Plant Physiol., Met. Detroit Sci. Rev., Jour. Chem. Edn.; Jour. Biol. Chem. Ph.D. Dissertation: Color and Molecular Structure of Azodyestuffs. Travel: Europe. Listed in: Natl. Biog. Dir.; A.M.S.

BREWER, Howard Eugene, Asst. Prof. of Botany, Ala. Poly. Inst., Auburn, Ala. PLANT ECOLOGY.

BREWER, P. Harvey, Asst. Prof. of Agri. Chem., Purdue Univ., West Lafayette, Ind. CHEMISTRY.

BREWINGTON, Gail Paul, Prof. of Physics, Lawrence Inst. of Tech., Highland Park, Mich. PHYSICS, CHEMISTRY.

BREWSTER, Edwin Tenney, Instr. in Natural Sci., Phillips Acad., Andover, Mass. POPULAR ARTICLES AND BOOKS ON SCIENCE.

BREWER, Wilma De Nell, Assoc. Prof., Dept. of Food and Nutrition, Mich. State Coll., E. Lansing, Mich. **HUMAN NUTRITION**. b. Oct. 18, 1915, Riley, Kans. d. Ben C. and Rosetta (James) B.



Edn.: B.S., Kans. State Coll., 1935; M.S., State Coll. of Wash., 1939; Ph.D., Mich. State Coll. Exp.: Tchr., H. S., St. George, Kans., 1935-37; Rsch. Fellow, State Coll. of Wash., Pullman, Wash., 1937-39; Instr., Simpson Coll., Indianola, Ia., 1939-40; Asst. Prof. and Asst. Home Economist, Univ. of N. H., 1940-43; Asst. in Rsch., Mich. State Coll., East Lansing, Mich., 1943—; Mem.: A.A.A.S.; A.H.E. A.; Amer. Chem. Soc.; Phi Kappa Phi; Sigma Xi. Contrb. to: Amer. Review of Tuberculosis; Jour. of Nutrition; Jour. of Amer. Dietetics Assn.; Amer. Jour. of Public Health. Ph.D. Dissertation: The Riboflavin and Nitrogen Metabolism of Six Women with Active Tuberculosis. Listed in: A.M.S. Special Int.: Human Metabolism Studies; Nutrition of Aging Women.

BREWSTER, Ray Q., Kans. Univ., Lawrence, Kans. **ORGANIC CHEMISTRY**.

BRICK, Bayard R., Consulting Chem. Engr., Bayard R. Brick Co., 3858 Westminster Place, St. Louis 8, Mo. **CHEMICAL ENGINEERING**. b. St. Cloud, Minn., June 28, 1906. s. Peter and Marie (Mueller) B. Edn.: B.Ch.E., Univ. of Minn., 1929; M.Sc., Wash. Univ., 1936. m. Berenice Brenner, May 1, 1943. c.: Bayard R., Jr.; Mary Joy; Melanie Marie; Peter Othmar. Exp.: Engrng. Faculty, Wash. Univ. St. Louis, Mo., 1929-37; Prod. Engr. and Purchasing Agent, Reardon Paint Co., 1937-39; Chem. Engr., U. S. Cartridge Co., 1940-46; Private Practice, Consult. Chem. Engr., St. Louis, Mo., 1947—. Mem.: Amer. Inst. of Chem. Engrs.; Inst. of Consulting Engrs.; Amer. Chem. Soc.; Amer. Indus. Hygiene Assn.; Air Pollution Control Assn.; Alpha Chi Sigma; Pi Mu Epsilon; Civitan.

BRICKWEDGE, Ferdinand Graft, Chief, Div. of Heat and Power, National Bur. of Standards, 4980 Quebec St., N. W., Wash., 16, D. C. **LOW TEMPERATURE PHYSICS AND ENGINEERING**. b. Baltimore, Md., Mar., 26, 1903. s. Ferdinand Henry and Virginia (Graft) B. Edn.: A.B., Johns Hopkins Univ., 1922; M.A., ibid., 1924; Ph.D., ibid., 1925. m. Marion Langhorne Howard, July 28, 1934. c.: Marion Virginia; Ruth Catherine; Langhorne Virginia. Exp.: Rsch. Assoc. in Colorimetry, Natl. Bur. of Standards, Wash., D. C., 1925-26; Chief, Low Temperature Lab., ibid., 1926-46; Chief, Thermodynamics Section, ibid., 1946-52; Chief, Heat and Power Div., ibid., 1946—. Mem.: Amer. Physical Soc.; Amer. Inst. of Physics; Physical Soc. of the Netherlands; Amer. Chem. Soc.; A.A.A.S.; Wash. Acad. of Sci.; Soc. of Automotive Engr.; Sigma Xi.

BRIDGES, Claude Frier, Asst. Dir., Div. of Test Rsch. and Service, World Book Co., Yonkers 5, N. Y. **PSYCHOLOGY**. b. Locust Grove, Ga., Nov. 11, 1909. s. Rev. Claude and Emma Mae (Frier) B. Edn.: B.S., Univ. of Fla., 1933; M.A., ibid., 1937. Exp.: Tchr., Fla. Public Elementary Schl., 1932-35; Tchr., Fla. Public High Schl., 1935-39; Supv. Principal, Jupiter Fla., Public Schl., 1937-39; Asst. and Instr., Dept. of Psychology, Ohio State Univ., Columbus, Ohio, 1939-41 and 1945-46; Civilian Personnel Rsch., U. S. War Dept., 1941-45; Asst. Dir., Div. of Test Rsch. and Service, World Book Co., Yonkers, N. Y., 1947—. Mem.: Amer. Psychological Assn.; Psychometric Soc.; Amer. Statistical Assn.; Amer. Edn. Rsch. Assn.; Kappa Phi Kappa; Phi Delta Kappa. Contrb. to: Amer. Psychologists; Psychological Bulletin; Psychometrika. Special Int.: Psychological Rsch., Test Development and Utilization, Edn. Evaluation.

BRIDGES, James Winfred, Sr. Prof. of Social Sciences Div., Sir George Williams Coll., Montreal Que., Can. **PSYCHOLOGY**.

BRIDGMAN, Olga, Prof. of Psychol. and Pediatrics, Univ. of Calif., Berkeley, Calif. **PSYCHIATRY**.

BRIDGMAN, Percy Williams, Hollis Prof. of Math. and Natural Philos., Harvard Univ., Cambridge, Mass. **PHYSICS**.

BRIER, Glenn Wilson, Chf., Meteorol. Statistics Sec., U. S. Weather Bur., Washington, D. C. **METEOROLOGICAL STATISTICS**. b. Fairfield, Iowa, Apr. 26, 1913. s. Albert and Amy (Adamson) B. Edn.: B.S., Parsons, 1935; A.M., Geo. Washington, 1940. m. Josephine Hartz, Nov. 20, 1940. c.: Paul; David and Katherine. Exp.: Sci. Aid., Bur. of Animal Indus., U. S. Dept. of Agri., Beltsville, Md., 1938-40; Statistician, Bur. Animal Indus., U. S. Dept. of Agri., ibid., 1938-40; Statistician, U. S. Weather Bur., Washington, D. C., 1941-47; Chf., Meteorol. Statistics Sec., ibid., 1947—. Mem.: Amer. Meteorol. Soc.; Amer. Statistical Soc.; Inst. of Math. Statistics; Amer. Geophys. Union; Phi Kappa Phi; Sigma Xi. Contrb. to: Bull. Amer. Meteorol. Soc.; Jour. of Meteorol.; Trans. Amer. Geophys. Union and Compendium of Meteorol. Special Int.: Statistical Methods of Forecasting, Graphical Correlation, Forecast Verification, Climatic Trends and Cycles, Solar-Weather Relationships, Statistical Theory of Turbulence.

BRIERLEY, Philip, Sr. Pathologist, U. S. Bureau of Plant Indus., Plant Indus. Station, Beltsville, Md. **PLANT PATHOLOGY**.

BRIGANCE, W. Norwood, Prof. of Speech, Wabash Coll., Crawfordsville, Ind. **PUBLIC OPINION AND AUDIENCE PSYCHOLOGY**.

BRIGGS, Alfred Poyneer, Assoc. Prof. of Med. and Biochem., Univ. of Ga. Med. Coll., Augusta, Ga. **CLINICAL BIOCHEMISTRY**.

BRIGGS, Charles Harold, Analytical and Rsch. Chemist, Philip R. Park, Inc., 2125 Grand Ave., San Pedro, Calif. **CHEMISTRY**.

BRIGGS, Clark Arthur, retired Engr., 1311 Spring Rd., N. W., Washington, D. C. **PHYSICS, WEIGHING AND MEASURING**.

BRIGGS, Fred N., Prof. of Agron. and Agronomist, Expt. Station, Univ. of Calif., Davis, Calif. **GENETICS, PLANT BREEDING**.

BRIGGS, Lyman James, Natl. Bureau of Standards, Washington, D. C.

BRIGGS, William P., Chf. Bacteriologist, Dept. Specifications and Controls, Norwich Pharmacal Co., Norwich, N. Y. **BACTERIOLOGY**.

BRIGHAM, George Dexter, Asst. Dir., Biol. Mfg. Div., Parke, Davis and Co., Detroit, Mich. **BACTERIOLOGY**.

BRIGHTMAN, Charles Lewis, Prof. of Physics, Syracuse Univ., Syracuse, N. Y. **PHYSICS**.

BRILL, Rudolf F., Prof. of Experimental Physics, Polytechnic Inst., of Brooklyn, Brooklyn, N. Y. **PHYSICAL CHEMISTRY, PHYSICS**. b. Eschwege, Germany, Sept. 7, 1899. s. Rudolf and Clara (Friederichs) B. Edn.: M.A., Ph.D., Friedrich Wilhelms-Univ., 1923. m. Else Rudloff, July 12, 1924. c.: Dieter. Exp.: Scientific Asst., Kaiser Wilhelm Inst. F. u. r. Faserstoff chemie, Berlin, Germany, 1922-23; Rsch. Chem., I. G. Farbenindustrie A. G., Ludwigshafen, Germany, 1923-41; Prof. of Inorganic and Physical Chem., Technische Hochschule, Darmstadt, Germany, 1941-47; Consultant Scientists, Signal Corps Engr. Lab., Fort Monmouth, N. J., 1947-48; Staff Mem., Phillips Petroleum Co., Bartlesville,



Okla., 1948-50; Prof. of Experimental Physics, Polytechnic Inst. of Brooklyn, Brooklyn, N. Y., 1950—. Hon. Pos.: Prof. at the Univ. of Heidelberg, Germany. Mem.: Amer. Chem. Soc.; Amer. Physical Soc.; Amer. Crystallographic Assn.; Gesellschaft Deutscher Chemiker. Contbr. to: *Zeitschrift Fur Kristallographie*; *Angewandte Chemie*; *Physik, Physikalische Chemie*; *Elektrochemie*; *Crytallographica Acta*; *Chemical Physics*; *Jour. of Applied. Special Int.: X-Ray Crystallography, Catalysis*.

BRILL, Abraham Arden, Lectr., Columbia Univ., 15 W. 70th St., N. Y., N. Y. MEDICINE, ANTHROPOLOGY.

BRILMYER, George Joseph, U. S. Veterans Hosp., Aspinwall, Pa. PATHOLOGY.

BRIMHALL, Dean R., Dir. of Rsch., Civil Aeronautics Admin., Box 267, Franklin Station, Washington, D. C. PSYCHOLOGY.

BRINDLEY, Paul, Prof. of Pathol., Univ. of Tex., Schl. of Med., Galveston, Tex. PATHOLOGY.

BRINK, Raymond Woodard, Prof. and Chmn., Dept. of Math., Univ. of Minn., Minneapolis, Minn. MATHEMATICS.

BRINK, R(oyal) Alexander, Prof. of Genetics, Univ. of Wis., Madison 6, Wis. GENETICS. b. Woodstock, Ont., Can., Sept. 16, 1897. s. Royal Wilson and Elizabeth Ann (Cuthbert) B. Edn.: B.S.A., Ont. Agri. Coll., 1919; M.S., Ill., 1921; D.Sc., Harvard, 1923. m. Edith Margaret Whitelaw of Ont., Can., Dec. 27, 1922. c.: Andrew Whitelaw and Margaret Alexandra. Exp.: Asst. Prof. of Genetics, Univ. of Wis., Madison, Wis., 1922-27; Assoc. Prof. of Genetics, *ibid.*, 1927-31; Prof., *ibid.*, 1931—; Chmn., Dept. of Gen., 1939-51. Mem.: Natl. Acad. of Sci.; Gen. Soc. of Amer.; Amer. Soc. Agronomy; Amer. Naturalists; Sigma Xi. Author: Numerous Rsch. Papers in Biological Jour. D.Sc. Dissertation: *The Physiol. of Pollen. Travel: Natl. Rsch. Coun. Fel., Inst. f. Vererbungsforschung, Berlin-Dahlem, 1925; Univ. of Birmingham, 1926; Managing Editor, GENETICS, 1952—*. Listed in: A.M.S.; Who's Who in Amer.

BRINKHOUS, Kenneth Merle, Prof. and Hd., Dept. of Pathol., Schl. of Med., Univ. of N. C., Chapel Hill, N. C. PATHOLOGY.

BRINKLEY, Stuart Robert, Assoc. Prof. of Chem., Sterling Chem. Lab., Yale Univ., New Haven, Conn. INORGANIC CHEMISTRY.

BRINTON, Paul H. M. P., Owner, Madre del Oro Mines, Oracle, Ariz. GEOCHEMISTRY.

BRIOD, Andre E., Hd., Technical Dept., Vitamin Div., National Oil Products Co., Harrison, N. J. CHEMISTRY.

BRIODY, Bernard Aloysius, Jr., Assoc. Prof. of Bacteriol. and Dir. of the Virus Lab., Hahnemann Med. Coll., 235 N. 15th St., Philadelphia, Pa. MICROBIOLOGY. b. Bethlehem, Pa., Nov. 12, 1920. s. Bernard A. and Mary (Broughal) B. Edn.: B.A., Lehigh Univ., 1941; Ph.D., Yale Univ., 1946. m. Elizabeth O'Reilly of Bethlehem, Pa., June 17, 1944. d. Michael and Mary O'Reilly. Exp.: Natl. Rsch. Coun. Fellow in the Med. Scis., 1946-48; Walter and Eliza Hall Inst., Melbourne, Australia, 1946-47; Univ. of Mich. Schl. of Pub. Health, 1947-48; Yale Univ., Schl. of Med., Instr. in Virology, 1948-50; Asst. Prof. of Microbiol., 1950-52; Assoc. Prof. and Dir. of the Virus Lab., Hahnemann Med. Coll., Philadelphia, Pa., 1952—. Mem.: Soc. of Amer. Bacteriologists; A.A.A.S.; Sigma Xi; Amer. Pub. Health Assn.; N. Y. Acad. of Sci.; Amer. Assn. of Immunologists; Alpha Epsilon Delta; Delta Tau Delta. Contbr. to: Sci.; Jour. of Immunology; Bacteriological Revs.; Jour. of Infectious Diseases; and Proceedings of the Soc. for Exptl. Biol. and Med. Ph.D. Dissertation: *Hemagglutination Induced by Viruses. Travel: Australia and New Zealand. Hobbies: Golf; Biography; Autobiography; Drama. Listed in: A.M.S.; Who's Who.*

BRISCOE, Charles F., Prof. Emer. of Bacteriol., retired Chf. Bacteriol., Expt. Station, State Coll., Miss. BACTERIOLOGY.

BRISTOW, Leonard, Head, Dept. of Math., Wis. State Tchrs. Coll., Oshkosh, Wis. MATHEMATICS. b. September 24, 1904, Milford, Ill. s. C. L. and Mary O. (Goodlink) B. Edn.: A.B., Colorado Coll., 1926; A.M., Univ. of Ill., 1927; Ph.D., Univ. of Ill., 1930. m. Evelyn McLain, Chicago, Ill., Apr. 9, 1932. d. Mr. and Mrs. J. W. McLain. c.: Shirley Jean. Exp.: Asst. in Math., Univ. of Ill., 1928-29; Instr. in Math., Univ. of Ill., 1930-43; Assoc. in Math., Univ. of Ill., 1943-46; Asst. Prof. of Math., Univ. of Wyo., 1946-49; Oshkosh State Tchrs. Coll., 1949—. Mem.: Phi Beta Kappa; Sigma Xi; Amer. Math. Soc.; Gamma Alpha. Contbr. to: *Transactions, Amer. Math. Soc.; Bull., Amer. Math. Soc., Duke Mathematical Jour. Ph.D. Dissertation: Expansion Theory Associated with Linear Differential Equations and Their Regular Singular Points. Special Int.: Expansion of Functions.*

BRITT, H. Grady, Assoc. Prof. of Biol., Wake Forest Coll., Box 125, Wake Forest, N. C. ZOOLOGY. b. Colerain, N. C., Apr. 24, 1915. s. John M. and Geneva (Mitchell) B. Edn.: B.S., magna cum laude, Wake Forest Coll., 1936; M.A., *ibid.*, 1938; Ph.D., Univ. of Va., 1944. Exp.: Tchng. Fellow in Biol., Wake Forest Coll., N. C., 1936-38; Instr., Biol., *ibid.*, 1938-40; Du Pont Rsch. Fellow in Biol., Univ. of Va., 1940-44; Asst. Prof. of Biol., Mary Washington Coll. of the Univ. of Va., 1944-47; Visiting Prof. of Zool., Univ. of N. C., summers 1946 and 47; Asst. Prof. of Biol., Wake Forest Coll., 1947-52; Assoc. Prof. of Biol., *ibid.*, 1952—. Mem.: Amer. Assn. of Parasitologists; A.A.A.S.; N. C. Acad. of Sci.; Assn. Southeastern Biologists; Phi Beta Kappa; Sigma Xi; Alpha Epsilon Delta; Beta Beta Beta; Kappa Phi Kappa. Contbr. to: Amer. Naturalist; Jour. Morphology; Jour. Elisha Mitchell. Special Int.: Cytotaxonomy of Digenetic Trematodes; Animal Parasitology.

BRITTAN, Martin Ralph, Asst. Prof. of Zool., Sacramento State Coll., Sacramento, Calif. VERTEBRATE ZOOLOGY AND ECOLOGY. b. San Jose, Calif., Jan. 28, 1922. s. Ralph Hinton and Addie Belle (Martin) B. Edn.: A.B., San Jose State Coll., 1946; Ph.D., Stanford Univ., 1951. m. Ruth Marie Luebke, Aug. 10, 1947. c.: Penelope Sue; Pamela Lynne. Exp.: Tchng. Asst. in Biol. Sciences, Stanford Univ., 1946-49; Asst. Prof. of Biol., S. Dak. Schl. of Mines and Tech., 1949-50; Asst. Prof. of Zool., San Diego State Coll., San Diego, Calif., 1950-53; Asst. Prof. Zool., Sacramento State Coll., Sacramento, Calif., 1953—. Mem.: Sigma Xi; Amer. Soc. Ichthyologists and Herpetologists; Amer. Soc. Mammalogists; Amer. Ornithologists Union; Soc. Vertebrate Paleontol.; Cooper Ornithol. Soc.; Theta Chi; Tri Beta. Contbr. to: *Copeia*; Jour. Mammalogy; Proc. Calif. Zool. Club; Philippine Jour. Sci.; Bull. Raffles Mus.; etc. War Record: Clinical Lab. Technician, U. S. Army Med. Dept., 1943-46. Special Int.: Systematics and Ecology of Fishes; Ecology and Distribution of Predatory Mammals and Birds; Impact of Indians and Fur Traders on Animal Life.

BRITTON, Max Edwin, Asst. Prof. of Botany, Northwestern Univ., Evanston, Ill. ECOLOGY.

BROADBENT, B. Holly, Dir., Bolton Fund, Schl. of Med., Western Reserve Univ., Cleveland, Ohio.

BROADBENT, Bessie May, Entomologist, U. S. Bureau of Entomol. and Plant Quarantine, Whittier, Calif. ENTOMOLOGY.

BROADHURST, Jean, Prof. Emer. Bacteriol., Columbia Univ. Tchrs. Coll., Hudson View Gardens, W. 183rd and Pinehurst, N. Y., N. Y. BOTANICAL SCIENCES, MEDICINE.

BROCK, Rev. Henry Matthias, Prof. of Physics, Weston Coll., Weston, Mass. PHYSICS, METHODOLOGY.

BROCK, James E., Assoc. Engr., Engrng. Expt. Station, Purdue Univ., Lafayette, Ind. PHYSICS.

BROCK, Vernon E., Dir., Div. of Fish and Game, Territory of Hawaii, P. O. Box 5424, Pawaa Substation, Honolulu, T. H. ICHTHYOLOGY; FISHERIES BIOLOGY. Fillmore, Calif., June 24, 1912. s. Anson Alvin and Ethel M. (Bennett) B. Edn.:

A.B., Stanford Univ., 1935; M.A., *ibid.*, 1944. m. Rosemary F. Hanemann, 1940. c.: Richard Eugene; James Allan. Exp.: Fisheries Biologist, Ore. State Fish Commn., 1936-40; Chf. Biologist, Ore. Fish Commn., 1940-43; Production Administrator and Analyst, U. S. Fish and Wildlife Service, 1943-44; Dir., Div. of Fish and Game, Territory of Hawaii, 1944—. Mem.: A.A.A.S.; Amer. Soc. Ichthy. and Herp.; Oceang. Soc. Pacific; Hawaiian Acad. Sci.; Biometrics Soc.; Sigma Xi. Contbr. to: Copeia; Pacific Sci.; etc. Special Int.: Fish and Fisheries of the Tropical Pacific; Population Studies of Reef Fishes; Life Hist. Studies of Tunas.

BRODE, Howard Stidham, Prof. Emer. of Biol. and Curator Museum, Whitman Coll., 2425 Washington Ave., Santa Monica, Calif. **BIOLOGY.**

BRODE, Robert Bigham, Univ. of Calif., Berkeley 4, Calif.

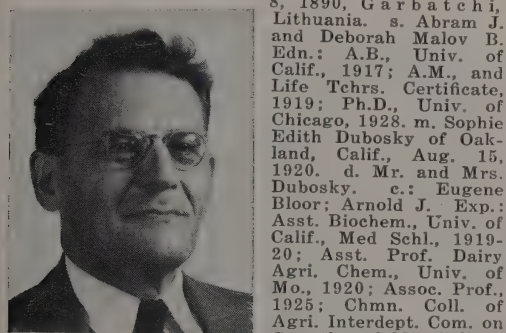
BRODERICK, Thomas Monteith, Chf. Geologist, Calumet and Hecla Consolidated Copper Co., 120 Calumet Ave., Calumet, Mich. **MINING GEOL- OGY.**

BRODERS, Albert Compton, Dir. and Consultant, Div. of Surgical Pathol., Mayo Clinic, Rochester, Minn. **SURGICAL PATHOLOGY.**

BRODIE, Allan G., Prof. and Hd., Dept. of Orthodontics and Dean, Coll. of Dentistry, Univ. of Ill., Chicago, Ill. **DENTISTRY.**

BRODIE, Renton Kirkwood, Vice-Pres., Procter and Gamble Co., Cincinnati, Ohio. **CHEMISTRY.**

BRODY, Samuel, Prof. of Dairy Husbandry, Univ. of Mo., Columbia, Mo. **PHYSIOLOGY.**



8, 1890, Garbatchi, Lithuania. s. Abram J. and Deborah Malov B. Edn.: A.B., Univ. of Calif., 1917; A.M., and Life Tehrs. Certificate, 1919; Ph.D., Univ. of Chicago, 1928. m. Sophie Edith Dubosky of Oakland, Calif., Aug. 15, 1920. d. Mr. and Mrs. Dubosky. c.: Eugene Bloor; Arnold J. Exp.: Asst. Biochem., Univ. of Calif., Med Schl., 1919-20; Asst. Prof. Dairy Agri. Chem., Univ. of Mo., 1920; Assoc. Prof., 1925; Chmn. Coll. of Agri. Interdept. Com. on Growth and Metabolism 1926—; Chmn. Herman Froasch Research Project in Agricultural Chemistry, Univ. of Mo. Coll. of Agriculture, 1929-40; Chmn. Com. on Muscular Work in Farm Animals, 1941-46; Prof. Dairy Husb., 1945; Chmn. Comm. on Influence of Climatic Factors on Physiol. Reactions and Productivity in Farm Animals, 1946—; Fellow, Guggenheim Foundation for Study in Europe, 1930-31; Borden Rsch. Award, 1950. Mem.: Fellow, A.A.A.S.; A.S.B.C.; A.I.N.; Soc. for Development and Growth, Amer. Dairy Sci. Assn.; A.A.S.P.; A.C.S.; Czechoslovakia Acad. Agri.; N.R.C.; A.S.N.; Sigma Xi; Gamma Sigma Delta; Univ. Club; Philos. Club. Author: 1000 Page Book, Bioenergetics and Growth, 1945. Contbr. to: Sci. Jour. Ph.D. Dissertation: Studies in Kinetics of Growth. War Record: A. A. F., Development Div., C. E. S., U. S. A., 1918-19. Travel: N. Amer.; Europe. Listed in: Amer. Men of Sci.; Who's Who in Amer.; Who Knows—and What. Special Int.: Nutrition; Effect of Climate on Animals.

BROGAN, Albert Perley, Dean, Grad. Schl. and Prof. of Philos., Univ. of Tex., Austin, Tex. **PHILOSOPHY.**

BROGDEN, Wilfred John, Prof. of Psychol., Univ. of Wis., Madison, Wis. **PSYCHOLOGY.**

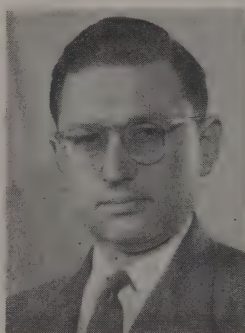
BROH-KAHN, Robert Henry, Scientific Dir., The Lasdon Foundation, Yonkers N. Y. **MEDICINE**



AND PHYSIOLOGY. b. Cincinnati, Ohio, Feb. 24, 1910. s. A. Bernard (dec.), and Marie (Leone) B. Edn.: B.S., Univ. of Ky., 1932; M.A., *ibid.*, 1933; B.M., Univ. of Cincinnati, Coll. of Med., 1940; M.D., *ibid.*, 1941. m. Eleanor Robinson Brooks, Feb. 9, 1952. Exp.: Rsch. Fellow, May Inst. for Med. Rsch., Cincinnati, Ohio, 1936-40; Tchng. Asst. in Bacteriol., Coll. of Med., Univ. of Cincinnati, Cincinnati, Ohio, 1938-40; Intern., U. S. Public Health Service, Marine Hosp., Staten Island, N. Y., 1940-41; Assoc. in Chg. of Bacteriol., May Inst. for Med. Rsch., Cincinnati, Ohio, 1941-42; Instr. of Bacteriol., Coll. of Med., Univ. of Cincinnati, Ohio, 1941-47; U.S.A.A.F. Lt. Col., Med. Corps, 1942-46; Asst. Dir., May Inst. for Med. Rsch., Cincinnati, Ohio, 1946-50; Asst. Prof. of Exptl. Med., Coll. of Med., Univ. of Cincinnati, 1947-50; Asst. Clinician, Div. of Internal Med., Outpatient Dispensary, Cincinnati General Hosp., Cincinnati, Ohio, 1948; Clinician, Div. of Internal Med., *ibid.*, 1949-50; Asst. Med. Dir., Bristol Labs., Inc., Syracuse, N. Y., 1950; Med. Dir., *ibid.*, 1950-51; Assoc. Prof. of Med., State Univ. of N. Y., Syracuse, N. Y., 1951; Assoc. Attending Physician, Univ. Hosp. of the Good Shepherd, Syracuse, N. Y., 1951; Med. Dir., Whittier Labs., Div. Nutrition, Rsch. Labs., Inc., Chicago, Ill., 1951-52; Scientific Dir., The Lasdon Foundation, Yonkers, N. Y., 1952—. Hon. Pos.: Assoc. Editor, Cincinnati Jour. of Med., 1948-50; Mem.: A.A.A.S.; Soc. Amer. Bacteriologists; Amer. Soc. for Clinical Investigation; Amer. Physiological Soc.; Soc. for Exptl. Biol. and Med.; Assn. of Military Surgeons of the U. S.; A.M.A.; Sigma Xi; Alpha Omega Alpha; Central Soc. for Clinical Rsch.; Amer. Federation for Clinical Rsch.; Assn. of Med. Dirs.; etc. Contbr. to: Jour. Bacteriol.; Amer. Jour. of Phys.; Federation Proc.; Jour. Immunol.; Cincinnati Jour. of Men.; Sci.; Nature; Proc. Internat. Congress of Microbiol.; Jour. of Clinical Investigation; Jour. of Lab. and Clinical Med.; Amer. Jour. of Med. Sci.; Archives of Biochem.; Proc. of the Soc. for Exptl. Biol. and Med.; Military Surgeon. Special Int.: Physiol. and Med.; Metabolism and Endocrinology; Diabetes Mellitus; Chemotherapy and Infectious Diseases; Bacteriol. and Epidemiology of Gastroenteritis; Influence of Emotions on Gastric and Renal Function; Application of Med., Physiol., Biochem., etc., to the Development of New Drugs and New Uses for Older Drugs.

BROKAW, Raymond Voorhees, Chf., Div. of Cancer Control, N. J. State Dept. of Health, 1408 Martine Ave., Plainfield, N. J. **CANCER CONTROL.**

BROMBERG, Ben George, Missile Chf. Engr., McDonnell Aircraft Corp., 210 Edwin Ave., Glendale



22, Mo. **AERONAUTICAL ENGINEERING AND AUTOMATIC CONTROLS.** b. N. Y. C., Feb. 14, 1915. s. Louis and Anne (Steinhouse) B. Edn.: B.S., N. Y. Univ., 1936; M.S., *ibid.*, 1937; Sc.D., Mass. Inst. of Tech., 1947. m. Pauline Riggs, May 10, 1941. c.: Jeffrey Riggs. Exp.: Structures Engr., Curtiss Airplane Div., Buffalo, N. Y., 1938-39; Rsch. Engr., Chf. Tech. Engr., Consolidate-Vultee, Downey, Calif., 1939-45; Rsch. Assoc., Mass. Inst. of Tech., Cambridge, Mass., 1945-47; Chf. Engr., Missile Div., McDonnell Aircraft Corps., Glendale, Mo., 1947—. Mem.: Inst. of

Aeronautical Sci.: St. Louis Chap.; Sigma Xi. Contrb. to: Jour. of Inst. of Aeronautical Sci.; Jour. Inst. of Radio Engrs. Special Int.: Automatic Control Systems of Aircraft. Structural Design.

BROMLEY, Helen Jean, Private Rsch., Scofield Town Rd., Stamford, Conn. BOTANY-ALGAE.

BRONFENBRENNER, Jacques J., Rsch. Prof. of Microbiol. and Immunol., Bowman Gray Schl. of Med., Winston-Salem, N. C. MEDICAL BACTERIOLOGY AND IMMUNOLOGY.

BRONK, Detlev Wulf, Pres. Rockefeller Inst., N. Y. C. BIOPHYSICS.

BRONSON, Howard Logan, Emer. Prof. of Physics, Dalhousie Univ., 10 Studley Ave., Halifax, Nova Scotia, Can. PHYSICS.

BROOKE, William Ellsworth, Prof. Emer. Math. and Mechanics, Univ. of Minn., 3135 22nd Ave., S., Minneapolis, Minn. MATHEMATICS.

BROOKER, L. G. S., Eastman Kodak Co., Kodak Pk., Rochester, N. Y. OPTICAL SENSITIZERS.

BROOKES, Margaret Constance Hessler, Asst. Prof. of Nutrition, Univ. of Chicago, Ill. CHEMISTRY OF NUTRITION.

BROOKS, Albert Nelson, Plant Pathologist, Fla. Agri. Expt. Station, Strawberry Investigations Lab., Box 522, Lakeland, Fla. PLANT PATHOLOGY.

BROOKS, Benjamin Talbott, Consulting Chemist, 135 E. 42nd St., N. Y., N. Y. CHEMISTRY.

BROOKS, Chandler McCuskey, Prof. of Physiol. and Pharmacol., 112 Pacific St., Brooklyn 2, N. Y. PHYSIOLOGY: NEUROPGTSIOLOGY AND PHYSIOLOGY OF CARDIOVASCULAR SYSTEM.

BROOKS, Charles, Disease Control Rsch., Brogdex Co., 1441 W. Second St., Pomona, Calif. PLANT PATHOLOGY.

BROOKS, Charles Franklin, Prof. of Meteorology and Dir., Harvard Univ. Blue Hill Meteorological Observatory, 1793 Canton Ave., Milton, Mass. METEOROLOGY.

BROOKS, Edward Morgan, Prof., Geophysics and Geophysical Engrng., Inst. of Tech., St. Louis Univ., St. Louis 8, Mo. METEOROLOGY.



Mar. 19, 1916, N. Haven, Conn. s. Charles and Eleanor (Stabler) B. Edn.: A.B., Harvard, 1937; S.M., M. I. T., 1939; Sc.D., *ibid.*, 1945. m. Sarah Bergh of Miami, Fla., Dec. 24, 1941. d. Mr. and Mrs. O. I. Bergh. c.: Karena; Daniel; Roxana; Valerie; Marieta; Bernard. Exp.: Rsch. Fellow, Woods Hole, Mass., 1938; Instr., Pan Amer. Airways, 1941-42; Instr., M. I. T., 1942-46; Asst. and Assoc. Prof., St. Louis Univ., 1946. Hon.

Pos.: Chmn., St. Louis Chapt., Amer. Meteorological Chmn., St. Louis Chapter, Amer. Meteorological Soc., 1948-49; Vice-Chmn., St. Louis Amateur Astronomical Soc. and Observing Chmn., 1950—. Mem.: Sigma Xi; Amer. Meteorological Soc. Ph.D. Dissertation: An Analysis of an Unusual Rainfall Distribution in a Hurricane. Travel: Hawaii; Cuba; Canada. Hobbies: Music; Astronomy. Listed in: Who's Who in Amer.; Who Knows—and What. Special Int.: Tornadoes and Thunderstorms.

BROOKS, Charles Harvey, Process Engr., c/o Sun Oil Co., 1608 Walnut St., Philadelphia 3, Pa. CHEMICAL ENGINEERING—WITH SPECIAL EMPHASIS ON HEAT TRANSFER AND PETROLEUM ENGINEERING. b. Somerville, Mass., Sept. 25, 1909. s. Louis C. and Sara H. (Spore) B. Edn.: B.S., cum laude, Yale Univ., 1931; M.S.,

Univ. of Mich., 1934; Sc.D., *ibid.*, 1937. m. Madeleine O. Rouse, June 25, 1938. c.: Juliette O.; Louis Joseph. Exp.: Jr. Development Engr., Socony-Vacuum Oil Co., 1931-33; Tchng. Fellow, Univ. of Mich., 1935-36; Assoc. Development Engr., Process Engr., Sun Oil Co., Philadelphia, Pa., 1936-41, 1946—. Mem.: Sigma Xi; Tau Beta Pi; Phi Lambda Upsilon; Amer. Inst. of Chem. Engrng.; Amer. Chem. Soc.; Phi Kappa Phi; Phi Sigma Kappa; Alpha Chi Sigma. Contrb. to: Trans. A. I. Ch. E.; Trans. A.S.M.E.; Refiner; Indus. and Engrng. Chem.; Oil and Gas Jour.; Petroleum Processing. War Record: U. S. Navy, 1941-46; Navy Commendation Ribbon. Special Int.: Heat Transfer; Petroleum Refining.

BROOKS, Frank Gary, Prof. of Biol., Cornell Coll., Mt. Vernon, Iowa. PARASITOLOGY.

BROOKS, H. B., Natl. Bureau of Standards, Washington 25, D. C. BASIC ELECTRICAL MEASUREMENTS.

BROOKS, J. Ansel, Prof. Emer., Newark Coll. of Engrng., P. O. Box 587, Madison, Conn. ENGINEERING.

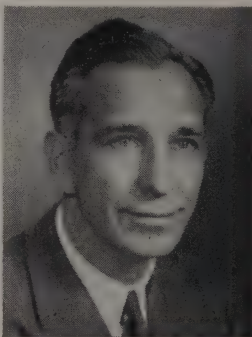
BROOKS, Maurice Graham, Assoc. Prof. of Wildlife Mgt., Univ. of W. Va., Morgantown, W. Va. WILDLIFE MANAGEMENT.

BROOKS, Reid Merrifield, Assoc. Prof. of Pomol., Univ. of Calif., Davis, Calif. FRUIT MORPHOLOGY, BREEDING AND CULTURE OF SWEET CHERRIES, REGISTER OF NEW FRUIT AND NUT VARIETIES.

BROOMHALL, Vincent, Continental Kilns, Inc., Box 755, East Liverpool, Ohio. CERAMICS.

BROPHY, Dorothy Hall, 737 Shadowlawn Dr., Westfield, N. J.

BROSIN, Henry Walter, Dir., Western Psychiatric Inst. and Clinics, 3811 O'Hara St., Pittsburgh, Pa.



Prof. and Chmn., Dept. of Psychiatry, Univ. of Pittsburgh, Pittsburgh, Pa. PSYCHIATRIST. b. Blackwood, Va., July 6, 1904. s. Martin and Marie (Danowski) B. Edn.: A.B., Univ. of Wis., 1927; M.D., *ibid.*, 1933. m. Ruth Hatfield, 1947. c.: Lloyd Wisdom. Exp.: Gen. Practitioner, Cincinnati and Denver, 1934-37; Staff of Div. of Psychiatry, Univ. of Chicago Med. Schl., Chicago, Ill., 1937-40; Gen. Practice, Neurol. and Psychiatry, Station Hosp., Camp Custer, Mich., 1941-42;

Chf. of Neuropsychiatry, LaGarde Gen. Hosp., New Orleans, La., 1942-44; Consultant in Neuropsychiatry, Third Service Command, 1944-45; Prof. and Hd. of Div. of Psychiatry, Univ. of Chicago Med. Schl., Chicago, Ill., 1946-51; Prof. and Chmn., Dept. of Psychiatry and Dir. of Western Psychiatric Inst. and Clinics, Pittsburgh, Pa., 1951—. Mem.: Alpha Omega Alpha; A.A.A.S.; Amer. Coll. of Physicians, Fellow; A.M.A., Fellow; Amer. Psychiatric Assn., Fellow; Amer. Psychoanalytic Assn.; Amer. Psychol. Assn.; Amer. Soc. for Rsch. in Psychosomatic Problems; Assn. for Rsch. in Nervous and Mental Diseases; Pittsburgh Neuropsychiatric Soc.; Allegheny Co. Med. Soc.; Natl. Assn. for Mental Health; Sigma Xi; Soc. for Biol. Psychiatry. Contrb. to: Jour. of Clin. Endocrinol.; Arch. Neurol. Psychiatry; Annal of Internal Med.; Amer. Jour. of Psychiatry; Psychosomatic Med.; Amer. Jour. of Orthopsychiatry; Soc. Service Rev.; Digest of Neurol. and Psychiatry; Wis. Med. Jour. War Record: Legion of Merit, 1941-46.

BROUGHER, John C., Sr. Partner, The Vancouver Clinic, Rt. 1, Box 898, Vancouver, Wash. OBSTETRICS AND GYNECOLOGY. b. LaCenter, Wash., June 9, 1901. s. Alvin Lincoln and Carri (Barnes) B. Edn.: B.A., Willamette Univ., 1923;

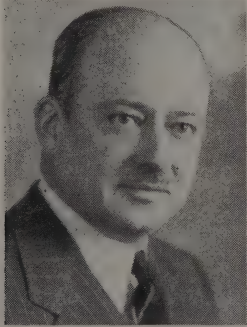
M.A., Univ. of Ore. Med. Schl., 1927; M.D., *ibid.*, 1928. m. Esther Bauman, June 14, 1927. c.: Gordon; Joann. Exp.: Student Asst. in Physiol., Univ. of Ore. Med. Schl., 1925-28; Instr. in Surgery, *ibid.*, 1929-31; Sr. Partner, Vancouver Clinic, Vancouver, Wash., 1939—. Mem.: Sigma Xi; Portland Acad. of Med.; Fellow, Amer. Coll. of Surgeons; Fellow, Internatl. Coll. of Surgeons; A.A.A.S.; Soc. for Study of Internal Secretions; Phi Delta Theta; Phi Beta Pi; C. of C. Contbr. to: Western Jour. of Surgery; Annals. of Western Med. and Surgery; Internatl. Coll. of Surgeons; Amer. Jour. Obstetrics and Gynecology; Jour. A.M.A.; Northwest Med. Special Int.: Obstetrics and Gynecology.

BROUGHTON, Dean Clarence, Rsch. and Engrng. Supvr. A. O. Smith Corp., 2828 N. 92nd St., Milwaukee, Wis. **APPLIED MECHANICS AND MECHANICAL DESIGN ANALYSIS.** b. Bloomington, Ill., Nov. 8, 1919. s. Clarence H. and Amy Alice (Miller) B. Edn.: B.S., Univ. of Ill., 1943; M.S., *ibid.*, 1947. m. Helen Briscoe, Dec. 21, 1947. c.: Carol Helen; Katherine Amy. Exp.: Development Engrng., Westinghouse Elec. Corp., 1943-46; Instr., Applied Mechanics, Univ. of Ill., 1946-48; Asst. Prof. of Mech. Engrng., Syracuse Univ., 1948-51; Research and Engrng.



Supvr., A. O. Smith Corp., Milwaukee, Wis., 1951—. Mem.: Soc. Automotive Engrng.; A.A.U.P.; A.S.E.E.; Sigma Xi. Contbr. to: Soc. for Exptl. Stress Analysis. Special Int.: Stress Analysis, Vibrations, and Reinforced Plastics.

BROUILLET, Ignace, Pres. Ecole Poly., Faculty of Engrng., Univ. of Montreal, 1430 St. Denis, Montreal, Can. **CONCRETE STRUCTURES AND FOUNDATIONS.** b. L'Assomption, P. Q., Can., Apr. 30, 1903. s. J. A. and Addee (Tur- enne) B. Edn.: B.A., Coll. de L'Assomption, 1924; B.Ap.Sc., Ecole Poly., 1929. Hon. Deg.: Ap. Sci., Univ. of Montreal, 1948; Dr. Sci., Univ. of Laval, 1950. m. Laurette Gratton, June 16, 1930. c.: Lise; Lucile; Raymond; Monique. Exp.: Asst. to Sanitary Engr., City of Montreal, Montreal, Can., 1929; Designer with Baulne and Leon-



ard, *ibid.*, 1930-40; Sr. Partner, Brouillet and Carmel Cons. Engr., *ibid.*, 1940— Prof. Reinforced Concrete, Ecole Poly., *ibid.*, 1943-46; Dean, *ibid.*, 1945-52; Pres., *ibid.*, 1952—. Hon. Pos.: Mem. Various Constrn. Committee for City of Montreal; Pres., Mass. Trans. Committee. Mem.: Engrng. Inst. of Can.; A.C.F.A.S.; Inst. Sci. Franco, Canada; Amer. Socf. of Civil Engrng.; Iron and Steel Inst. of London; Assn. Internatl. des Ponts et Charpentes, etc. Special Int.: Reinforced and Prestressed Concrete.

BROUSE, Don, Chem. Engr., Forest Products Lab., U. S. Forest Service, Madison 5, Wis. **FOREST PRODUCTS.** b. Noble Co., Ind., Aug. 19, 1895. s. Ulysses C. and Jennie Lind (Tyler) B. Edn.: B.S., Purdue Univ., 1921; M.S., Univ. of Wis., 1925; Ph.D., *ibid.*, 1931. m. Margery E. O'Hara Oct. 17, 1944. Exp.: Instr. of Math., Baker Univ., Baldwin, Kans., 1922-23; Chem. Engr., Forest Products Lab., U. S. Forest Service, Madison, Wis., 1923—. Mem.: Amer. Chem. Soc.; A.A.A.S.; Forest Products Rsch. Soc.; Sigma Xi; Tau Beta Pi; Phi Lambda Upsilon; Sigma Phi Epsilon. Contbr. to: Jour. of the Forest Products Rsch. Soc.; Chem.

Abstracts. Special Int.: Woodworking Adhesives and Glued Wood Products.

BROUWER, Dirk, Munson Prof. of Nat. Philos. and Astron., and Dir. Observatory, Yale Univ. Observatory, New Haven 11, Conn. **ASTRONOMY.** s. Martinus and Louisa (Van Wamelen) B. b. Sept. 1, 1902, Rotterdam, Netherlands. Edn.: Ph.D., Univ. of Leiden, 1927. m. Johanna Antonia Mathilda de Graaf of Rotterdam, Netherlands, Nov. 1, 1928. c.: James Martin. Exp.: Rsch. Asst. in Astron., Leiden, 1923-27; Fellow, Internatl. Edn. Bd., 1927-28; Instr. in Astron., Yale Univ., 1928-33; Asst. Prof., *ibid.*, 1933-39; Assoc. Prof., *ibid.*, 1939-41; Prof. and Dir., Yale Observatory, 1941—; Munson Prof. of Natural Philos. and Astron., Yale Univ., 1944—; Hon. Pos.: Correspondent, Royal Netherlands Acad. Sci.; Assoc. Royal Astron. Soc.; Chmn., Comm. 20, Internatl. Astron. Union. Mem.: A.A.A.S.; Amer. Astron. Soc.; Astron. Soc. of Pacific; Internatl. Astron. Union; Sigma Xi; Geophys. Union; Amer. Acad. of Arts and Sci., 1951; Natl. Acad. of Sci.; Correspondent, Royal Netherlands Acad. Ph.D. Dissertation: Jupiter's Galilean Satellites. Listed in: A.M.S.; Who's Who in Amer.; Natl. Cyclopaedia of Amer. Biog.; Who's Who in the East..

BROWMAN, Ludvig Gustav, Prof. of Zool. and Physiol., Mont. State Univ., Missoula, Mont. **PHYSIOLOGY.**

BROWN, Alice Lenore, Rsch. Asst. to Isolation of Chromosomes, U. S. Public Health Project No. 435, Colloidal Chem., Rsch. Foundation, Ohio State Univ., 1536½ Neil Ave., Columbus 1, Ohio. **EMBRYOLOGY. PATHOLOGICAL EMBRYOLOGY. PHYSIOLOGICAL CHEMISTRY (FUNDAMENTAL BIOLOGY).** b. Norton Co., Kans., Dec. 17, 1888. d. Ora Lincoln and Catherine Ann (Farlee) B. Edn.: A.B., Univ. of Kans., 1916; A.M., *ibid.*, 1920; Ph.D., Cornell Univ. Med. Coll., N. Y. C., 1929. Exp.: Asst. Instr. and Rsch. Asst., Zool. Dept., Univ. of Kans., Lawrence, Kans., 1916-18; Instr., Zool., Embryology and Physiol., Kans. State Agri. Coll., Manhattan, Kans., 1918-21; Asst. to, Anatomy Dept., Cornell Univ. Med. Coll., N. Y. C., 1921-24; Fellow Rsch., Biol. Lab., Memorial Hosp., N. Y. C., 1924-25; Asst. to, Diagnostic Lab., Harlem City Hosp., N. Y., N. Y., 1925-29; Asst. Biochem. Lab., St. Luke's Hosp., N. Y., N. Y., 1929; Serologist, Serol. Lab., Univ. of Mich. Hosp., Ann Arbor, Mich., 1929; Prof., Biol. Dept., Brenau Coll., Gainesville, Ga., 1929-33; Hon. Fellow Rsch. Faculty, Trinity Coll., Duke Univ., Durham, N. C., 1933-34; Author-Dir., Biol. Proj., U. S. Biol. Lab., Beaufort, N. C., 1934-35; Independent Biol. Rsch. Various Projects, Washington, D. C., 1935-42; Asst. to Biochem. Dept., Sci. Hy. and Pub. Health, Johns Hopkins Univ., 1937; Tehr. Chem. I-II, McKinley Night H. S., Washington, D. C., 1937-38; Coordinator (Sr. Rsch.), U. S. Dept. of Agri., Weather Bureau, River and Floods Div., 1938-39; Assoc. to Dr. Henry A. Monat, Private, Wash., D. C., 1941; Tehr., Biol. Physics, Chem., St. Marys Sem. Jr. Coll., St. Marys, Md., 1942-43; Tech. Interne, Clinic-X-ray, Spring Grove St. Hosp., Catonsville, Md., 1943; Asst. to, Clinic-X-Ray, Ashtabula General Hosp., Ashtabula, Ohio, 1946-47; Asst. to, Zool. Dept., Hancock Museum, Univ. of Southern Calif., 1947; Asst. to, Zool. Dept., Museum, Univ. of Kans., 1947-48; Assoc. in Ophthalmol., Univ. of Kans., Schl. of Med., Lawrence and Kans. City, 1948; Asst. to, Engr. Exp. Sta., Oils Rsch., Ohio State Univ., Columbus, Ohio, 1951-52; Rsch. Asst. to, Isolation of Chromosomes, Chem. Dept., *ibid.*, 1952—. Mem.: A.A.A.S.; A.A.U.P.; Beta Beta Beta; Microscopical Soc.; N. Y. Acad. Sci.; Kans. Acad. Sci.; Amer. Ornithology Union; Delta Zeta. Contbr. to: Amer. Jour. Anatomy; Anatomical Record; Proc. Wildlife Restoration and Conservation, N. Amer. Wildlife Conf., 1936. Gen. Int.: Interest in



Coordination of Life Factors as related to Our Religions; Internatl. Understanding. Special Int.: Exptl. Endocrinol.; Embryology (species differences); Pathological Embryology (Nutrition values); Micro-dissection and Tissue Culture (Endocrine Extracts); Isolation of Chromosomes to this Relationship.

BROWN, Allan, Dept. of Botany, Univ. of Minn., Minneapolis, Minn. PLANT PHYSIOLOGY.

BROWN, Arthur Austin, Engr., Installation Engrng. Lab., Pratt and Whitney Aircraft Div., United Aircraft Corp., E. Hartford, Conn. PHYSICS. b. Cleveland, Ohio, Feb. 12, 1915. s. Carroll Wilder and Harriet Austin (Hoskins) B. Edn.: A. B., Oberlin Coll., 1936; Sc.M., Brown Univ., 1937; Ph.D., *ibid.*, 1941 m. Edith Dinsmore Conant, July 28, 1945. c. Elizabeth Conant and William Carroll. Exp.: Test Engr., Asst. Proj. Engr., Installation Lab. Engr., Pratt and Whitney Aircraft Div., United Aircraft Corp., E. Hartford, Conn., 1940—. Mem.: Fellow, A.A.A.S.; Amer. Physical Soc.; Soc. of Automotive Engrs.; Sigma Xi; Amer. Soc. of Refig. Engrs. Contrb. to: Jour. of Applied Physics; Refrigerating Engrng. Special Int.: Aircraft Engine Icing, Cooling and Performance. Supvd. Mech. Design, Constn. and Operation of Installation Engrng. Lab., Inc. High Altitude Low Temp. Engine Testing Facilities.

BROWN, Aubrey J., Head, Dept. of Agricultural Economics, Ky. Agricultural Expt. Station, Univ. of Ky., Lexington, Ky. AGRICULTURAL MARKETING AND AGRICULTURAL PRICES. b. Hemple, Mo., July 3, 1913. s. Aubrey S. and Della Florence (Holmes) B. Edn.: B.S., Univ. of Ill., 1935; M.S., *ibid.*, 1937; Ph.D., *ibid.*, 1946. m. Helen Margaret Molloy of Rantoul, Ill., Sept. 1, 1935; d. Mr. and Mrs. William A. Molloy; c.: Margaret Ann; Aubrey Charles; Paula Louise. Exp.: Assistantship (Resch. and Tehng.), Univ. of Ill., 1935-38; Resch. Asst., Univ. of Ky., 1938-41; Asst. Prof., *ibid.*, 1941-46; Assoc. Prof., 1946; Hd. of Dept. of Markets and Rural Fin., *ibid.*, 1946—; Prof., *ibid.*, 1947—; Head, Dept. of Agricultural Econ., *ibid.*, 1952—. Mem.: Amer. Farm Econ. Assn.; Univ. of Ky. Resch. Club; A.A.U.P.; Lambda Chi Alpha; Gamma Sigma Delta; Sigma Xi. Author: Thirty Years of Farm Prices and Production in Ky. (with D. G. Card); Index Numbers of Prices and Production of Farm Products in Kentucky (with D. G. Card and O. M. Farrington); Livestock Movement at Kentucky Auction Markets (with C. D. Phillips); Market Movement of Livestock in Kentucky (with C. D. Phillips); Price and Market Data on Lambs, Hogs, Veal and Calves at Four Central Ky. Livestock Auction Markets, 1926-43 (with C. D. Phillips). Ph.D. Dissertation: Economic Study of Veal Calves. Hobbies: Fishing; Gladiolus Hybridizing.

BROWN, Bailey Edgar, retired, 1207 Delafield Pl., N. W., Washington, D. C. CHEMISTRY, AGRICULTURE.

BROWN, Bancroft Huntington, Prof. of Math., Dartmouth Coll., Hanover, N. H. MATHEMATICS.

BROWN, Barnum, Curator Emer. of Fossil Reptiles, Am. Museum Natural History, 522 W. End Ave., N. Y., N. Y. PETROLEUM GEOLOGY.

BROWN, Benjamin Arthur, Agronomist, Univ. of Conn., Storrs, Conn. AGRICULTURE, CHEMISTRY.

BROWN, Carl Barrier, Hd., Sedimentation Section, Office Rsch., Soil Conservation Service, 317 Pine-wood Ave., Silver Spring, Md. SEDIMENTATION.

BROWN, Carl Richards, Assoc. Prof. of Psychol., Univ. of Mich., Ann Arbor, Mich. PSYCHOLOGY.

BROWN, Carlton Ernest, Chemist, Camp Detrick, Aerobiology Branch, Frederick, Md. INDUSTRIAL HYGIENE.

BROWN, Cecil Langford, Esso Labs., Standard Oil Co., 10 Rockview Terrace Ave., North Plainfield, N. J.

BROWN, Charles H., Iowa State Coll., Library, Ames, Iowa. SCIENCE LIBRARIANSHIP.

BROWN, Charles Leonard, Prof. and Hd., Dept. of Med. Temple Univ. Schl. of Med., 3401 N. Broad St., Philadelphia, Pa. INTERNAL MEDICINE.

BROWN, Charles W., Prof. of Geol., Brown Univ., Providence, R. I. GEOLOGY.

BROWN, Dalton Milford, Dept. of Biol., State Tchrs. Coll., Johnson City Tenn. BOTANICAL SCIENCES.

BROWN, Eleanor, 7 Ripley Rd., Hanover, N. H.

BROWN, Ethan Allan, Physician, 75 Bay State Rd., Boston 15, Mass. MEDICINE. b. London, England, Mar. 16, 1905. s. Edward Arnold and Maria (Riegerowska) B. Edn.: Balliol Coll., Oxford, England, 1928-29; Univ. of London, 1930-35; St. Mary's Hosp. Med. Schl., London, England, m. Helen Alice Flaherty, Sept. 14, 1948. Exp.: Instr. in Biol., Univ. of London, London, England, 1932-34; Physician, U. S., 1935—; Chf. of Allergy Dept., Lahey Clinic, Boston, Mass., 1935-38; Staff Physician, New England Baptist and Deaconess Hosps., Boston, Mass., 1936-38; Consultant in Allergy, Essex Co. Tuberculosis Sanatorium, Danvers, Mass., 1936—; Physician in Chf., Allergy Dept., New England Med. Center, Boston, Mass., 1938—. Consultant in Allergy, Boston Floating Hosp., Boston, Mass., 1938—; Asst. Prof. of Pediatrics, Tufts Med. Schl., Boston, Mass., 1950—; Dir., Asthma Rsch. Foundation, Inc., Boston, Mass., 1938—. Mem.: Royal Coll. of Physicians; Royal Coll. of Surgeons; A.M.A.; Mass. Med. Assn.; Amer. Coll. of Allergists; Amer. Acad. of Allergy; Amer. Soc. of Adv. of Sci.; Amer. Soc. for Rsch. in Psychosomatic Problems; Soc. for Investigative Dermatol. Gen. Int.: Chem. Certificate, Physic and Biol. Prizes, 1930; Histol., Anatomy and Physiol. Prizes, 1931; Hygiene, Forensic and Psychol. Med. Prizes, 1932; Morbid Anatomy Prize, 1933; Wallace Mem. Prize and Medal, Pathol. Prize, Midwifery Prize, Ophthalmol. Prize, 1934; Prox. Accessit Agnes Cope Prize, Prize Medicine Aeq., Prox. Accessit Cheadle Gold Medal, Malcolm Morris Certificate, 1935. Contrb. to: Various Med. and Scientific Jours.

BROWN, F. W., Tech. Dir., U. S. N. O. T. S., China Lake, Calif. PHYSICS.

BROWN, Frank Arthur, Jr., Prof. of Zool., Northwestern Univ., Evanston, Ill. ZOOLOGY.

BROWN, Frank Emerson, Prof., Dept. of Chem., Iowa State Coll., Ames, Iowa. CHEMISTRY.

BROWN, Frederick Martin, Hd., Sci. Dept., Fountain Valley Schl., Colorado Springs, Colo. ENTOMOLOGY.

BROWN, Frederick W., SPEECH AND HEARING.

BROWN, George Granger, Dean of Engrng., Univ. of Mich., Ann Arbor, Mich. CHEMICAL ENGINEERING.

BROWN, George Henderson, Box 45, Newtown, Conn. MEDICINE, ENGINEERING.

BROWN, George Lincoln, Emer. Pres., S. Dak. State Coll., Brookings, S. Dak.

BROWN, Glenn V., Engrng. Consultant, Private Practice and Consultant, Pa. Bd. Fish Commissioners, 312 E. Main St., Mechanicsburg, Pa. CHEMICAL ENGINEERING.

BROWN, Gordon Campbell, Assoc. Prof. of Epidemiol., Schl. of Public Health, Virol. Lab., Univ. of Mich., Ann Arbor, Mich. VIRUS DISEASES, EPIDEMIOLOGY AND IMMUNOLOGY.

BROWN, Gordon S., Head of Dept. of Elec. Engrng., Mass. Inst. of Tech., Cambridge, Mass. ELECTRICAL ENGINEERING.

BROWN, Harley Procter, Assoc. Prof. of Zool., Univ. of Okla., Norman, Okla. PROTOZOOLOGY AND ENTOMOLOGY. b. Uniontown, Ala., Jan. 13, 1921. s. Harley Procter and Martha (McGinniss) B. Edn.: A.B., Miami Univ., 1942; A.M., *ibid.*, 1942; Ph.D., Ohio State Univ., 1945. m. Laura Williams, June 1, 1942. c.: Mary Hamilton. Exp.:

Asst., Dept. of Zool. and Entomol., Ohio State Univ., Columbus, Ohio, 1942-45; Univ. Fellow, *ibid.*, 1945; Instr. in Zool., Univ. of Idaho, Moscow, Idaho, 1945-47; Instr., Ore. Inst. of Marine Biol., 1946; Instr., Biol. Dept., Queen's Coll., N. Y. C., 1947-48; Asst. Prof. of Zool., Univ. of Okla., 1948-52; Assoc. Prof., *ibid.*, 1952—. Mem.: Sigma Xi; Phi Sigma; A.A.A.S.; Okla. Acad. of Sci.; Soc. of Protozool.; Soc. of Systematic Zool.; Amer. Soc. of Zool.; Okla. Ornithol. Soc.; Phi Beta Kappa; Phi Eta Sigma; Delta Phi Alpha. Contrb. to: Amer. Midland Naturalist; Annals of the Entomol. Soc. of Amer.; Ohio Jour. of Sci.; Proc. of Okla. Acad. of Sci.; Turtux News; Schl. Sci. Rev.; Internatl. Jour. for Audio-Visual Edn.; The Biologist; Proc. of the Soc. of Protozool. Special Int.: Structure and Mechanics of Protozoan Flagella; Life Histories of Certain Parasitic Insects.

BROWN, Harry Bates, Prof. of Agronomic Rsch. retired, Agri. Center, Univ. Sta., Baton Rouge, La. COTTON BREEDING.

BROWN, Herbert C., Purdue Univ., Lafayette, Ind. CHEMISTRY.

BROWN, Howard Dexter, Prof. of Horticulture, Ohio State Univ. and Agril. Expt. Station, Columbus 10, Ohio. RESEARCH AND TEACHING IN HORTICULTURAL TECHNOLOGY.

BROWN, Ina Corinne, Prof. of Social Anthropology, Scarritt Coll., Nashville, Tenn. SOCIAL ANTHROPOLOGY. b. Gatesville, Tex. d. John Dayton and Corinne (Wells) B. Edn.: A.B., Univ. of Chicago, 1936; Ph.D., *ibid.*, 1942. Exp.: Staff. Methodist Bd. of Edn., Nashville, Tenn., 1921-39; Sr. Specialist in Social Studies, U. S. Office of Edn., Washington, D. C., 1939-42; Prof. of Social Anthropol., Scarritt Coll., Nashville, Tenn., 1942—. Hon. Pos.: Chmn., Natl. Com. on Social Studies and Mem., Bd. of Dirs., A.A.U.W., 1951-53. Mem.: Fellow, Amer. Anthropol. Assn.; Amer. Geo. Soc.; A.A.A.S.; Southern Sociol. Soc.; Soc. for Applied Anthropol.; Phi Beta Kappa; Sigma Xi. Contrb. to: Jour. Negro Edn.; Jour. A.A.U.W.; Peabody Jour. of Edn. Special Int.: Race Relations; Amer. Negro.

BROWN, James Greenlief, Hd., Dept. of Plant Pathol., Univ. of Ariz., Box 4672, Univ. Sta., Tucson, Ariz. PLANT PATHOLOGY.

BROWN, James Howard, Assoc. Prof. of Bacteriol., Johns Hopkins Univ. Schl. of Med., 1833 E. Monument St., Baltimore, Md. BACTERIOLOGY.

BROWN, Judson S., Dept. of Psychol., Univ. of Iowa, Iowa City, Iowa. PSYCHOLOGICAL RESEARCH.

BROWN, Julius Arthur, Prof. of Physics and Phys. Sci., Jacksonville Jr. Coll., Jacksonville 7, Fla. ASTRONOMY AND PHYSICS. b. N. Y. C., May 8, 1880. s. Francis and Louis (Reiss) B. Edn.: A.B., Dartmouth, 1902; A.M., *ibid.*, 1904; B.Sc., Oxford, England, 1906. m. Helen Conner (dec.), June 21, 1909. c.: Francis; Sanborn C.; Julia-Elizabeth Jessup; Arthur M. and Samuel G. Exp.: Asst. Physics, Dartmouth, Hanover, N. H., 1902-04; Demonstrator, Physics, Oxford, England, 1906-07; Asst. Prof. Physics, Dartmouth, Hanover, N. H., 1907-09; Prof. of Physics, Syrian Park Coll., Beirut, Lebanon, 1909-14; Lectr., Columbia Univ., N. Y. C., 1917-18; Prof. of Astronomy, Amer. Univ. of Beirut, Lebanon, 1919-46; Dean, Schl. of Arts and Sci., *ibid.*, 1941-46; Lectr., Astronomy and Physics, Colgate, 1947-49; Prof., Jacksonville Jr. Coll., Jacksonville, Fla., 1949—. Mem.: A.A.A.S.; Amer. Phys. Assn.; Amer. Asst. Amer. Meteor.; Alpha Delta Pi; Phi Beta Kappa; Sigma Xi. Special Int.: Solar Physics; Elec. Gas Discharges; Variable Star Photometry.

BROWN, Lawrence Eldon, Chemist, 2100 Robert E. Lee Blvd., New Orleans 19, La. CHEMISTRY. b. Republic Co., Kans., June 19, 1914. s. Zur Edward and Myrtle (Neville) B. Edn.: B.A., Southwest Tex. Tchrs. Coll., 1936. c.: Brenda Joy. Exp.: Chemist, Analytical Section, Southern Regional Rsch. Lab., New Orleans, La., 1942-44; Chemist in Chg., Micronalytical Lab., *ibid.*, 1944—. Mem.: Amer. Chem. Soc.; A.A.A.S.; Alpha Chi;

Phi Theta Kappa. Contrb. to: Analytical Chem.; Jour. of Amer. Oil Chemists Soc. Special Int.: Microchem., Quantitative Microchem. Analysis.

BROWN, Lawrence H., Box 632, East Liverpool, Ohio. CERAMICS.

BROWN, Lillian Olive, Prof. of Math., Hood Coll., Frederick, Md. MATHEMATICS.

BROWN, Madelaine Ray, Instr. in Neurol., Harvard Med. Schl., 986 Memorial Dr., Cambridge, Mass. NEUROLOGY.

BROWN, Oral Ala, Sr. Agricultural Engr., Agricultural Engrng. Lab., Box 134, Univ. of Tenn., Knoxville, Tenn. ELECTRICAL ENGINEERING. b. December 31, 1893, Good Hope, West Va. s. Woodville and Minnie May (Sommerville) B. Edn.: B.S. in E.E., W. Va. Univ., 1924; M.S. in E.E., Iowa State Coll., 1925; Ph.D., *ibid.*, 1932. m. Mary McMorrow of Glendon, W. Va., June 13, 1924; d. Marshall McClellon and Susan Fox McMorrow; c.: Mary Susan; Wm. McMorrow. Exp.: Grad. Asst., Instr., Asst. Prof. Elect. Engr., Iowa State Coll., 1924-39; Assoc. Elect. Engr., U.S.D.A., B.P.I.S.' A.E., Wash., D. C.; Irwinville, Ga.; Enterprise, Ala., Auburn, Ala., 1939-44; Rsch. on Farm Machines, Sweet Potato Project, Agri. Engr., U.S.D.A., B.P.I. S.' A.E., Ellisville, Miss., Resch., Sweet Potato Machines, 1944-45; Sr. Agri. Engr., *ibid.*, Tobacco Sta., Oxford, N. C., 1945—, Resch. in Tobacco Curing. Mem.: A.S.A.E.; Tau Beta Pi. Contrb. to: Progressive Farmer; So. Agri.; Agri. Engr. Ph.D. Dissertation: Production of Carbon Black in a Dielectric Field. War Record: World War I. Gen. Int.: Invented Machine for Mechanically Digging and Shaking Peanuts, Sheller for Shelling Seed Peanuts, Temperature and Humidity Control Systems for Tobacco Curing Barns. Listed in: A.M.S.; W. W. S. and S. E.; Who Knows— and What. Special Int.: The effects of electromagnetic radiation on living organisms of plants, seeds, and plant products.

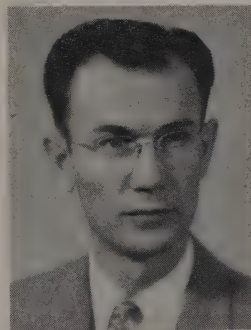
BROWN, Phillip B., Mine Foreman, AS & R Aptodo Postal No. 85, Parral, Chih, Mex. MATHEMATICS, METALLURGY.

BROWN, Rachel Fuller, Sr. Biochemist, N. Y. State Dept. of Health, Div. Labs. and Rsch., 26 Buckingham Dr., Albany, N. Y. BIOCHEMISTRY.

BROWN, Ralph Hall, Prof. of Geography, Univ. of Minn., Minneapolis, Minn. GEOGRAPHY.

BROWN, Robert Heath, Schl. of Aviation Med. and Rsch., Pensacola, Fla. EXPERIMENTAL PSYCHOLOGY.

BROWN, Robert Henry, Assoc. Prof. of Physics, Walla Walla Coll., Coll. Place, Wash. PHYSICS.



b. Sioux Falls, S. Dak., Aug. 27, 1915. s. Harry James and Isabelle (Ross) B. Edn.: B.S., Union Coll., 1940; M.S., Univ. of Nebr., 1942; Ph.D., Univ. of Wash., 1950. m. Ruth Frances Miler, Des Moines, Iowa, 1942. d. Mr. and Mrs. L. F. Miler. c.: Rebecca Sue; Judith Ann. Exp.: Field Sec., S. Dak. Book and Bible House, 1937-40; Asst. Instr. in Physics, Univ. of Nebr., 1940-42; Rsch. Engr., Sylvania Elec. Products, Flushing, N. Y., 1942-45; Head Science Department, Canadian Union Coll., Lacombe, Alberta, 1945-47; Acting Instr. in Physics, Univ. of Wash., 1948-49; Asst. Prof. of Physics, Walla Walla Coll., Coll. Place, Wash., 1947-50; Assoc. Prof., *ibid.*, 1950—. Mem.: Amer. Association of Physics Tchrs.; Amer. Phys. Soc.; The Inst. of Radio Engrs.; The Soc. of the Sigma Xi. Contrb. to: Have published papers in The Rev. of Scientific Instruments and the Proc. of the I.R.E. Ph.D. Dissertation: Ion Formation and Decay in a Mercury Resonance Cell as Evidenced by Electrical Image Forces. Travel:

Canada; Mexico. Listed in: A.M.S. Special Int.: Electronics: Physical Optics.

BROWN, Robert Marshall, Prof. Emer., R. I. Coll. of Edn., Providence, R. I. GEOGRAPHY.

BROWN, Roland W., Geologist, U. S. Geol. Survey, U. S. Dept. of Interior, U. S. Natl. Museum, Washington, D. C. PALEOBOTANY.

BROWN, S. Leroy, Prof. of Physics, Univ. of Tex., Austin, Tex. PHYSICS.

BROWN, Sanborn Conner, Assoc. Prof. of Phys., Mass. Inst. of Tech., Cambridge 39, Mass. PHYSICS.



b. Beirut, Lebanon, Jan. 19, 1913. s. Julius Arthur and Helen (Conner) B. Edn.: A.B., Dartmouth Coll., 1935; M.A., *ibid.*, 1937; Ph.D., M.I.T., 1944. m. Lois Wright, June 21, 1940. c.: Peter M.; Stanley W.; Prudence E. Exp.: Asst. in Phys., Dartmouth Coll., Hanover, N. H., 1935-37; Tchng. Fellow, Mass. Inst. of Tech., Cambridge, Mass., 1938-41; Instr. in Phys., *ibid.*, 1941-45; Asst. Prof. of Phys., *ibid.*, 1945-49; Assoc. Prof. of Phys., *ibid.*, 1949—. Mem.: Amer. Phys. Soc.; A.A.P.T.; A.A.A.S.; Sigma Xi. Contrb. to: Amer. Jour. Phys.; Phys. Rev.; Rev. Scientific Instruments; Jour. Chem. Phys.; etc. Special Int.: Detection of Radioactivity; Microwave Gaseous Electronics.

BROWN, Spencer F., SPEECH AND HEARING.

BROWN, Theodore Cecil, Assoc. Prof. Mechanical Engineering, Office 207, Page Hall, State Coll., Raleigh, N. C. DESIGN PROBLEMS OF MECHANICAL EQUIPMENT OF BUILDINGS. b. Paintsville, Ky., May 15, 1907. s. Andrew Jackson and Elizabeth Marie (Tiebe) B. Edn.: B.S., Univ. of Ky., 1931; M.E., *ibid.*, 1936; M.S., N. C. State, 1940. m. Lucy Bolin of Portsmouth, Ohio, June 22, 1927; d. Bernard and Sally Bolin; c.: Theodore Cecil II; Bernard Andrew. Exp.: Engr., U. S. War Dept. (Rivers and Harbors), 1931-32; 1932-37, Bd. of Edn., Ashland, Ky., Tch. and Engr. in Chg. of Const.; 1937—, Inst. Asst. and Assoc. Prof. Mech. Engrng., N. C. State Coll., Raleigh, N. C. Hon. Pos.: Treas., Prof. Engrs. of N. C., former Sec. Raleigh Section A.S.M.E.; former Chmn. State Coll. Branch A.S.E.E.; Past Comdr. K. T.; P.M., Enoch Coun.; P.H.P., Raleigh R.A.M. Mem.: A.A.U.P.; A.S.E.E.; A.S.M.E.; A.S.H.V.E.; N. C. Soc. of Engr.; Prof. Engrs. of N. C.; N.S. P.E.; Raleigh Engrs. Club; Sigma Chi; Blue Key; Golden Chain; Tau Beta Pi; Pi Tau Sigma; Theta Tau; Disciples Club. Author: Drafting Room Practices. Contrb. to: Amer. Engr.; Jour. of Engr. Drawing. War Record: Instr., Navy Diesel Engrng. Program and Special Lecturer on Fuel, Fuel Pumps, and Fuel Injection. Gen. Int.: Registered Engr., Special Mech. Equipment for Schls., Hosps., and Large Bldgs. Hobby: Masonry. Listed in: W. W. in Engrng.; A.M.S.; W. W. in the South and Southwest. Special Int.: Recently completed study of Climatic Data of North Carolina as used by Engineers. Useful to designers of Air Conditioning, Heating and Construction.

BROWN, Theodore Henry, Prof. of Business Statistics, Harvard Univ. Grad. Schl. of Business Admin., 25 Meadow Way, Cambridge, Mass. STATISTICS.

BROWN, Walter James, retired, 1006 Wellington St., London, Ont., Can. SOCIAL SCIENCES.

BROWN, Walter T., Pres., Victoria Univ., Toronto, Ont., Can. PHILOSOPHY.

BROWN, Warner, Prof. of Psychol., Univ. of Calif., Berkeley, Calif. PSYCHOLOGY.

BROWN, Weldon G., Chicago Univ., Chicago, Ill. ORGANIC REDUCTIONS WITH METALLIC HYDRIDES.

BROWN, Williamson James, Acting Chf., Systematic Unit, Div. Entomol., Dept. of Agri., 151 Metcalfe St., Ottawa, Ont., Can. ENTOMOLOGY.

BROWN, William Randall, Prof. of Geol., Univ. of Ky., 125 Edgemore Dr., Lexington, Ky. GEOLOGY. b. Staunton, Va., Oct. 31, 1913. s. Thornton Lee and Ellen Gertrude (Greer) B. Edn.: B.S., Univ. of Va., 1938; M.A., *ibid.*, 1939; Ph.D., Cornell Univ., 1942. m. Elizabeth Blessing Whitmore, 1942. c.: Elizabeth Dudley; Denison Greer; Elaine Daingerfield. Exp.: Asst., Univ. of Va., 1937-39; Asst., Cornell Univ., 1939-42; Asst. and Assoc., Geologist, Va. Geol. Survey, 1942-45; Asst. Prof., Univ. of Ky., Lexington, Ky., 1945-47; Assoc. Prof., *ibid.*, 1947-52; Prof. of Geol., *ibid.*, 1952—. Mem.: Geol. Soc. Amer.; Amer. Mineralogical Soc.; Sigma Xi; Geol. Soc. Ky.; Va. Acad. Sci.; A.A.U.P.; Sigma Gamma Epsilon. Contrb. to: Jour. Geol.; Proc. Va. Acad. Sci.; Va. Jour. Sci.; Bull. Geol. Soc. Amer. Special Int.: Structural, Metamorphic and Igneous Geol. of the Va. Piedmont; Mica Deposits of Va.

BROWNE, Frederick Lincoln, Chemist, P-6, Forest Products Lab., Forest Service, U. S. D. A., 3546 Lake Mendota Dr., Madison, Wis. CHEMISTRY.

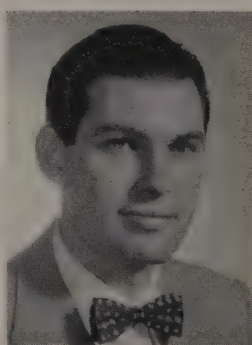
BROWNE, J. S. L., Royal Victoria Hosp., Montreal, Que., Can. ENDOCRINOLOGY—CLINICAL RESEARCH.

BROWNE, William Hand, Jr., Prof. Emer. Electrical Engrng., Coll. of Agri and Engrng., Univ. of N. C., Raleigh, N. C. ELECTRICAL ENGINEERING.

BROWNE, William W., Prof. of Biol., Coll. of the City of N. Y., 139th St., N. Y., N. Y. BACTERIOLOGY.

BROWNING, Harold W., Prof. of Botany and Dir., Grad. Studies, R. I. State Coll., Kingston, R. I. CHEMISTRY, BOTANY.

BROWNING, William Elgar, Jr., Lead Engr., Livermore Rsch. Lab., 354 Andrews St., Livermore, Calif. CHEMISTRY AND NUCLEAR ENGINEERING.



b. Warren, Ohio, Oct. 1, 1923. s. William Elgar and Selina (Clark) B. Edn.: A.B., Ohio State Univ., 1943. m. Alice Cornuelle, June 4, 1944. c.: Arthur William; Susan Carol; Carl Douglas. Exp.: Jr. Chemist, Los Alamos Scientific Lab., Los Alamos, New Mex., 1943-46; Chemist, Snr. Chemist, Fairchild Engine and Airplane Corp., Oak Ridge, Tenn., 1947-51; Chemist, Lead Engineer, Calif. Rsch. and Dev. Co., Livermore Rsch. Lab., Livermore, Calif., 1951—. Mem.: Amer. Chem. Soc.; A.A.A.S.; Phi Eta Sigma. Contrb. to: Nucleonics. Special Int.: Effects of Nuclear Radiations on Properties of Materials; Radiation Chemistry; Tracer Measurements; Irradiation Techniques.

BROWNLOW, Louis, Trustee, Public Admin., 1726 M St., N. W., Washington, D. C. PUBLIC ADMINISTRATION.

BRUCE, O. C., Regional Chf. of Operations, Soil Conservation Service, Center Bldg., Upper Darby, Pa. SOIL CONSERVATION.

BRUCE, William C., 1137 S. Third St., Milwaukee, Wis. EDUCATION.

BROXON, James William, Prof. of Physics, Univ. of Colo., Boulder, Colo. **PHYSICS**. b. Union Twp., Whitley Co., Ind., July 12, 1897. s. William Chester and Victoria Ann (Gillespie) B. Edn.: A.B., Wabash Coll., 1919; M.A., Univ. of Minn., 1920; Ph.D., ibid., 1926. m. Vera Maude Peacock, Dec. 16, 1922. c.: William David; Patricia Jane. Exp.: Asst. in Physics, Wabash Coll., Crawfordsville, Ind., 1917-18; Instr. in Math., ibid., 1918-19; Tchng. Fellow in Physics, Univ. of Minn., Minneapolis, Minn., 1919-22; Instr., Univ. of Colo., Boulder, Colo., 1922-23; Asst. Prof. of



Physics, ibid., 1923-27; Assoc. Prof., ibid., 1927-29; Prof. of Physics, ibid., 1929—; Instr. in Physics, Yale Univ., New Haven, Conn., 1924-25, during leave of absence from Univ. of Colo.; Rsch. Assoc., Metallurgical Lab., Univ. of Chicago, Chicago, Ill., 1943-44, during Leave of absence from Univ. of Colo. Hon. Pos.: Pres. Colo.-Wyo. Acad. of Sci., 1952-53; Pres., Univ. of Colo. Chapter of Sigma Xi; Pres., Univ. of Colo. Chapter Amer. Assn. of Univ. Professors. Mem.: Amer. Physical Soc., fellow; Amer. Assn. of Physics Tchrs.; Amer. Soc. for Engrng. Edn.; A.A.A.S., fellow; Amer. Geophysical Union; Colo.-Wyo. Acad. of Sci.; Amer. Assn. of Univ. Professors; Phi Beta Kappa; Sigma Xi; Sigma Pi Sigma; Lambda Chi Alpha; Town and Gown Club. Contrb. to: The Physical Review; Il Nuova Cimento; Terrestrial Magnetism and Atmospheric Electricity; Bull. of the Colo.-Wyo. Acad. of Sci.; Jour. of General Psychol. Gen. Int.: Rsch. on the Manhattan Project during W. W. II; this led to two Patents Later Assigned to the Atomic Energy Commission. Special Int.: Cosmic Rays; Conduction Through Gases; Atmospheric Electricity.

BRUCE, William Fausset, Chf. Organic Chemist, Wyeth Inst., 724 Hirst St., Havertown, Pa. **ORGANIC CHEMISTRY**. b. York Springs, Pa., July 22, 1904. s. Amos Martin and Mary Susan (Fausset) B. Edn.: A.B., summa cum laude, Wesleyan Univ., 1927; A.M., ibid., 1928; A.M., Harvard Univ., 1929; Ph.D., ibid., 1931. m. Verna Updike, June 27, 1936. c.: Agnes Helen; William Furman; Barbara Jean. Exp.: Asst. in Chem., Wesleyan Univ., 1925-28; Asst. in Ethics, ibid., 1925; Univ. Scholar, Harvard Univ., 1928-29; Univ. Fellow, ibid., 1929; duPont Fellow, ibid.,



1930; Instr. in Chem., ibid., 1931; Sheldon Traveling Fellow, ibid., 1931-32; Asst., Rockefeller Inst., Princeton, N. J., 1932-35; Instr., Cornell Univ., Ithaca, N. Y., 1935-39; Asst. Prof. ibid., 1939-45; Sr. Chemist, Wyeth Inst., Philadelphia, Pa., 1944-46; Chf. Organic Chemist, ibid., 1947—. Hon. Pos.: Chmn., Cornell Sect., Amer. Chem. Soc.; Chmn., Biochem. Sect., Philadelphia Section, Meeting in Miniature; Councillor, Philadelphia Sect., Amer. Chem. Soc. Mem.: Amer. Chem. Soc.; Philadelphia Organic Chemists Club; Phi Beta Kappa; Sigma Xi; Alpha Chi Sigma. Contrb. to: Liebig's Annalen der Chemie; Jour. Biological Chem.; Jour. Amer. Chem. Soc.; Sci.; Microchemie; Antibiotics and Chemotherapy; Chem. Abstracts; Biological Abstracts. Special Int.: Organic Chem.; Medicinal Chem.; Scientific Apparatus.

BRUCKNER, Jacob Herbert, Prof. and Hd., Dept. of Poultry, Cornell Univ., Ithaca, N. Y. **POULTRY**.

BRUES, Austin Moore, Dir., Div. of Biol. and Med. Rsch., Argonne Natl. Lab., Box 299, Lemont, Ill. **CANCER RESEARCH**. b. Milwaukee, Wis., Apr. 25, 1906. s. Charles T. and Beirne (Barrett) B. Edn.: A.B., Harvard Univ., 1926; M.D., Harvard Med. Schl., 1930. m. Mildred Carter, June 1, 1930. c.: Roger Austin; Nancy Carter and Charles Thomas, 2nd. Exp.: Med. Resident, Huntington Mem. Hosp., Boston, Mass., 1930-31; House Officer, Mass. Gen. Hosp., Boston, Mass., 1931-32; Asst. in Med., Harvard Med. Schl., Boston, Mass., 1932-34; Grad. Asst.,



Mass. Gen. Hosp., ibid., 1932-34; Asst. Phys., Huntington Mem. Hosp., ibid., 1932-37; Rsch. Fellow in Med., Harvard Med. Schl., ibid., 1934-35; Instr. and Tutor in Biochem. Sci., Harvard Coll., ibid., 1934-42; Moseley Travelling Fellow, Harvard Univ. and Royal Cancer Hosp., London, England, 1935-36; Grad. Asst., Peter Bent Brigham Hosp., Boston, Mass., 1936-37; Instr. in Med., Harvard Med. Schl., ibid., 1936-37; Assoc. Phys., Huntington Mem. Hosp., ibid., 1937-41; Assoc. in Med., Harvard Med. Coll., ibid., 1937-42; Ward Visit, Boston City Hosp., ibid., 1938-39; Freshman Advisor, Harvard Coll., ibid., 1939-42; Jr. Assoc., Peter Bent Brigham Hosp., ibid., 1940-41; Intern. Army Induction Center, ibid., 1940-44; Assoc. Phys., Peter Bent Brigham Hosp., ibid., 1941-42; Responsible Investigator, Office of Sci. Rsch. and Develop., ibid., 1941-44; Asst. Prof. of Med., Harvard Med. Schl., ibid., 1942-45; Asst. Phys., Mass. Gen. Hosp., ibid., 1942-45; Sr. Biol., Metallurgical Lab., Univ. of Chicago, Chicago, Ill., 1944-46; Assoc. Prof. of Med., Dept. of Med. and Inst. of Radiobiol. and Biophysics, ibid., 1945-52; Prof., 1952—; Sr. Biol. and Dir., Biol. Div., Argonne Natl. Lab., Chicago, Ill., 1946-50; Sr. Biol. and Dir., Div. of Biol. and Med. Rsch., ibid., 1950—. Mem.: Amer. Assn. of Anatomists; A.A.A.S.; Amer. Assn. for Cancer Rsch.; Amer. Physiol. Soc.; Amer. Soc. for Clin. Investigation; Assn. for Study of Internal Secretions; Assn. of Amer. Phys.; Central Soc. for Clin. Rsch.; Inst. of Med. of Chicago; Soc. for Cell Biol.; Soc. of Exptl. Biol. and Med.; Tissue Culture Assn.; Radiation Rsch. Soc. Contrb. to: Amer. Jour. of Med. Sci.; Biochem. Jour.; Amer. Jour. of Cancer; Proc. Royal Soc. of London; Sci.; Jour. of Clin. Investigation; Anat. Record; War Med.; Cancer Rsch., etc. Special Int.: Radiation Biol., Cancer, Cell Physiol. and Growth.

BRUES, Charles Thomas, Prof. Emer. Entomol., Harvard Univ., 164 Highland Ave., Newtonville, Mass. **ENTOMOLOGY**.

BRUESKE, George Albert, Instrument Designer, The Perkin-Elmer Corp., Glenbrook, Conn. **PHYSICS**.

BRUMFIELD, Robert Thornton, Assoc. Prof., State Tchrs. Coll., Farmville, Va. **BOTANY**.

BRUMM, John Lewis, Prof. and Hd., Dept. of Journalism, Univ. of Mich., Ann Arbor, Mich. **JOURNALISM**.

BRUNEL, Jeles, Dir., Botanical Inst., Univ. of Montreal, 4101 est. rue Sherbrooke, Montreal, Que., Can. **CRYPTOGAMIC BOTANY**.

BRUNJES, Austin S., Process Design Coordinator, Lummus Co., 420 Lexington Ave., N. Y., N. Y. **CHEMICAL ENGINEERING**.

BRUNN, Harold, Clinical Prof. of Surgery and Dir., Thoracic Clinic, Univ. of Calif. Med. Schl., 2200 Post St., San Francisco, Calif.

BRUNQUIST, Ernest Herman, Assoc. Prof. of Physiol. and Pharmacology, Univ. of Colo. Schl. of Med., 4200 E. Ninth Ave., Denver, Colo. **PHYSIOLOGY**.

BRUNETTI, Cleo, Dir. Engrng. Rsch. and Development, General Mills, Inc., Mech. Div., 1620 Central Ave., Minneapolis, Minn.



ELECTRONICS: ELECTRICAL ENGINEERING. b. Virginia, Minn., Apr. 1, 1910. s. Nazareno and Serafina (Cavalier) B. Edn.: B.E.E., Univ. of Minn., 1932; Ph.D., *ibid.*, 1937. m. Nona Billmyre, Aug. 16, 1938. c.: Ronald David; Marlene Marie. Exp.: Tehng. Fellow and Instr. in Elec. Engrng., Univ. of Minn., 1932-37; Instr., Dept. of Elec. Engrng., Lehigh Univ., 1937-39; Asst. Prof., *ibid.*, 1939-41; Directed Rsch. in Radio, Electronics, and Electrical

Engrng., *ibid.*, 1937-41; Consultant in Elec. Engrng. to Industrial and Patent Concerns, 1934-41; Evening Lectr. in Radio, Geo. Washington Univ., 1941-42; Consultant, Office of Scientific Rsch. and Development, N. D. R. C. Div. 4, 1942-46; Rsch. and Development Engr., Natl. Bureau of Standards, 1941-42; Alternate Chf., Radio and Electronics Development Section, 1942; organized and headed, Production Engrng. Section, 1943-45; Chf., Ordnance Engrng. Section, 1945-47; organized and Chf. of Engrng. Electronics Section, 1947-48; Assoc. Dir., Stanford Rsch. Inst., Stanford, Calif., 1949-53; Dir., Engrng. Rsch. and Development, General Mills, Inc., Mech. Div., Minneapolis, Minn., 1953—. Hon. Pos.: Mem., Panel on Electronic Components, Rsch. and Development Bd., 1947—; Chmn. of Subpanel on Electronic Miniaturization, 1949-50; Mem., Natl. Advisory Group, Natl. Radio Inst., 1948—; Mem., Com. on Electronics, Aeronautical Bd., 1947. Mem.: Fellow, Inst. Radio Engrs.; Fellow, Amer. Inst. Elec. Engrs.; Wash. Acad. Sci.; USA Natl. Com., Internatl. Scientific Radio Union; Amer. Standards Assn.; Tau Beta Pi; Eta Kappa Nu; Pi Tau Pi; Scabbard and Blade. Author: *The Clarification of Average Negative Resistance*, Library of Congress, 1937; *Low Frequency Voltage and Power Amplifiers*, Vol. I, 1948; *Low Frequency Voltage and Power Amplifiers*, Vol. II, 1948; *Radio Frequency Voltage and Power Amplifiers*, 1948; *LC and Crystal Master Oscillators*, 1948; *Buffers, Frequency Multipliers and Output Stages of Transmitters*, 1948. Contrb. to: *Proc. Inst. Radio Engrs.*; *Elec. Engrng.*; *Electronics*; etc. War Record: 2nd Lt., Signal Reserve, U. S. Army, 1932. Gen. Int.: Cited in 1941 as America's Outstanding Young Electrical Engr.; Recipient Natl. Materials and Methods Achievement Grand Award, 1947; Natl. Amer. Civic League Scholarship Key for 1937; U. S. Naval Ordnance Development Award, 1945; War Dept. Certificate for Outstanding Services, 1945; Army-Navy Certificate of Appreciate, World II, 1945; Fellow, Inst. Radio Engrs.; Fellow, Amer. Inst. Elec. Engrs. Special Int.: Industrial Development and Management, General Rsch. Admin.; Engrng. Admin.; Public Speaking; Electronics, general; Electronic Miniaturization; Automatic Assembly Line Design; Proximity Fuze Development and Production; Guided Bomb Development; Printed Electronic Circuits; Air Rsch. Instrumentation; Medical Electronics; Meteorological Instruments; Military Electronics; Chem. of Electronic Materials; Ceramic Engrng.; Vacuum Tube Oscillators; Transistron Oscillator; Resistance-Tuned Oscillators; Negative Resistance Circuits; Frequency Stability; Measuring Instruments; Operational Calculus Solution of Electric Circuits; Ultra-high Frequency Radiation; Power Capacitors; Transmission Line Theory; Acoustical Engrng.; Radio Design; Electron Tube Design; Sub Miniature Radio Transmitters, Receivers, Transceivers and Components; Smog and Air Research, electronic and electro-mechanical computers, precision instrumentation; fine particle grinding and classification.

BRUNS, Paul Eric, Assoc. Prof. of Forestry, Mont. State Univ., Missoula, Mont. **FOREST MANAGEMENT.** b. New York, New York, July 30, 1915. s. Eric and Erna (Tausch) B. Edn.: A.B., N. Y. U., 1937; Forestry Schl., Univ. of Munich, Germany, 1937-38; Schl. of Forestry, Yale Univ., New Haven, 1938-40; M.F., *ibid.*, 1940; Coll. of Forestry, Univ.

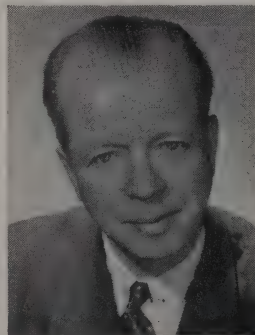
of Wash., 1950-51; Weyerbaeuser Resch. Fellow. m. Patricia Byrne of N. Y., N. Y., Feb. 13, 1944; d. William J. and Susan Byrne; c.: Pamela Anne; Eric William; Robert Thomas. Exp.: 1941, Timber Cruiser, Hamilton Veneer Co., Orangeburg, S. C.; 1942-44, Instr., Asst. Dir. and Acting Dir. of Academics, Southeastern Air Service, Atlanta, Ga., and Palmer Field, Bennettsville, S. C., 1945, Assoc. Forester, Northeastern Forest Exmpl. Sta., U. S. Forest Service, Laconia, N. H.; 1946-47, Woodlands Mgr., N. Troy Div., Blair Veneer Co., N. Troy, Vt.; Presently Assoc. Prof. at M. S. Univ.; Gen. Mgr. of Lubrecht Forest of Mont. Forest and Conservation Exmpl. Sta., Greenbough, Mont. Mem.: Delta Phi Alpha; Mont. Druids; Soc. of Amer. Foresters; Mont. Acad. of Sci.; Amer. Assn. of Univ. Prof.; Amer. Soc. of Photogrammetry. Listed in: *A.M.S.*; *Who's Who in the West*. Special Int.: Forest Management.

BRUNSON, Arthur Maxwell, Sr. Agronomist, U. S. D. A., Purdue Univ., 815 N. Grant St., West Lafayette, Ind. **CORN BREEDING.**

BRUNSWIK, Egon, Prof. of Psychol., Univ. of Calif., Berkeley, Calif. **PSYCHOLOGY.** b. Budapest, Hungary, Mar. 18, 1903. s. Julius and Helene (von Wiser) von B. Edn.: Ph.D., Univ. of Vienna, 1927. m. Else Frenkel, June 9, 1938. Exp.: Asst. to Lectr. (Dozent), Univ. of Vienna, 1927-37; Asst. Prof. to Prof., Univ. of Calif., 1938—. Mem.: Amer. Psychol. Assn. Author: *Wahrnehmung und Gegenstandswelt*, Vienna, 1934; *Experimentelle Psychologie in Demonstrationen*, Vienna, 1935; *Systematic and Representative Design of Psychol. Experiments*, Univ. of Calif. Press., 1947; *The Conceptual Framework of Psychol.*, 1952. Contrb. to: *Psychol. Rev.*; *Amer. Jour. Psychol.*; *Jour. Exptl. Psychol.*; *Philosophy of Sci.*; *Internatl. Encyclopedia of Unified Sci.* Special Int.: Perception; Exptl. Design; Systems and Theory of Psychol.; Philosophy of Sci.

BRUSON, Herman A., Manager Polymer Div. of Industrial Rayon Corp., Cleveland, Ohio, **CHEMISTRY.**

BRUUN, Johannes Hadeln, Dir. of Rsch., Hooker Electrochem. Co., Niagara Falls, N. Y. **ORGANIC AND PHYSICAL CHEMISTRY.** b. Sweden, Nov. 8, 1899. s.



Karl K. and Thora (Wager) B. Edn.: Ch.E., Norwegian Inst. of Tech., 1923; Ph.D., Johns Hopkins Univ., 1929. m. Mildred M. Hicks, May 1, 1930. Exp.: Production Supvr., Amer. Aniline Products, Lock Haven, Pa., 1924-27; Sr. Rsch. Assoc. Chemist, Natl. Bureau of Standards, Washington, D. C., 1927-32; Mgr. of Rsch. Div., Sun Oil Co., Philadelphia, Pa., 1932-42; Acting Plant Mgr., General Aniline and Film Corp., 1942-43; Dir. of Process Development, *ibid.*, 1943-47; Dir. of Rsch., *ibid.*, 1947-52; Dir. of Commercial Development, *ibid.*, 1952; Dir. of Rsch., Hooker Electrochem. Co., Niagara Falls, N. Y., 1952—. Hon. Pos.: Pres., Rsch. Dir. Assn., N. Y., 1950-51; Mem., A.C.S. Council, Washington, D. C., 1930-32; etc. Mem.: Amer. Chem. Soc.; Sigma Xi; Chemists' Club; Amer. Inst. of Chemists; Commercial Chem. Development Assn. Special Int.: Petroleum; Dyestuffs; Organic Chemicals.

BRUUN, Mildred M. Hicks, Free Lance Technical Writer, Lewiston, New York. **PETROLEUM.** b. Evinston, Va., Jan. 30, 1900. d. Everdell A. and Minnie Hay (Patrick) Hicks. Edn.: A.B., Randolph-Macon Woman's Coll., 1921; M.S., Univ. of Iowa, 1925; Ph.D., *ibid.*, 1930. m. Johannes Hadeln Bruun, May 1, 1930. Exp.: Hd., Dept. of Chem., Columbia Coll., Columbia, S. C., 1921-23; Tehr. of Sci., H. S., Biwabik, Minn., 1923-24; Grad. Asst. in Chem., Univ. of Iowa, 1924-25; Hd. of Analytical Dept., Asst. to Technical Dir., Amer.

Aniline Prod., Inc., 1925-26; Rsch. Chemist, Natl. Bureau of Standards, 1926-32; Rsch. Chemist, Sun Oil Co., Philadelphia, Pa., 1932-42; Consulting Chemist, Bureau of Standards, 1932-38; Rsch. Chemist, Memorial Hosp. for Cancer, N. Y., N. Y., 1942-46; Free lance Technical Writer, 1946—. Mem.: Amer. Chem. Soc.; Phi Beta Kappa; Sigma Xi. Contrb. to: Jour. Amer. Chem. Soc.; Indus. and Engrng. Chem.; Encyclopedia of Chem. Special Int.: Determination of Phys. Constants; Composition of Petroleum; Lubrication Oils.

BRYAN, Alvin Wesley, Dean, Coll. of Dentistry and Prof. of Dental Pathol., State Univ. of Iowa, Box 727, Iowa City, Iowa. DENTAL PATHOLOGY.

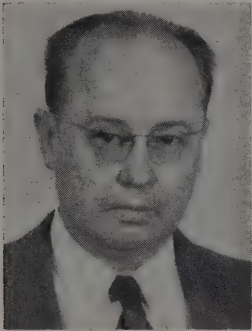
BRYAN, George Smith, Prof. and Chm., Dept. of Botany, Univ. of Wis., Madison, Wis. MORPHOLOGY, CYTOLOGY.

BRYAN, Kirk, Assoc. Prof. of Physiography, Harvard Univ., Cambridge, Mass. GEOLOGY, GEOGRAPHY.

BRYAN, Mary de Garmo, Prof. of Home Econ. and Suprv. of Food Service, Tchrs. Coll., Columbia Univ., 40 Fifth Ave., N. Y., N. Y. DIETETICS AND INSTITUTION MANAGEMENT.

BRYANS, William Remington, Asst. Dean and Prof. of Engrng. Mechanics, N. Y. Univ., 15 Circle Dr., Hastings-on-Hudson, N. Y. ENGINEERING MECHANICS.

BRYANT, Carroll W., Chf., Office of Operations Analysis, Headquarters Tactical Air Command,



Analysis, Headquarters Tactical Air Command, Va. PHYSICS. b. Langley Air Force Base, Dousman, Wis., Sept. 20, 1907. s. William G. and Jennie (Machold) B. Edn.: B.A., Beloit Coll., 1928; Ph.D., Johns Hopkins Univ., 1935. m. Lennaveve Goodrich, Aug. 7, 1930. Exp.: Jr. Instr. in Phys., Johns Hopkins Univ., 1930-35; Assoc. Prof. of Phys. and Math., Univ. of Tenn., 1935-41; Hd., Phys. Dept., Univ. of Wichita, 1941-43; Operations Analyst, U. S. Air Forces, 1943-44; Sr. Physicist, U. S. Bureau of Standards, 1944-45;

Hd., Phys. Dept., Univ. of Wichita, 1945-46; Chf., Operations Analysis, Headquarters Tactical Air Command, 1946—. Mem.: Amer. Phys. Soc.; Optical Soc. of Amer.; A.A.P.T.; A.A.U.P.; Sigma Xi; Kiwanis. Contrb. to: Jour. Optical Soc. of Amer.; Jour. Tenn. Acad. of Sci. War Record: Operations Analyst, U. S. A. F., 1943-44. Special Int.: Optics; Operations Analysis.

BRYANT, Edwin Francis, Rsch. Chemist, Sunkist Growers, Box 215, Corona, Calif. CITRUS BI-PRODUCTS.

BRYANT, Eugene E., Ferro Corp., 4150 E. 56th St., Cleveland 5, Ohio. CERAMICS.

BRYANT, Harold Child, Supt., Grand Canyon Natl. Park, Natl. Park Service, Dept. of Interior, Grand Canyon, Ariz. ZOOLOGY.

BRYANT, Jay Clarke, Biochemist, Natl. Cancer Inst., Bethesda, Md. TISSUE CULTURE. b. Susquehanna, Pa., Feb. 6, 1905. s. Clayton S. and Mary (Tallman) B. Edn.: B.S., Pa. State Coll., 1932. m. Jean Barzhe, Oct. 30, 1940. Exp.: Asst. in Soil Survey, Pa. and N. Y., 1932-37; Tchng. Asst. in Dept. of Agron., Cornell Univ., Ithaca, N. Y., 1933-37; Soil Tech., U.S.D.A., Geneva, N. Y., 1938-40; Soil Tech., U.S.D.A., Coll. Park, Md., 1940-47; Biochemist, Natl. Cancer Inst., Natl. Inst. of Health, Bethesda, Md., 1947—. Mem.: Amer. Chem. Soc.; A.A.A.S.; N. Y. Acad. of Sci.; Tissue Culture Assn.; Soil Sci. Soc. of Amer. Contrb. to: Soil Sci.; Iowa State Coll. Jour. of Sci.; Jour. of Natl. Cancer Inst. Special Int.: Soil Moisture Measurement; Losses of Soluble Materials from

Soil in Runoff Water; Filtrability of Chick Embryo Extract for Use in Tissue Culture; Tissue Culture Media of Known Chem. Composition.

BRYANT, John Myron, Prof. Emer. of Elec. Engrng., Univ. of Minn., 1606 Ridgeway Ave., Lancaster, Pa. ELECTRICAL ENGINEERING.

BRYANT, Louise Stevens, 1589 Midland Ave., Bronxville, N. Y. PSYCHOLOGY.

BRYANT, Owen, Steamboat Springs, Colo. ZOOLOGY.

BRYNGELSON, Bryng, Prof. of Speech and Dir. of Speech Pathology, Speech Dept., Univ. of Minn., Minneapolis, Minn. SPEECH PATHOLOGY. b. Otisco, Minn., Apr. 22, 1892. s. August and Ida Sophia (Nelsen) B. Edn.: B.A., Carleton Coll., 1916; M.A., State Univ. of Iowa, 1926; Ph.D., ibid., 1931. m. Arminda Mowre, Sept. 13, 1922. c.: William Mowre. Exp.: Inst. in Speech, Carleton Coll., Northfield, Minn., 1918-19; Scholarship, Yale Univ., New Haven, Conn., 1920-21; Prof. of Speech, Hanover Coll., Hanover, Ind., 1922-24; Fellowship, State Univ. of Iowa, Iowa City, Iowa, 1924-26; Fellowship, Univ. of Wis., Madison, Wis., 1926-27; Dir. of Speech and Hearing Clinic, Univ. of Minn., Minneapolis, Minn., 1927-51; Prof. of Speech and Dir. of Speech Pathology, Univ. of Minn., Minneapolis, Minn., 1951—. Hon. Pos.: Hon. Mem. of N. W. Pediatric Soc. Mem.: Sigma Xi; Amer. Speech and Hearing Assn.; Speech Assn. of Amer.; Amer. Men of Sci.; Former Mem. of Genetic Assn. Author: Know Yourself, 1944; Speech in the Classroom, 1941. Contrb. to: Amer. Genetic Jour.; Jour. of Abn. and Soc. Psychology; Amer. Speech and Hearing Disorders; Lancet; Mental Hygiene; Jour. of Speech, Spec. Int.: Speech Pathology, Stuttering; Personality Disorders; Left Handedness.

BRYSON, Gladys Eugenia, Prof. and Chm., Dept. of Sociology, Smith Coll., Northampton, Mass. SOCIOLOGY.

BRYSON, Lyman, Prof. of Edn., Tchrs. Coll., Columbia Univ., N. Y., N. Y. ANTHROPOLOGY, EDUCATION.

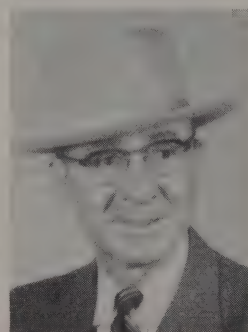
BUCHANAN, Archibald Ray, Prof. of Anatomy, Univ. of Colo. Schl. of Med., 4200 E. Ninth Ave., Denver, Colo. NEUROANATOMY.

BUCHANAN, Ben F., Technical Service Dir. and Mgr. of Pharmaceutical Dept., Amino Products Div., Internat. Minerals and Chem. Corp., 1010 S. Hale, Wheaton, Ill. FOOD CHEMISTRY AND TECHNOLOGY.

BUCHANAN, James William, Morrison Prof. of Zool. and Chmn., Dept. of Zool., Northwestern Univ., Evanston, Ill. ZOOLOGY.

BUCHANAN, Robert Earle, Prof. of Bacteriol., Dir., Iowa Agri. Expt. Station, Dean of Grad. Schl., Iowa State Coll., Ames, Iowa. BACTERIOLOGY.

BUCHANAN, William Dwight, Entomologist in Chg., Forest Insect Investigation Lab., Bldg. T9,



Univ. of Mo., Columbia. Mo. RELATION OF INSECTS TO THE SPREAD OF PLANT DISEASES, AND FOREST ENTOMOLOGY. b. Venice, Utah, July 1, 1899. s. William Wallace and Nancy M. (Poole) B. Edn.: B.A., Univ. of Calif., 1925; M.S., Univ. of Minn., 1933. m. Elsie C. Hoffman, Aug. 11, 1923. c.: David Scott and Alice Joyce. Exp.: Tch., Presidio Open Air Schl., San Francisco, Calif., 1925-26; Tch. and H. S. Prin., Sevier Co., Utah, Public Schls., 1926-29; Instr. of Biol., Schl. of Agri., Univ. of Minn., 1929-33; Relation of Insects to the Spread of the Dutch Elm Disease, U. S. Dept. of Agri., 1933-42; White Fringe Beetle Rsch., Florala, Ala., ibid.,

1942-43; Insect Rsch. and Control, Emergency Rubber Project, Tex. and N. Mex., *ibid.*, 1943-46; Collecting, Rearing and Transferring Certain Parasites of the Spruce Budworm from the Rocky Mountain Region and Ore. for Liberation in New England, *ibid.*, 1946-49; Investigation of Vectors of Elm Phloem Necrosis, Columbus, Ohio, *ibid.*, 1949-52; Investigation of Insects in Relation to the Spread of the Oak Wilt Disease, *ibid.*, 1952—. Mem.: Fellow, A.A.A.S.; Amer. Assn. Econ. Entomologists; Entomol. Soc. Amer.; Soc. Amer. Foresters; Pi Kappa Alpha. Contrb. to: Jour. Econ. Entomol.; Phytopathol. War Record: Private, World War I. Special Int.: Relation of Insects to the Spread of Plant Diseases; Forest Entomol. and Biological Control of Insects.

BUCHER, Walter Hermann, Exec. Officer, Dept. of Geol., Columbia Univ., N. Y. 27, N. Y. GEOLOGY. b. Akron, Ohio, Mar. 12, 1888. s. August J. and Maria (Gebhardt) B. Edn.: Ph.D., Univ. of Heidelberg, Germany, 1911. Hon. Deg.: Sc.D., Princeton, 1947. m. Hannah E. Schmid of Zürich, Switzerland, 1914. c.: John Eric; Mary Dorothy; Margaret Louise; Robert Walter. Asst. Prof., 1915-20; Assoc. Prof., 1920-24; Prof., 1924-40; Chmn., Dept. of Geol. and Geog., 1937-40; Prof., Geol., Columbia Univ., 1940—. Chmn., Dept. of Geol., 1950—. Hon. Pos.: Chmn., Dept. of Geol. and Geog., Cinn., 1937-40; Div. Chmn., Natl. Rsch. Coun., 1940-43; Pres., Amer. Geophys. Union, 1948—. Chmn., Dept. of Geol., Columbia, 1950—. Mem.: Natl. Acad. of Sci.; Natl. Rsch. Coun.; Amer. Geophys. Union; Geol. Soc. of Amer.; etc. Author: The Deformation of the Earth's Crust, 1933. Hobby: Observations of Native Flora and Birds. Listed in: Who's Who in Amer.; A.M.S.

BUCHHOLZ, John Theodore, Prof. of Botany, Univ. of Ill., Urbana, Ill. BOTANY.

BUCHSBAUM, Ralph, Asst. Prof. of Zool., Univ. of Chicago, Chicago, Ill. ZOOLOGY.

BUCHTA, John William, Chmn., Dept. of Physics and Asst. Dean of Senior Coll. S. L. A., Univ. of Minn., Minneapolis, Minn. PHYSICS.

BUCK, A Morris, Transportation Consultant, Box 472, Pine Beach, N. J. ENGINEERING.

BUCK, Harold W., Riverside, Conn.

BUCK, Johannes S., Sterling Winthrop Rsch. Inst., Rensselaer, N. Y. MEDICAL CHEMISTRY.

BUCK, John Nelson, Rsch. Consultant, 1600 Langhorne Road, Lynchburg, Va. CLINICAL PSYCHOLOGY, IN GENERAL AND PROJECTIVE TECHNIQUES IN PARTICULAR. b. Germantown, Pa., April 9, 1906. s. Clifford Ross and Gertrude Jane (Nelson) B. Edn.: Univ. N. C., 1925 & 1927; Swarthmore Coll. 1943-44; Univ. of Va., 1944-45. m. Frances Sandige, Oct. 8, 1927. c.: Barbara; Gurdon Saltonstall. Exp.: Lynchburg State Colony, Va.; App. Ment. Exam. 1929-38; Staff Psychologist 1938-43; Rsch. Fellow Univ. of Va. Hosp., 1945; Chief Psychologist, Lynchburg State Colony, 1945-51. Mem.: Amer. Assn. on Mental Deficiency; Soc. for Projective Techniques; Soc. for Philos. & Psychol.; Va. Acad. of Sci.; Am. Psychological Assn.; Sigma Xi. Contrb. to: Jour. of Clinical Psychol.; Jour. of Applied Psychol.; Jour. of Projective Techniques; Am. Jour. of Mental Deficiency, Va. Mental Hygiene Survey; Jour. of the Natl. Edn. Assn.; De Paul Hosp. Bull.; Revista de Psicología General y Aplicada; Contributions toward Med. Psychology. Gen. Int.: Construction of The H-T-P Technique, Philo-Phobe; and the Time Appreciation Test, Special Int.: Projective Techniques; Measurement of Intelligence; Licensing and Certification Legislation.

BUCK, Solon Justus, Archivist, U S Natl. Archives, 6645 Barr Rd., Washington, D. C. AMERICAN HISTORY.

BUCKINGHAM, Burdette Ross, Editor and Dir., Ginn and Co., Statler Office Bldg., Boston, Mass. EDUCATION.

BUCKINGHAM, Earl, Prof., Mass. Inst. of Tech., Cambridge, Mass. BEHAVIOR OF ENGINEERING MATERIALS.

BUCKLAND, Donald Channing, Assoc. Prof. of Forest Pathol., Dept. of Biol. and Botany, Univ. of British Columbia, Vancouver 8, B. C., Canada. FOREST PATHOLOGY. b. New Zealand, July 9, 1917. s. Charles Channing and Gertrude Nellie (Wilshire) B. Edn.: B.A., Univ. of B. C., 1941; B.S.F., *ibid.*, 1942; M.F., Yale Univ., 1943; Ph.D., *ibid.*, 1945. m. Jean Kirstine Adam, May 26, 1945. c.: Elizabeth Jean and Dorothy Ann. Exp.: Rsch. Asst., B. C., Forest Service, Can., 1938-41; Forest Pathol., Dominion Sci. Service, 1941-46; In Chg., Dominion Lab. of Forest Pathol., Victoria, Can., 1947-48; Assoc. Prof. of Forest Pathol., Univ. of B. C., Can., 1948—. Hon. Pos.: Lit. and Sci. Exec., Univ. of B. C.; Can. Forestry Assn. Mem.: Can. Inst. of Forestry; Soc. of Amer. Foresters; Can. Phytopathol. Soc.; Can. Soc. of Microbiol.; A.A.A.S.; B. C. Acad. of Sci.; Assn. of B. C. Foresters. Contrb. to: Can. Jour. of Botany; Forestry Chronicle; and Trade Jours. Special Int.: Root Diseases of Forest Trees.

BUCKLEY, Jeremiah Paul, Chf. Engr., Highways Div., Automotive Safety Fdn., Washington, D. C. HIGHWAY ENGINEERING. b. Utica, N. Y., June 10, 1909. s. John M. and Katherine (McDonald) B. Edn.: B.S.C.E., Univ. of Mich., M.S.(C.E.), *ibid.*, m. Lucille E., April 15, 1931. c.: James Edmund. Exp.: Asst. Civil Engr. City Engr. Office, Detroit, Mich., 1933-34; Jr. Engr. and project Engr. charge of road construction, Mich. St. Highway Dept., 1934-37; Statistical Engr., 1937-39; Highway planning Engr. and Asst. Dir. planning and traffic div., 1939-42; Expert Consultant and Hd. Transportation Specialist, Highway Div., Office Chf. of transportation, U. S. Army, 1942-43; Supervising Engr., Joint fact-finding Comm. on Highways, Streets and Bridges, Calif. Legislature, 1946—; Engr. Dir. Highway Study Comm., Mich. Good Roads Federation, 1947; Highway Engr. and Special Consultant, Automotive Safety Foundation, 1947—. Mem.: Amer. Soc. of Civil Engr., Inst. of Traffic Engr.; Mich. Engrng. Soc., Univ. Club. Author: Highway Needs in Mich., 1948; An Engineering Study of Ohio's Highways, Roads and Streets, 1950. Contrb.: Amer. Soc. of Civil Engr. Proceedings; Highway Rsch. Board Proceedings; Highway Conference Proceedings, Univ. of Mich.; Ohio St. Univ.; Georgia Inst. of Tech. War Record: WWII, 1943-46. Gen. Int.: Registered Professional Engr. Special Int.: Highway Engrng.

BUCKLEY, Oliver Ellsworth, retired, 13 Fairview Terrace, Maplewood, N. J. PHYSICS; ELECTRICAL ENGINEERING. b. Sloan, Iowa, Aug. 8, 1887. s. William D. and Sarah (Jeffrey) B. Edn.: B.S., Grinnell Coll., 1909; Ph.D., Cornell Univ., 1914. Hon. Deg.: D.Sc., Grinnell Coll., 1936; D.Sc., Columbia Univ., 1948; D. Eng., Case Inst. of Tech., 1948. m. Clara Lane, 1914. c. Katherine Nuckolls, William; Barbara Wolfe; Juliet. Exp.: Engrng. Dept., Western Elec. Co., 1914-25; Bell Telephone Labs., 1925-52; Dir. of Rsch., *ibid.*, 1933-36; Exec. Vice Pres., *ibid.*, 1936-40; Pres., *ibid.*, 1940-51; Chm. of Bd., *ibid.*, 1951-52; Mem., Bd. of Dirs., *ibid.*, 1937—. Mem. Gen. Adv. Com. AEC, 1948-54; Chm. Sci. Adv. Com. ODM, 1951-52. Hon. Pos.: Trustee, Jackson Memorial Lab., Bar Harbor, Maine; Trustee, Thomas A. Edison Foundation. Mem.: Fellow, Am. Physical Soc.; Am. Inst. Elec. Engrs.; Amer. Acoustical Soc.; A.A.A.S., Fellow; Fellow, Am. Acad. Arts and Sciences; Natl. Acad. Sci.; Am. Philos. Soc.; Sigma Xi; Phi Beta Kappa Phi Kappa Phi. War Record: Maj., Signal Corps, A.E.F., World War I; Mem., Communications and Guided Missiles Divs., Natl. Defense Rsch. Com., Awarded Medal for Merit, World War II. Gen. Int.: Inventor Ionization Vacuum Gauge; Loaded Submarine Telegraph Cable; Repeated Submarine Telephone Cable. Special Int.: Electrical Communication.

BUCKMAN, Harry O., Prof. of Soil Tech., N. Y. State Coll. of Agri., Cornell Univ., Ithaca, N. Y. SOIL SCIENCE.

BUCKY, Philip B., Prof. and Exec. Officer, Schl. of Mines, Columbia Univ., N. Y., N. Y. MINING ENGINEERING.

BUCY, Paul, 25 E. Washington St., Chicago, Ill. NEUROLOGY.

BUDDHUE, John Davis, 1210 N. Arroyo Blvd., Pasadena 3, Calif. **CHEMISTRY AND METEORITES.**

BUDDINGTON, Arthur Francis, Princeton Univ., Princeton, N. J.

BUDINGTON, Robert A., P. O. Box 944, Winter Park, Fla.

BUE, Hyym Elias, retired, 620 Locust St., Roselle, N. J.

BUEHLER, Calvin Adam, Hd., Dept. of Chem., Univ. of Tenn., Knoxville, Tenn. **CHEMISTRY.**

BUEHLER, Karl, Coll. of St. Thomas, St. Paul, Minn. **MEDICINE.**

BUEHRER, Theophil Fredric, Prof. of Agri. Chem. and Physical Chemist, Coll. of Agri. and Expt. Station, Univ. of Ariz., Tucson, Ariz. **PHYSICAL CHEMISTRY.**

BUEL, Jack, Partner, Psychological Equipment Div., Vector Mfg. Co., Houston, Tex. **PSYCHOLOGY.**

BUELL, Mary Van Rensselaer, Rsch. Assoc. in Pharmacol., Wash. Univ., Med. Schl., St. Louis 10, Mo. **ENZYME CHEMISTRY.** h. 1893, Madison, Wis. d. Chas. Edwin and Martha (Merry) B. Edn.: B.A., 1914, M.A., 1915, Ph.D., 1919, Univ. of Wis. Exp.: Asst. in Chem., Univ. of Ill., 1915-16; Asst. in Nutrition, Univ. of Wis., 1917-19; Instr. in Nutrition, *ibid.*; Asst. Prof. in Home Econ., Univ. of Iowa, 1920-21; Asst. in Physiological Chem., Johns Hopkins Schl., 1921-22; Assoc. in Physiological Chem., *ibid.*, 1922-30; Assoc. in Med., *ibid.*, and Chem. for the Med. Clin., Johns Hopkins Hosp., 1930-45; Rsch. Assoc. in Enzyme Chem., Univ. of Wis., 1948-50; Rsch. Asst. in Biochem., Wash. Univ. Med. Schl., 1950-51; Rsch. Assoc. in Pharmacol., *ibid.*, 1951—. Mem.: Phi Beta Kappa; Sigma Xi; A.S.B.C.; Kappa Alpha Theta. Contrb. to: Jour. of Biol. Chem.; Amer. Jour. of Physiol. Listed in: A.M.S.; Who's Who in the East; Who Knows—and What. Special Int.; Nucleotide Chemistry.

BUELL, Murray F., Asst. Prof. of Botany, Rutgers Univ., New Brunswick, N. J. **BOTANY.**

BUERGER, Martin J., Dept. of Geol., Mass. Inst. of Tech., Cambridge, Mass., **CRYSTALLOGRAPHY-MINERALOGY.**

BUGBEE, Lucian Willis, Jr., Patent Attorney and Consulting Engr., Barthel and Bugbee, 1611 Natl. Bank Bldg., Detroit, Mich. **PATENT LAW, OPTICAL ENGINEERING.**

BUGENTAL, James F. T., Asst. Prof. of Psychol., Univ. of Calif., Los Angeles 24, Calif. **PSYCHOLOGY: CLINICAL PSYCHOLOGY, PERSONALITY THEORY, INTERVIEWING AND PSYCHOTHERAPY.** b. Ft. Wayne, Ind., Dec. 25, 1915. s. Richard F. and Hazel J. (Veness) B. Edn.: B.S., West Tex. State Tchrs. Coll., 1940; M.A., George Peabody Coll., 1941; Ph.D., Ohio State Univ., 1948. m. Mary Edith Smith, Feb. 11, 1939. c.: James Owen; Jane Pattie. Exp.: Supvr. of Exam., Tenn. Dept. of Personnel, 1941-43; Asst. Regional Chf. of Classification, 5th U. S. Civil Service Region, 1943-44; Asst. Prof. of Psychol. and Asst. Dir., Guidance Center, Ga. Inst. of Tech., 1944-46; Asst. Prof. of Psychol., Univ. of Calif., Los Angeles, Calif., 1948—. Hon. Pos.: U. S. Pub. Health Service Fellow in Clin. Psychol., 1947-48; Sec., Vice-Pres., Pres., Mem. of Exec. Bd., Los Angeles Soc. of Clinical Psychologists in Private Practice, 1950—. Mem., Psychotherapy Com., Amer. Psychol. Assn., 1950-53; Chmn., Program Com., Southern Calif. Psychol. Assn., 1951-52. Mem.: Amer. Psychol. Assn.; A.A.A.S.; A.A.U.P.; Western Psychol. Assn.; Calif. Psychol. Assn.; Southern Calif. Psychol. Assn.; Sigma Xi; Psi Chi; Phi Delta Kappa; Pi Gamma Mu. Author: Workbook in General Psychol., 1950; Psychol. Interviewing, 1952. Contrb. to: Jour. Consulting Psychol.; Jour. Clin. Psychol.; Amer. Psychologist; Jour. Personality. War Record: Clin. Psychologist, Lawson Army General Hosp., 1945-46. Special Int.: Psychol. Interviewing; Psychotherapy; Personality Theory; Group Dynamics.

BUIE, Bennett Frank, Prof. of Geology, Dept. of Geology, Univ. of S. C., Columbia 19, S. C. **GEOLOGY.** b. Patrick, S. C., January 9, 1910. s. Daniel Franklin and Julia (Smith) B. Edn.: B.S., Univ. of S. C., 1930; M.S., Lehigh Univ., 1932; M.A., Harvard Univ., 1934; Ph.D., *ibid.*, 1939. m. Susanna Peirce of Warrenton, Va., August 9, 1938. d. Albert E. and Susanna Peirce. c.: Susanna; Julia; Caroline; Margaret. Exp.: Research Fellow in Geology, Lehigh Univ., 1930-32; Asst. in Geol., Harvard Univ., 1932-37; Res. Adviser, *ibid.*, 1935-37; Summers, 1933-35, Mem. of Shaler Memor. Exped. from Harvard Univ. to Highwood Mountains of Mont.; Summer, 1936, Field Asst., U. S. Geol. Survey; 1937-38, Geol. Amiranian Oil Co. and Inland Exploration Co. in Iran and Afghanistan; 1939-41, Geol., Indian Oil Concessions, Ltd., Karachi and Calcutta, India; 1941-42, Geol., Standard Oil Co. of Texas; 1942-45, Corps of Engrs. U. S. Army; in charge of Geol. Work for Persian Gulf Command and Chf. of Special Studies Sect., Gen. Headqtrs., P.G.C.; Exec. Officer, Office of Foreign Liquidation Commissioner for Europe, U. S. Dept. of State; 1946—, Prof. of Geol., Univ. of S. C. and Geol. for State Resch., Planning and Development Bd. Mem.: Sigma Xi; Mineral. Soc. of Amer.; Amer. Assn. of Petrol. Geol.; Amer. Inst. of Mining and Metall. Engrs.; Omicron Delta Kappa; Cosmos Club; Teheran Club. Author: Igneous Rocks of the Highwood Mountains, Mont., 1941; South Carolina Raw Materials, 1949. Contrb. to: Bull. of Geol. Soc. of Amer.; Amer. Mineralogist. Ph.D. Dissertation: Dikes and Related Intrusives of the Highwood Mountains Area. War Record: Awarded Order of the Red Star and Bronze Star Medal for Geol. Work in Persian Gulf Command. Travel: Europe; Middle East; Iran; India. Hobby: Photography. Listed in: A.M.S.; W. W. in the S. and S. W.; W. W. in Transportation and Commerce. Special Int.: Economic Geology, Petrology, Geography and Geology of the Middle East.

BUIE, Thomas Stephen, Reg. Conservator, Soil Conservation Service, U. S. D. A., Spartanburg, S. C. **SOIL CONSERVATION.**

BULGER, Harold Aten, Asst. Prof. of Clinical Med., Washington Univ., St. Louis, Mo. **INTERNAL MEDICINE.**

BULL, Henry B., Prof. and Hd., Dept. of Biochem., State Univ. of Iowa, Iowa City, Iowa. **PHYSICAL BIOCHEMISTRY, PROTEIN CHEMISTRY.**

BULLARD, H. Hays, Pathologist, Suburban Hosp., 6700 Offutt Lane, Chevy Chase, Md. **PATHOLOGY.**

BULLARD, Ralph Hadley, Prof. of Chem., Hobart Coll., Geneva, N. Y. **CHEMISTRY.**

BULLEN, Adelaide Kendall, Resch. Anthropol., Fla. State Museum, Gainesville, Fla. **ANTHROPOLOGY.**

b. January 12, 1908, Worcester, Mass.; d. Oliver Sawyer and Grace (Adelaide) Marble Kendall. Edn.: Simmons Coll., 1925-26, 1929; A.B., cum laude, Radcliffe, 1933; Field Schl., Univ. of N. Mex., Summer, 1941; Grad. Work, Harvard, 1943-46; Grad. Work, *ibid.*, 1947-48, 1950. m. Ripley Pierce Bullen of Worcester, Massachusetts, and Schenectady, New York, July 25, 1929. s. Mr. and Mrs. Dana Ripley Bullen. c.: Dana Ripley II; Pierce Kendall. Exp.: Resch. Anthropol., Health Center, Radcliffe Coll., 1943-44; Staff and Resch. Fellow, Fatigue Laboratory, Graduate Schl. of Business Administration, Harvard Univ., 1944-46; Civilian Consultant in Anthropology, Dept. of Army, 1946; Analysis of Data Collected and Writing of Report, Dept. of Anthropol., Peabody Museum, Harvard Univ., 1946-48; Resch. Anthropol., Writing Up Material on Nervous and Mental Fatigue, Fla. State Museum, 1949—.



Mem.: Sigma Xi; Fellow, Amer. Anthropol. Assn.; Fellow, Royal Anthropol. Inst., London; Amer. Assn. of Phys. Anthropol.; Soc. of Applied Anthropol.; Soc. of Resch. in Psychosomatic Med.; Soc. for Resch. in Child Development; A.A.A.S.; A.A.P.S.S.; League of Women Voters. Author: Child Development, Vol. 16; N. Y. Times, Reviewed by Catherine Mackenzie; Psychosomatic Med.; Amer. Jour. of Phys. Anthropol.; etc. Travel: Europe; West Indies; New Mexico. Hobbies: Music; Writing; Gardening. Listed in: A.M.S.; Who Knows—and What. Special Int.: Social Anthropology, Physical Anthropology, Applied Anthropology, Body Build and Temperament, Stuttering, Nervous and Mental Fatigue, Industrial Studies, Vocational Resch.

BULLEN, Rev. Brother, Thomas Gerrard, F.S.C.H., Chmn., Sci. Div. and Prof. of Physics, Iona Coll.,



33 Beechmont Dr., New Rochelle, N. Y. EXPERIMENTAL PHYSICS. b. Melling, Lancashire, England, Mar. 5, 1913. s. John David and Anne Letitia (Rawlinson) B. Edn.: B.Sc., Natl. Univ. of Ireland, 1934; M.Sc., *ibid.*, 1935; Ph.D., *ibid.*, 1936; Higher Diploma in Edn., *ibid.*, 1938. Exp.: Hd., Sci. Dept., St. Joseph's Coll., Marino, Dublin, 1934-38; Instr. in Exptl. Physics, Univ. Coll., Dublin, 1935-37; Resch. (Post Doctoral Fellowship) Univ. of Bristol, England, 1938-39; Hd., Coll., Bristol, England, 1939-41; Hd. Sci. Dept., St. Joseph's Coll., Stoke-on-Trent, England, 1941-46; Prof. of Physics, Iona Coll., New Rochelle, N. Y., 1946—; Chmn., Sci. Div., *ibid.*, 1951—. Mem.: Sci. Masters' Assn., London; Amer. Inst. Physics; Knights of Columbus. Contrb. to: Nature (London); Proc. Royal Irish Acad. (Dublin); Amer. Jour. of Physics. War Record.: Civil Defense, England, 1939-44. Special Int.: Electronics; Radiotracer Applications; Thermal Measurements of Insulators at High Temperatures.

BULLINGTON, Walter Edward, Prof. of Biol., Randolph-Macon Coll., Ashland, Va. PROZOOLOGY.

BULLITT, James Bell, Prof. of Pathol., Univ. of N. C., Chapel Hill, N. C. PATHOLOGY.

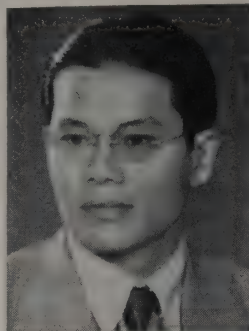
BULLITT, William Marshall, Sr. Member, Bullitt and Middleton, Lawyers, Ky. Home Life Bldg., Louisville, Ky. MATHEMATICS.

BULLOCK, Jesse L., Prof. and Chmn., Dept. of Chem., Clark Univ., Worcester, Mass. ORGANIC CHEMISTRY.

BULLOCK, Wilbur Lewis, Assoc. Prof. of Zool., Univ. of New Hampshire, Durham, N.H. b. Brooklyn, N. Y., Mar. 8, 1922. s. William Andrew and Lillian May (Schetzler) B. Edn.: B.S., Queens Coll., 1942; M.S., Univ. of Ill., 1947; Ph.D., *ibid.*, 1948. m. Cecilia Ann Groenewold of Queens, N. Y., Apr. 4, 1944. d. Rudolph Groenewold. c.: Walter Alan; Robert Craig; Clifford Andrew. Exp.: Asst. Instr., Biarritz Am. Univ., Biarritz, France, Aug.-Nov., 1945; Asst., Univ. of Ill., 1946-47; Fellowship (Grad.), *ibid.*, 1947-48; Instr., Univ. of N. H., 1948-49; Asst. Prof., *ibid.*, 1949-53, Assoc. Prof., *ibid.*, 1953—. Mem.: Sigma Xi; Phi Sigma; Am. Scientific Affiliation; Am. Soc. of Parasitologists. Contrb. to: Jour. Morphology, Jour. Parasitol. Ph.D. Dissertation: Histochemical Studies on the Acanthocephala. War Record. Med. Aid Man, Combat Engr. Bn ETO, 1944-45. Travel: France; Belgium; Netherlands; Germany; England. Gen. Int.: Dir. of U. S. Pub. Health Service proj., Histochem. of trichinosis, Marine fish parasites. Hobbies: Fishing, lecturing on sci. and Christianity. Listed in: A.M.S.

BULLOCK, William Edward, Consulting Engr., 65 University Pl., N. Y., N. Y. ENGINEERING.

BUMATAY, Elias Fijer, Hd., Grad. Schl. and Dean, Coll. of Edn. and Normal Coll., Natl. Univ., Manila, Republic of the Philippines.



PSYCHOLOGY OF LEARNING. b. Santo Domingo, Ilocos Sur., July 20, 1906. s. Mr. Sergio (dec.) and Filomena (Fijer) B. Edn.: B.A., Ed.B., Univ. of Nev., 1932; M.A., *ibid.*, 1933; M.S., Univ. of Kan., 1936; Ph.D., Univ. of Tex., 1940. m. Ambrosia Tagupa of Santo Domingo, Ilocos Sur., Dec. 6, 1925. d. Felix and Juliana Tagupa. c.: Elsie; Joseph; Rosalina; Adelwisa. Mem.: Instrn. of Edn., Psychol. and Philos., Coll. of Edn., Natl. Univ., 1941; Hd.,

Graduate Schl., National Univ., 1945; Dean, Coll. of Education and Normal Coll., *ibid.*, 1945; Chmn., Comm. on Honorary Degrees, National Univ., 1950; Chmn., Educational and Scientific Conference on the occasion of the Golden Jubilee of the Natl. Univ., 1950. Mem.: A.M.S.; A.A.A.S.; Amer. Psychol. Assn.; N.E.A.; Nat. Honorary Soc. in Bio.; Natl. Hon. Soc. in Psychol. Author: Proposed Curriculum for Philippine Schls., 1938; Foundation of Ednl. Psychol., 1947; Foundation of Edn., 1950; and many others. Contrb. to: Jour. of Gen. Psychol. Ph.D. Dissertation: Directional orientation and other factors in maze learning. Travel: China; Japan; Hawaii; Can.; Mex. Hobbies: Experimenting; Reading and Writing. Listed in: A.M.S. Special Int.: Psychol. of Learning; Edn.

BUNCH, Marion Estel, Assoc. Prof. of Psychol., Washington Univ., St. Louis, Mo. PSYCHOLOGY.

BUNDICK, Harriet Ellen, Tchr., Langley Jr. H. S., 1465 Columbia Rd., N. W., Washington, D. C. EDUCATION.

BUNKER, John Wymond Miller, Dean, Grad. Schl., Mass. Inst. of Tech., Cambridge, Mass. BIO-CHEMISTRY.

BUNTING, Charles Henry, Lectr. in Pathol., Yale Univ. Med. Schl., New Haven, Conn. PATHOLOGY.

BUNTING, Elmer Newman, Physical Chemist, Natl. Bureau of Standards, 3726 Windom Pl., Washington, D. C. CHEMISTRY.

BUNTING, Russell Welford, Prof. and Dean, Schl. of Dentistry, Univ. of Mich., Ann Arbor, Mich. DENTISTRY.

BUNZELL, Herbert Horace, Dir., Bunzell Lab., P. O. Box 44, N. Y. 1, N. Y. BIOCHEMISTRY. b. Prag, Austria Hungary, Jan. 13, 1887. s. Frederick and Matilda. Edn.: B.S., Univ. of Chicago, 1906; Ph.D., *ibid.*, 1910. Exp.: Asst. and Instr., Univ. of Chicago, Chicago, Ill., 1906-10; Biochemist, U. S. Dept. of Agri., Washington, D. C., 1910-16; Prof. and Hd. of Dept. of Chem., Univ. of Cincinnati, Cincinnati, Ohio, 1916-18; Industrial Positions, Detroit and Bayonne, N. J., 1918-20; Dir. Bunzell Lab., N. Y., N. Y., 1920—; Prof. and Hd. of Dept. of Chem., Woman's Med. Coll., *ibid.*, 1920-36. Hon. Pos.: Dir. Amer. Bd. of Clinical Chem. Mem.: Amer. Soc. Biol. Chem.; Amer. Chem. Soc.; A.A.A.S.; Soc. of Cereal Chem.; Sigma Xi; Phi Chi. Author: Every Day With Chem., 1935. Contrb. to: Jour. of Biol. Chem.; Jour. Amer. Chem. Soc.; Sci.; Cereal Chem.; Wiedemann's; Torrey Bull.; Amer. Jour. Physiol.; U. S. Dept. of Agric. Bull.; etc. Gen. Int.: Conducted a number of Radio Programs to Popularize Sci. Chem. Special Int.: Developed Methods of Measuring Oxidizing Enzymes; Developed Method for Studying Ropiness of Bread; Criminological Investigation, Lie Detector.

BURBANK, Wilbur S., U. S. Geol. Survey, Washington 25, D. C. ECONOMIC GEOLOGY.

BURCH, Oscar G., Owens-Illinois Glass Co., Box 1035-1036, Toledo 1, Ohio. CERAMICS.

BURCH, Paul Randolph, Prof. of Biol., Radford Coll., Radford, Va. **MALACOLOGY**.

BURCHAM, Donald Preston, Deputy Chf., Ordnance Electronics Div., Natl. Bureau of Standards, Washington, D. C. **ELECTRONICS AND GENERAL PHYSICS**. b. Baker, Ore., Mar. 11, 1916. s. Don H. and Myrtle A. (Philbrick) B. Edn.: B.A., Reed Coll., 1937; Ph.D., Univ. of Wash., 1942. m. Henrietta M. Willock, Feb. 7, 1942. c.: Marilyn Margaret; Roy Preston. Exp.: Staff, Boeing Aircraft Co., 1942; Hd., Puget Sound M.S.R., U.S.N., 1943-44; Staff, Applied Physics Lab., Univ. of Wash., 1945-46; Staff, Ordnance Electronics Div., Natl. Bureau of Standards, from Oct. 1946. Chmn., Working Group of Rsch. and Development Bd.; Chmn., Div. Electronic Steering Com. Mem.: A.A.A.S.; I.R.E.; A.P.S.; Amer. Inst. of Phys.; Pi Mu Epsilon. Registered Professional Engineer. Special Int.: Ordnance Electronics Rsch. and Development.

BURCHFIELD, B. M., 4458 Westmoreland Court, Riverside, Calif. **CERAMICS**.

BURDA, Francis X., Assoc. Prof. of Physics, Rt. 1, Box 235 AA, New Braunfels, Tex. **ELECTRIC AND MAGNETIC MEASUREMENTS**.

BURDICK, Everette Marshall, Dir. of Laboratories, Strong-Cobb & Co., Am., Chlorophyll Div., Lake Worth, Fla. Res. 327 Malverne Road, West Palm Beach, Fla. B10. **CHEMISTRY**. b. Aug. 9, 1913, Champaign, Ill. s. Pearl Oscar and Margaret Alice (Hyde) B. Edn.: B.S., cum laude, Univ. of Miami, Fla., 1935; M.S. Purdue Univ., 1937; Ph.D., *ibid.*, 1943. m. Lois Aline Enyart of Lafayette, Ind., Nov. 13, 1937. d. Mr. and Mrs. F. V. Nelson. Exp.: Tchng. Asst., Dept. Chem., Univ. of Miami, Fla., 1932-35; Tchng. Asst. Dept. Chem., Purdue Univ., Lafayette, Ind., 1935-41; Rsch. Chem., Dept. Agri., Peoria, Ill., 1941-45; Rsch. Chem., U. S. Fruit and Veg. Prod. Lab., Weslaco, Tex., U. S. D. A., 1945-46; Dir. of Rsch., Texsun Citrus Exchange, Weslaco, Texas, 1946-52; Tech. Consultant, Rio Farms, Inc., Edouach, Tex., 1949-52; Tech. Dir. Am. Chlorophyll, 1952—; Dir. of Lab.; Chlorophyll, chlorophyll derivatives, carotene, xanthophyll and phytol processing, *ibid.*, 1953—. Mem.: A.C.S.; Fellow, Amer. Inst. of Chem.; A.A.A.S.; Inst. of Food Technol.; Rio Grande Valley Hort. Club; Sigma Xi; Phi. Lambda Upsilon; Pi Delta Sigma; Iron Arrow; Mason. Author: Outline of Organic Chem., 1947 (co-author); Chem. Processes, 1950 (co-author); Co-author Fruit and Veg. Juices (chapter on Grapefruit Juice). Contrb. to: Sci. Jours. Ph.D. Dissertation: Enzymatic Hydrolysis of Certain Rare Sugars. Gen. Int.: Patents in Fields of Citrus Processing, Enzymes Submerged Combustion, and Fermentation. Hobbies: Sports; Photography. Listed in: Who's Who in South and Southwest; Who Knows—and What; Amer. Men of Sci.; Chem. Who's Who.

BURDICK, Harold Ormand, Dean, Coll. of Liberal Arts, Alfred Univ., Alfred, N. Y. **PHYSIOLOGY**. b. New Market, N. J., June 26, 1897. s. Alberne Hugh and Josephine (Dunham) B. Edn.: A.B., Milton Coll., 1919; M.A., Univ. of Wis., 1926. Hon. Deg.: Sc.D., Salem Coll., 1939. m. Hannah Shaw, June 23, 1919. c.: Kenneth; Carol Ruth; Judith. Exp.: Instr., Salem Coll. Acad., 1919-20; Prof. of Biol., Salem Coll., 1920-29; Grad. Asst., Univ. of Wis., 1925-27; Prof. of Biol., Milton Coll., 1929-31; Assoc. Prof. of Biol., Alfred Univ., Alfred, N. Y., 1931-37; Prof. of Biol. and Dept. Chmn., *ibid.*, 1937—; Acting Dean, Coll. of Liberal Arts, *ibid.*, 1948-49; Dean, *ibid.*, 1949—. Mem.: Soc. for the Study of Internal Secretions; Amer. Physiol. Soc.; Amer. Soc. Zoologists; Soc. Exptl. Biol. and Med.; A.A.U.P.; N.E.A.; Sigma Xi; Phi Sigma; Lambda Chi. Contrb. to: Endocrinology; Anatomical Record; Amer. Jour. Physiol.; Science; Proc. Soc. Exptl. Biol. and Med.; etc. Special Int.: Pregnancy Test; Bio-assay of Gonadotrophins.

BURDICK, Raymond Terry, Hd., Dept. of Econ., Sociology and History, Colo. State Coll., Fort Collins, Colo. **ECONOMICS**.

BURDON, Kenneth Livingston, Prof. of Bacteriol. and Immunology Depts., Baylor Univ., Coll. of Med., Houston, Tex. **MICROBIOLOGY**.

BURG, Anton B., Univ. of Southern Calif., Los Angeles 7, Calif. **INORGANIC CHEMISTRY**.

BURGER, Alfred, Univ. of Va., Charlottesville, Va. **MEDICAL CHEMISTRY**.

BURGESS, Albert F., retired, 24 Franklin St., Greenfield, Mass. **ENTOMOLOGY**.

BURGESS, Blandford C., Box 350, Monticello, Ga. **CERAMICS**.

BURGESS, Ernest W., Prof. of Sociology, Univ. of Chicago, Chicago, Ill. **SOCIOLOGY**.

BURGESS, Louis, Attorney, 233 Broadway, N. Y., N. Y. **LAW**.

BURGESS, Paul Steere, Dean, Coll. of Agri. and Dir., Agri. Expt. Station, Univ. of Ariz., Tucson, Ariz. **AGRICULTURAL CHEMISTRY**.

BURINGTON, Richard Stevens, Chief Mathematician and Dir. of Evaluation and Analysis Group, Rsch. and Development Division, Bureau of Ordnance, Navy Dept., Wash., D. C. **MATHEMATICS; PHYSICS**.



b. Columbus, Ohio, August 31, 1901. s. Herbert M. and Eva (Stevens) B. m. Jennet Mae Wootton of Cambridge, Ohio, May 15, 1924. d. Mr. and Mrs. Joseph Wootton. c.: Artha Jean, Richard Edward, Juanita Virginia. Edn.: B.A., Ohio State Univ., 1925; M.A., *ibid.*, 1926; Ph.D., *ibid.*, 1931. Exp.: Grad. Asst. in Math., Ohio State Univ., 1925-26; Instr. in Math., Case Schl. of Applied Science, 1926-32; Asst. in Math., Ohio State Univ., 1929-30; Asst. Prof. of Math., Case Schl. of Applied Sci., 1932-38; Assoc. Prof. of Math., 1938-46 (on leave to Navy Dept. 1941-46); consultant and Hd. Mathematician, Bu. of Ord., Navy Dept., Washington, D. C., 1941-46; consultant, Applied Math. Panel, N.D.R.C., O.S.R.D., 1942-45; Chf. Mathematician, Bu. of Ord., Navy Dept., Washington, D. C., 1946—. Mem.: Chmn. Math. Conf., Cornell Meeting of S.P.E.E., 1934; Amer. Math. Soc.; Math. Assn. of Amer.; Amer. Soc. for Engrng. Edn.; A.A.U.P.; Fellow of Amer. Assn. Adv. of Sci.; Inst. of Math. Statistics; Amer. Statistical Assn.; Amer. Phys. Soc.; Chmn., Applied Math. Div., S.P.E.E., 1940-41; Fellow of Operations, Research Soc.; U. S. Naval Institute; Philos. Soc. of Washington; Washington Acad. of Sci.; Cosmos Club (of Washington); Phi Beta Kappa; Pi Mu Epsilon; Sigma Xi. Ph.D. Dissertation: An Invariantive Classification of Plane Cubic Curves under Affine Transformations. Author: Handbook of Math., 1933, 2nd Ed., 1940, 3rd Ed., 1949; Sr. Author (with C. C. Torrance), Higher Mathematics, 1939. Rschs.: Matrices in Elec. Cir. Theory, Hydro- and Aerodynamics; Probability, Statistics; Algebra, Algebraic Geometry; Naval Ordnance; Operations Research, Evaluation Research; Scientific Administration; Education. Travel: U. S.; Central Amer.; South Amer.; Europe; Pacific Oceania. Hobbies: Travel, Pipe Organ, Transportation. Listed in: Amer. Men of Sci., Who's Who in Engrng. Special Int.: Operations Rsch.; Applied Math.; Philosophy of Math.

BURK, Dean, Hd. Chemist, Natl. Cancer Inst., Natl. Institutes of Health, Bethesda 14, Md. **BIOCHEMISTRY**. b. Oakland, Calif., Mar. 21, 1904. s. Frederic and Caroline (Frear) B. Edn.: B.S., Univ. of Calif. at Berkeley, 1923; Ph.D., *ibid.*, 1927. m. Mildred Chaundy, Jan. 28, 1929. c.: Diana; Wendy; Frederic. Exp.: Assoc. Phys. Chemist, Fixed Nitrogen Rsch. Lab., Bureau Chem. and Soils, U. S. Dept. of Agri., 1929-37; Chemist, *ibid.*, 1937-39; Assoc. Prof. of Biochem., Cornell Med. Coll., N. Y., N. Y., 1939-41; Sr. Chemist, Natl. Cancer Inst., U. S. Public Health Service, 1939-48; Prin. Chemist, *ibid.*, 1948-51; Hd. Chemist, *ibid.*, 1951—; Rsch. Master, Geo. Washington Univ., 1947—; Special Cancer Rsch. Fellow, U. S. Public Health Service, Kaiser Wilh. Inst. Cell Physiol., 1950. Mem.:

A.A.A.S.; Amer. Chem. Soc. (Hillebrand Award, '52); Amer. Soc. Biol. Chem.; Amer. Soc. Cancer Rsch.; Soc. Exptl. Biol. and Med.; Soc. General Physiol.; Amer. Soc. Plant Physiologists; N. Y. Acad. Sci.; L. I. Biol. Assn.; Sigma Xi; Gamma Alpha. Contrb. to: Jour. Amer. Chem. Soc.; Jour. Biol. Chem.; Jour. Natl. Cancer Inst.; Cancer Rsch.; Jour. Phys. Chem.; Arch Biochem.; Jour. General Physiol.; Sci.; Scientific Monthly; Plant Physiol.; etc. Special Int.: Cancer; Photosynthesis; Nitrogen Fixation; Thermodynamics; Kinetics; Enzymes; Antibiotics.

BURK, Robert Emmett, Asst. Chemical Dir., Plastics Dept., E. I. du Pont de Nemours and Co., Wilmington, Del. **CHEMISTRY.**

BURKE, Frank D., Prof. of Chem., John Carroll Univ., Cleveland, Ohio. **ANALYTIC CHEMISTRY.**

BURKE, Joseph William, P. O. Box 218, Colorado Springs, Colo. **ECONOMICS.** b. Centuria, Wis., Aug. 26, 1889. s.

Thomas H. and Ella (Barrett) B. Edn.: B.A., Univ. of Minn., 1927; LL.B., *ibid.*, 1930. m. Anne F. Schaefer, Nov. 14, 1916. c.: Cleatus J.; Alvera M. B. Becker; Robert L. Becker; Amer. Econ. Assn.; A.A.A.S.; Amer. Statistical Assn.; Colorado-Wyo. Acad. of Sci.; Industrial Relations Rsch. Assn.; Nat. Acad. of Econ. and Political Sci.; Royal Econ. Soc. (London); Colo. Springs Knife and Fork Club; Sons of Union Veterans of the Civil War. Special Int.: Labor Econ. and Industrial Relations; Money and Banking; International Economics; International Relations.

BURKHART, Walter Clinton, Prof. of Bacteriol., Univ. of Ga., Athens, Ga. **BACTERIOLOGY.**

BURKHOLDER, Paul Rufus, Chmn., Dept. Bacteriology, Univ. of Ga., Athens, Ga. **MICROBIOLOGY.** b. Orrstown, Pa., Feb. 1, 1903. s. William Rankin and Mary Ellen (Schubert) B. Edn.: A.B., Dickinson Coll., 1924; Ph.D., Cornell Univ., 1929. Hon. Deg.: M.A., Yale Univ., 1944; Sc.D., Dickinson Coll., 1949. m. Lillian Miller, Feb. 4, 1930. c.: Franz M.; Peter M.; Karl M. Exp.: Instr. in Botany, Cornell Univ., Ithaca, N. Y., 1924-28; Biol. Curator, Buffalo Museum of Sci., Buffalo, N. Y., 1929-32; Asst. Prof., Conn. Coll., 1934-37; Assoc. Prof., *ibid.*, 1937-38; Assoc. Prof., Univ. of Mo., 1938-40; Assoc. Prof., Yale Univ., 1940-43; Eaton Prof. of Botany, *ibid.*, 1944-53; Chmn., Dept. of Plant Sci., *ibid.*, 1950-53. Hon. Pos.: Scientific Adviser, Sloane-Kettering Inst. for Cancer Rsch. Mem.: Natl. Acad. Sci.; Amer. Soc. Naturalist; Soc. Amer. Bacteriologists; Bot. Soc. Amer.; Sigma Xi. Co-author: Growth Hormones in Plants, 1936. Contrb. to: Jour. Gen. Physiol.; Quarterly Rev. Biol.; Amer. Jour. Bot.; Proc. Natl. Acad. Sci.; Arch. Biochem.; Jour. Bacteriol.; etc. Gen. Int.: Chloromycetin. Special Int.: Microbiol., Plant Physiol.; Growth Substances, Antibiotics, Plant Hormones, Vitamins in Plants.

BURKHOLDER, Walter H., Prof. of Plant Pathol., Cornell Univ., Ithaca, N. Y. **PLANT PATHOLOGY.**

BURLAGE, Henry Matthew, Dean and Prof. of Pharmacy, 702 East 43rd Street, Austin, Texas. **PHARMACY.** b. Rensselaer, Ind., May 23, 1897; s. Max and Mary A. (Linzbach) B. m. Alleda V. Robb of Seattle, Wash., December 29, 1925. Edn.: A.B., Univ. of Ind., 1919; A.M., Harvard, 1921; Ph.G., B.S., Purdue, 1924; Ph.D., Univ. of Wash. (Seattle), 1929. Exp.: Asst. Instr. in Pharm., Purdue, 1921-24; Instr. of Pharm., Univ. of Wash., 1924-26; Assoc. Prof., Pharmaceutical Analysis, Chem. for Ore. Bd. of Pharm., Ore. State Coll., 1927-29; Assoc. Prof. of Pharm., Purdue, 1929-31; Prof. of Pharm., Univ. of N. C., 1931-47; Dean and Prof. of Pharm., Univ. of Tex., 1947—. Mem.: Rho Chi

Soc., (Natl. Pres.); Amer. Pharm. Assn. (Chmn., Sec. on Pract. Pharm., and Dispensing, 1935; Chmn., Scientific Sect., 1936); Chmn., Natl. Pharmaceutical Syllabus Comm., 1937-46; Amer. Chem. Soc.; A.A.A.P.; Exec. Comm., Amer. Assn., Coll. of Pharm., 1942-44; A.A.A.S.; Phi Beta Kappa; Sigma Xi; Kappa Psi; Phi Lambda Upsilon; Alpha Chi Sigma. Ph.D. Dissertation: Chem. Examination of Asarum Caudatum. Contrb. to: Jour. of Amer. Pharm. Assn. Rschs. of Gen. Int.: Phytochem. and Antibacterial Studies on Drug Plants; Studies on Pharmaceutical Preparations and Drug Assays; Abstractor for Chem. Abstracts. Special Int.: Pharmacy and Pharmaceutical Chem.

BURLING, Lancaster D., Geologist, Geol. Survey of Canada, Victoria Museum, Ottawa, Ont., Can. **INVERTEBRATE PALEONTOLOGY.**

BURLINGAME, Edith Mildred, Instr. in Psychol., Univ. of Idaho, Moscow, Idaho. **GENERAL EXPERIMENTAL PSYCHOLOGY.**

BURLINGAME, Leonas Lancelot, Prof. Emer. Biol., Stanford Univ., 1321 Webster St., Palo Alto, Calif. **GENETICS.**

BURLINGTON, Richard Stevens, Chf. Mathematician, Dir. Evaluation and Analysis Groups, Bureau of Ordnance, Navy Dept., 5200 N. Carlin Spring Rd., Arlington, Va. **APPLIED MATHEMATICS.**

BURLINSON, Louise Otis, 2319 N. Second Ave., Tucson, Ariz. **CHEMISTRY.**

BURMESTER, Ben Roy, Rsch. Physiologist, Regional Poultry Rsch. Lab., 243 Kensington Rd., East Lansing, Mich. **PHYSIOLOGY.**

BURN, Caspar Greene, Assoc. Prof. of Pathol. and Dir. of Lab., Kings County Hosp., 726 Ocean Ave., Brooklyn, N. Y. **PATHOLOGY.**

BURNELL, Dorah L., Assoc. Prof. of Chem., Houghton Coll., Houghton, N. Y. **CHEMISTRY.** b. Dec. 14,



1889, Friend, Neb. d. John and Laura Alice (Dean) B. Edn.: Dipl., S. T. C., Kearney, Neb., 1916; B.Sc., Univ. of Neb., 1924; M.A., Univ. of Neb., 1925. Exp.: Prin. of H. S., Lodgepole, Neb., 1916-17; Asst. Prin., H. S., Sutton, Neb., 1917-18; Prin., H. S., Sutton, Neb., 1918-22; Chem. Instr., Univ. of Neb., 1925-26; Hd., Chem. Dept., Assoc. Prof. of Chem., Houghton Coll., 1926—. Mem.: Phi Beta Kappa; Iota Sigma Pi; Sigma Xi; Amer. Chem. Assn.; A.A.A.S.; Fellow of Amer. Inst. of Chemists; Kappa Phi; Pasteur Pre-Medic Club; Amer. Red Cross; W.C.T.U. Author: Assoc. Ed., Quadri Service Manual of Organic Chem., by Edward F. Degering, 1938; Assoc. Ed., Organic Chem., by Edward F. Degering, 1939. Dissertation: Micro Methods for Quantitative Determination of Fat in Blood. Travel: U. S. Recreations and Hobbies: Choral Work; Fishing; Travel.

BURNETT, J. Clawson, Alpine, N. J. **PHYSICS.**

BURNHAM, Robert Ward, Color Control Dept., Eastman Kodak Co., Kodak Park Wks, Rochester, N. Y. **PSYCHOLOGY.**

BURNS, Beryl Iles, Commissioner of Hospitals, General Hosp. No. 1, 24th and Cherry, Kansas City, Mo. **ANATOMY.** b. Unionville, Mo., Apr. 22, 1889. s. William Arthur and Mary Ethelinda (Jones) B. Edn.: A.B., Univ. of Mo., 1916; A.M., Univ. of Mich., 1918; M.D., Univ. of Iowa, 1924; Ph.D., Northwest Univ., 1933. m. Hallie Hendrick, Apr. 5, 1915. c.: Mary Evelyn; Betty June. Exp.: Instr. of Anatomy, Univ. of Mich., 1916-18; Instr. of Anatomy, Univ. of Iowa, 1918-24; Asst. Prof. of Anatomy, *ibid.*, 1924-25; Prof. of Anatomy, Univ. of Utah, 1925-32; Dean. Schl. of Med., *ibid.*, 1929-32; Elizabeth Ward Fellow Neurology, North-

western Univ., 1931-32; Prof. and Hd., Dept. of Anatomy, La. State Univ., 1932-45; Dean, Schl. of Med., La. State Univ., 1939-45; Med. Dir. of Hospitals, Univ. of Tex. Med. Branch, 1945-49; Commissioner of Hospitals, Kansas City, Mo., 1949—. Mem.: Amer. Assn. Anatomy; A.M.A.; Mo. State Med. Assn.; Jackson County Med. Soc.; Southern Med. Assn.; Amer. Hosp. Assn.; Mo. State Hosp. Assn.; Phi Beta Psi; Sigma Xi. Author: Lab. Outline of Anatomy, 1938. Contbr. to: Anatomical Record; Jour. Comparative Anatomy; Jour. Exptl. Biol. and Med.; Southern Med. Jour.; Hosp. Mgt. Special Int.: Neuro-Anatomy; Gross Anatomy; Embryology; Med. Admin.

BURNS, Keivan, Prof. of Astron., Univ. of Pittsburgh, Pittsburgh, Pa. **ASTRONOMY**.

BURNS, Louisa, Dean, Research Laboratory, Amer. Osteopathic Assn., 1721 Griffin Avenue, Los Angeles 31, Calif. **OSTEOPATHIC RESEARCH: STRUCTURAL CAUSES OF MALFUNCTION**. b. Salttilloville, Ind., March 18, 1869. d. William Nathan and Mary Lois (Littell) B. Edn.: B.S., Borden Inst., 1891; M.S., *ibid.*, 1904; D.O., Pacific Coll. of Osteopathy, 1903; D.Sc.O., *ibid.*, 1906. Hon. Degree: D.Sc., Coll. of Osteopathic Physicians and Surgeons; D.Sc.O., Kirksville Coll. of Osteopathic Physicians and Surgeons, 1948. Exp.: Prof. of Physiol., Pacific Coll. of Osteopathy, 1904-14; Dean, A. T. Still Rsch. Inst., 1914-37; Dean, Rsch. Lab., Amer. Osteopathic Assoc., 1937—; Prof. Emeritus, Coll. of Osteopathic Physicians and Surgeons. Mem.: Amer. Osteopathic Assoc.; Amer. Assn. for the Adv. of Sci.; Calif. Osteopathic Assoc.; Sigma Sigma Phi; Delta Omega; Axis Club; Osteopathic Womens Natl. Assoc. Author: Principles of Osteopathy, 1907; Nerve Centers, 1911; Physiol. of Consciousness, 1911; Pathogenesis of Visceral Diseases Following Vertebral Lesions, 1948; Cells of the Blood, 1931. Contbr. to: Jour. of Amer. Osteopathic Assoc. Listed in: A.M.S.; Who's Who on the Pacific Coast. Special Int.: Segmental Relations of the Spinal Cord.

BURNS, Robert Homer, Wool Specialist and Hd., Wool Department, Univ. of Wyo., Laramie, Wyo. **WOOL TECHNOLOGY**. b. Laramie, Wyo., August 23, 1900. s. Ottl Lyle and Adelaide (Barton) B. Edn.: B.S., Wyo. Univ., 1920; M.S., Iowa State Coll., 1921; Ph.D., Univ. of Edinburgh, 1931 m. Agnes Miller of Los Angeles 31, Calif., March 4, 1925. d. Wm. R. and Agnes B. Miller. c.: Margaret A. (Page); Robert Lyle; Agnes M. (Rainwater); Eleanor Ruth. Exp.: Asst. Animal Husbandman, N. Mex. A. and M. Coll., 1921-22; Asst. Animal Husbandman, Univ. of Ariz., 1922-24; Asst. Wool Specialist, Univ. of Wyo., 1924-30; On leave from Wyo. Univ., 1930-31; Wool Specialist, *ibid.*, 1939 to date. Hon. Pos.: Mem. China U. S. Agri. Mission; Wool Ed., Amer. Soc. of Animal Production; Livestock and Wool Consultant of Overseas Consultants Inc. Mem.: Sigma Xi; Alpha Tau Omega; Alpha Zeta; Kiwanis Club. Contbr. to: Jour. Textile Inst., Natl. Wool Grower; Textile Rsch. Jour.; Amer. Wool Handbook; Textile Fibers. Ph.D. Dissertation: Studies on the Inheritance of Wool Characters and Fleece Analysis in Sheep. War Record: World War I, SATC. Travel: Scotland, England, Wales, Germany, Hawaii, Guam, China, Manchuria, Holland, Italy, Turkey, Iran. Hobbies: Old Time Ranch Hist.; Fur Farming, livestock bells. Listed in: A.M.S.; Who Knows—and What; Who's Who. Special Int.: Animal Prod., Genetics, Nutrition, Fur Farming, Public Relations (between city and county); Ranch History.

BURNS, Robert Martin, Chemical Dir., Bell Telephone Lab., Murray Hill, N. J. **CORROSION**.

BURNS, Robert Kyle, Rsch Assoc., Dept. of Embryology, Carnegie Inst., Wolfe and Madison Sts., Baltimore, Md. **EMBRYOLOGY**.

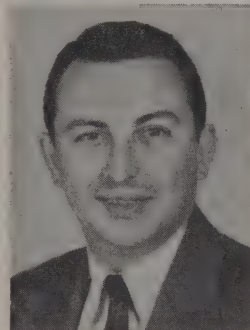
BURNSIDE, Carlton Earl, Agriculturist, Acting in Chg., U. S. Intermountain Bee Culture Lab., Engng. Shops, Univ. of Wyo., Laramie, Wyo. **AGRICULTURE**.

BURR, Arthur Albert, Prof., Rensselaer Polytechnic Institute, Troy, N. Y. **METALLURGICAL PHYSICS**. b. Manor, Sask., Can., Aug. 23, 1913. s. Charles Albert and Mary (Hay) B. Edn.: B.S., Univ. of Sask., 1938; M.S., *ibid.*, 1940; Ph.D., Pa.

State Coll., 1943. m. Leslie Mae Dickin, July 1, 1941. c.: Janet Leslie. Exp.: Tehr., Saskatchewan Public Schls., 1932-36; Grad. Asst., Univ. of Sask., 1937-40; Grad. Asst., Pa. State Coll., 1940-43; Rsch. Physicist, Armstrong Cork Co., 1943-45; Asst. Prof., Dept. of Metallurgical Engrng., Rensselaer Poly. Inst., Troy, N. Y., 1945-47; Assoc. Prof., *ibid.*, 1947-53; Prof., *ibid.*, 1953—. Mem.: Amer. Phys. Soc.; Amer. Soc. for Metals; Soc. for Nondestructive Testing; Amer. Inst. Mining and Metallurgical Engrng.; Amer. Electrochemical Soc.; Amer. Soc. for Engrng. Edn.; Sigma Pi Sigma; Sigma Xi; Phi Lambda Upsilon. Contbr. to: Rev. Scientific Instruments; Trans. A.S.M.; Welding Jour.; Trans. Electrochem. Soc.; Phys. Rev.; Trans. A.I.M.E. Special Int.: Structural Changes in Metals; Instrumentation and Use of X-ray Diffraction Techniques; Kinetics of Reactions.

BURR, Harold Saxton, Prof. of Anatomy, Yale Univ. Schl. of Med., New Haven, Conn. **MEDICAL SCIENCES**.

BURR, John Green, Jr., Sr. Chemist, Oak Ridge Natl. Lab., Oak Ridge, Tenn. **ORGANIC CHEMISTRY**. b. Ft. Sill, Okla., Mar. 12, 1918.



s. John G. and Ruth (Guyer) B. Edn.: B.S., Mass. Inst. Tech., 1940; M.S., *ibid.*, 1940; Ph.D., Northwestern Univ., 1948. m. Irma Garri-gan, June 12, 1943. c.: John, III; Sara Margaret; Kathleen; Mary-ellen; Elizabeth. Exp.: Jackson Lab., DuPont, 1940-41; Tehng. Asst., Univ. of Notre Dame, 1941-42; Rsch. Asst., Metallurgical Lab., Manhattan Dist., 1943-45; Tehng. Asst., Eastman Fellow, Northwestern Univ., 1945-47; Asst. Prof., Miami Univ., 1947-48; Sr. Chemist, Oak Ridge Natl. Lab., Oak Ridge, Tenn., 1948—. Mem.: Amer. Chem. Soc.; Sigma Xi; Phi Lambda Upsilon; Knights of Columbus. Contbr. to: Jour. Amer. Chem. Soc. War Record: U. S. Navy, 1945-46. Special Int.: Organic Reaction Mechanism; Isotopic Carbon Uses; Cancer Carcinogens and Chemotherapy.

BURR, William W., Dean, Univ. of Nebr. Coll. of Agri., Lincoln, Nebr.

BURRELL, Arthur Brotherton, Prof., Dept. of Plant Pathol., Cornell Univ., Ithaca, N. Y. **PLANT PATHOLOGY**.

BURRELL, Robin Charles, Prof. of Agril. Chem., Ohio State Univ., Columbus, Ohio. **BIOLOGICAL CHEMISTRY**.

BURRESS, Walter M., P. O. Box 387, Dallas, Tex. **GEOLOGY, GEOGRAPHY**.

BURRILL, Meredith Frederic, Dir., U. S. Bd. of Geographical Names, Dept. of Interior, 5503 Grove St., Chevy Chase, Md. **GEOGRAPHY**.

BURRIS, Robert, Univ. of Wis., Madison, Wis. **PLANT PHYSIOLOGY**.

BURROWS, William, Assoc. Prof. of Bacteriol., Dept. of Bacteriol. and Parasitology, Univ. of Chicago, Chicago, Ill. **BACTERIOLOGY**.

BURT, C. Pauline, Prof. of Chem., Smith Coll., 101 Prospect St., Northampton, Mass. **ORGANIC AND MEDICINAL CHEMISTRY**. b. Uhrichsville, Ohio, Aug. 15, 1890. d. William F. and Emma (Diehl) B. B.A., Pa. Coll. for Women, 1914; M.A., Mt. Holyoke Coll., 1916; Ph.D., Yale Univ., 1925. Hon. Deg.: Sc.D., Pa. Coll. for Women, 1944. Exp.: Asst. in Chem., Mt. Holyoke Coll., South Hadley, Mass., 1914-17; Instr., Vassar Coll., Poughkeepsie, N. Y., 1917-20; Instr., Smith Coll., Northampton, Mass., 1919-22; 1924-25; Asst. Prof., *ibid.*, 1925-31; Assoc. Prof., *ibid.*, 1931-37; Prof., 1937—. Mem.: Amer. Chem. Soc.; A.A.A.S.; Sigma Xi; Iota

Sigma Pi. Contbr. to: Jour. of Amer. Chem. Soc.; Jour. of Chem. Educators; Annalen der Chemie. Special Int.: Organic and Med. Chem.

BURT, Charles Earle, Manager, Quivira Specialties Co., (Biological Supplies), 4204 West 21st Street, Topeka, Kan. BIOLOGY.



b. Aug. 12, 1904, Neodesha, Kan. s. Edward Waird and Mary Ellen (Pierce) B. Edn.: B.S., Kan. State Coll., 1926; M.S., *ibid.*, 1927; Ph.D., Univ. of Mich., 1930. m. May Danheim of Blue Rapids, Kan., Dec. 29, 1926. d. Henry N. and Jennie E. Choate. Exp.: Asst. Curator, Herpetol., Amer. Museum of Nat. Hist., 1929-30; Prof. of Biol., Trinity Univ., Tex., 1930-31; Prof. of Biol., Northwestern Coll., Kan., 1931-44; Mgr., Quivira Spec. Co., Topeka, Kan., 1945—; Field

Institute, 1931-34, Zool.; Kans. Acad. Sci. and Letters; A.A.A.S.; Audubon Soc.; A.S.I.H.; Herpetologists League; Chicago Acad. Sci.; Amer. Microscopical Soc.; Kans. Entomol. Soc.; Biological Soc. Wash.; Phi Kappa Phi; Sigma Xi; Seabrook Men's Club. Contbr. to: Sci. Mags. Ph.D. Dissertation: A Phylogenetic Study of the Teiid Lizards of the Genus *Cnemidophorus*. War Record: O. R. C., Inf., 1926-36, 2nd Lt. Travel: N. Amer. Hobbies: Travel; Philately; Biol. Field Work. Listed in: Amer. Men of Sci.; Naturalists Dir. Special Int.: Herpetology; Biological Supply Business.

BURT, Joseph Bell, Dean and Prof. of Pharmacy, Univ. of Nebr., Lincoln, Nebr. PHARMACY AND PHARMACEUTICAL CHEMISTRY.

BURT, Mary McMillan, 800 24th Ave., N., St. Petersburg, Fla. MATHEMATICS.

BURT, William Henry, Prof. of Zool. and Curator of Mammals, Museum of Zool., Univ. of Mich., Ann Arbor, Mich. MAMMALOGY.

BURTON, Everett Tyler, Rsch. Engr., Bell Telephone Labs., 463 West St., N. Y., N. Y. ELECTRICAL RESEARCH.

BURTON, Glenn Willard, Geneticist, U. S. D. A., 421 W. 10th St., Tifton, Ga. GENETICS, PLANT BREEDING.

BURTON, Helen Brown, Prof. of Home Econ., Univ. of Okla., Norman, Okla. NUTRITION; EXPERIMENTAL FOOD STUDY. b. Chicago, Ill., Jan. 7, 1889. d. Frank and Lena (Brown) B. Edn.: A.B., Ind. Univ., 1911; B.S., Lewis Inst., 1915; S.M., Univ. of Chicago, 1922; Ph.D., *ibid.*, 1929. Exp.: Instr., Home Econ., Lewis Inst., 1915-18; Hd. of Home Econ. Dept., Wayne State Tchrs. Coll., 1918-21; Hd. of Home Econ. Dept., W. Tex. State Tchrs. Coll., 1922-25; Dir., Schl. of Home Econ., Univ. of Okla., 1927-49; Prof. of Home Econ., *ibid.*, 1949—. Hon. Pos.: Fellowship, Univ. of Chicago, 1925-27; Fellow, A.A.A.S. and Okla. Acad. Sci.; Pres., Okla. Home Econ. Assn., 1945-47; Pres., Norman Bus. and Prof. Women's Club. Mem.: Sigma Xi; Omicron Nu; Iota Sigma Pi; Delta Kappa Gamma; A.A.A.S.; P.E.O.; D.A.R.; Bus. and Prof. Women's Club; Norman C. of C. Contbr. to: Jour. Biol. Chem.; Jour. Home Econ.; Proc. Okla. Acad. Sci. Ph.D. Dissertation: The Effect of Cereals upon the Retention of Calcium and Phosphorus in Children and Adults. Travel: Europe; Mexico. Listed in: A.M.S.; Okla. Women. Special Int.: Calcium and Phosphorus Retention in Human Beings; Ascorbic Acid Metabolism in Human Beings; Ascorbic Acid Content of Foods.

BURTON, M., Prof., Univ. of Notre Dame, Notre Dame, Ind. CHEMICAL KINETICS & PHOTO-CHEMISTRY.

BURTON, Opitz Russell, Palisade, N. J. HEART DISEASE.

BURTT, Harold E., Prof. and Chmn., Dept. of Psychol., Ohio State Univ., Columbus, Ohio. PSYCHOLOGY.

BURWASH, Edward Moore, retired, 36-A Avenue Rd., Toronto, Ont., Can. ARCHAEOLOGY.

BURWELL, Charles Sidney, Dean and Rsch. Prof. of Clinical Med., Harvard Med. Schl., 25 Shattuck St., Boston, Mass. INTERNAL MEDICINE.

BURWELL, Edward B., Jr., Office Chief of Engrs., Washington 25, D. C. GEOLOGY-ENGINEERING.

BURWELL, Robert L., Jr., Prof. of Chem., Northwestern Univ., Evanston, Ill. PHYSICAL CHEMISTRY. b. Baltimore, Md., May 6, 1912. s. Robert L. and Anne (Lewis) B. Edn.: B.S., St. Johns Coll., 1932; M.S., Princeton Univ., 1934; Ph.D., *ibid.*, 1936. m. Elise Frank, Dec. 23, 1939. c.: Polly; Augusta. Exp.: Procter Fellow, Princeton Univ., 1935-36; Instr., Trinity Coll., Hartford, Conn., 1936-39; Instr., Northwestern Univ., 1939; Asst. Prof., *ibid.*, 1946; Assoc. Prof., 1946-52; Prof., *ibid.*, 1952—; Chmn., Chem. Dept., *ibid.*, 1952—. Mem.: Amer. Chem. Soc.; Faraday Soc.; Sigma Xi; Phi Lambda Upsilon. Contbr. to: Jour. Amer. Chem. Soc. War Record: U. S. Navy, 1942-46. Special Int.: Physical Chem.; Physical Organic Chem.; Heterogeneous Catalysis.

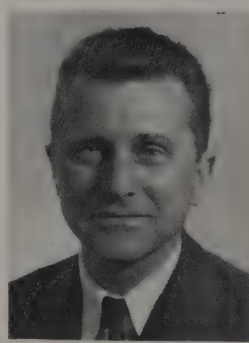
BUSCH, Karl George Adolph, Hd., Chem. Dept., Capital Univ., Columbus, Ohio. ORGANIC CHEMISTRY.

BUSEY, Harold McNeil, Staff Mem., Los Alamos Scientific Lab., 1278-A 41st St., Los Alamos, N.



Mexico. NUCLEAR CHEMISTRY. b. Jacksonville, Ill., June 16, 1917. s. Edgar Thomas and Maude Mae (McNeil) B. Edn.: A.B., Ill. Coll., 1939; M.S., Tulane Univ., 1941; Ph.D., *ibid.*, 1948. m. Emma Holle, 1941. c.: Dixie Elizabeth. Exp.: Chemist, Ethyl Corp., Baton Rouge, La., 1941-42; Associate Scientist, Southern Regional Lab., U.S.D.A., New Orleans, La., 1942-44; Chemist, Cargill, Inc., Minneapolis, Minn., 1944-45; Instr., Tulane Univ., New Orleans, La., 1945-47; Staff Mem., Los Alamos Scientific Lab., Los Alamos, N. Mex., 1947—. Mem.: Los Alamos Astronomical Soc.; A.A.A.S.; Amer. Chem. Soc.; Sigma Xi; Alpha Chi Sigma. Contbr. to: Indus. and Engrng. Chem. Special Int.: Nuclear Reactor Development; Manipulation of Macro Quantities of Radioactive Materials; Cryogenics; Utilization of Solar Energy.

BUSH, George Franklin, Owner-Dir., G. F. Bush Associates, Box 175, Princeton, N. J. RESEARCH



AND MANUFACTURE OF ELECTROMECHANICAL INSTRUMENTS. b. Philadelphia, Pa., July 1, 1909. s. Frank Homer and Alvena (Hollenbach) B. Edn.: B.S., Lafayette Coll., 1932; M.E., *ibid.*, 1942; M.S., Univ. of Pa., 1945. m. Helma Nitzsche, June 12, 1939. c.: Helma Dierdra; Penelope Nitzsche; George Christopher. Exp.: Asst. Prof., Princeton Univ., 1942-45; Assoc. Prof. of Machine Design, Cornell Univ., 1946-47; Owner-Dir., G. F. Bush Associates, Princeton, N. J., 1947—. Mem.: Sigma Xi; A.S.T.M.; N. J. Soc. Professional Engrs.; Princeton Engrng. Soc.; Mason; Sigma Chi. USN Award for Exceptional

Service. Author: Reading Engrng. Drawings, 1942; Reading Engrng. Supplement, 1943. Contrb. to: Trans. A.S.M.E.; Jour. Engrng. Edn.; Jour. Engrng. Drawing. Special Int.: Rsch. in Guided Missiles; New and Original Instrumentation in Rubber, Textile Papers, and Petroleum Industries.

BUSH, Laurens Earle, Prof. and Head Department of Math., Kent State Univ., Kent, Ohio. ALGEBRA. b. Martins, S. C., Mar. 24, 1900. s. Laurens Ashley and Mary Elizabeth (Oswald) B. Edn.: B.S., The Citadel, 1919; S.M., Univ. of N. C., 1926; Ph.D., Ohio State Univ., 1931. m. Winnie Davis Kearse, June 23, 1920. c.: Patricia Earle; Edward Ashley. Exp.: Staff, S. C. Highway Dept., 1919; Farmer, 1919-22; Public Schl. Tchrr., 1922-25; Instr., Univ. of N. C., 1926-30; Univ. Fellow, Ohio State Univ., 1930-31; Instr., ibid., 1931-33; Prof. and Chmn. of Math. Dept., Coll. of St. Thomas, St. Paul (Minn.), 1933-53; Prof. and Hd., Dept. Math., Kent State Univ., Kent, Ohio, 1953—. Hon. Pos.: Bd. of Govs., Math. Assn. of Amer., 1947-50; Sec., Minn. Section, ibid., 1945-51; Dir., William Lowell Putnam Math. Competition, M.A.A., 1948—. Mem.: Amer. Math. Soc.; Math. Assn. of Amer.; Sigma Xi; Pi Mu Epsilon. Contrb. to: Bull. Amer. Math. Soc.; Amer. Math. Monthly; Natl. Math. Mag.; Amer. Jour. Math. Special Int.: Linear Algebras.

BUSH, Vannevar, Pres., Carnegie Inst. of Washington, Wash., D. C. ELECTRICAL ENGINEERING.



b. Everett, Mass., Mar. 11, 1890. s. Richard Perry and Emma Linwood (Paine) B. Edn.: B.S., Tufts Coll., 1913; M.S., ibid., 1913; D.Eng., Harvard Univ., 1916; D.Eng., Mass Inst. of Tech., 1916. Hon. Deg.: Sc.D., Tufts Coll., 1932, and since then has received honorary degrees from Brown Univ., Middlebury Coll., Johns Hopkins Univ., Univ. of Pa., Yale Univ., Poly. Inst. of Brooklyn, Stevens Inst. of Tech., Williams Coll., Rutgers Coll., Wash. Univ., Harvard Univ., Trinity Coll., Univ. of Buffalo, W. Va. Univ., Columbia Univ., Princeton Univ., Carnegie Inst. of Tech., Cambridge Univ., LL.D., Colby Coll., 1951. m. Phoebe Davis, Sept. 5, 1916. c.: Richard Davis; John Hathaway. Exp.: Staff, Test Dept., Gen. Elec. Co., 1913; Staff, Inspection Dept., U. S. Navy, 1914; Instr. Math., Tufts Coll., 1914-15; Asst. Prof. Elec. Engrng., ibid., 1916-17; Assoc. Prof. Elec. Power Transmission, Mass. Inst. of Tech., 1919-23; Prof., ibid., 1923-32; Vice-Pres. and Dean of Schl. of Engrng., ibid., 1932-38; Pres., Carnegie Inst. of Wash., Wash., D. C., 1938—. Mem.: Hon. Mem., Franklin Inst.; Hon. Mem., Amer. Inst. of Elec. Engrs.; Fellow, Amer. Physical Soc.; Amer. Math. Soc.; Amer. Philos. Soc.; Amer. Acad. Arts and Sci.; Natl. Acad. Sci.; Amer. Soc. for Engrng. Edn.; Phi Beta Kappa; Tau Beta Pi; Alpha Tau Omega; Sigma Xi; St. Botolph Club of Boston; Century Club in N. Y.; Cosmos Club in Wash. Hon. Pos.: Trustee, Tufts Coll., Johns Hopkins Univ., Carnegie Corp. of N. Y., and the Graphic Arts Foundation, a life mem. of the Mass. Inst. of Tech. Corp., and a Regent of the Smithsonian Institution; Dir., Amer. Telephone and Telegraph Co., 1947—; Dir., Merck and Co., 1949—; Mem. of the Bd. of Dir., Metals and Controls Corp., 1952—. Author: Operational Circuit Analysis, 1929 and many technical articles, and the co-author, with Wm. Henry Timbille, of Principles of Elec. Engrng., 1922; A collection of his papers and addresses was issued in 1946, under the title Endless Horizons, with a foreword by the late Frank B. Jewett; most widely known publication is Modern Arms and Free Men, a discussion of the role of sci. in preserving democratic institutions, which was the Book of the Month Club selection for Dec., 1949. War Record: Comm. as Lt.-Comdr., U. S. Naval Reserve, 1924-32; At the outbreak of World War II, while still retaining his position with the Carnegie Institution, he was appointed by the Pres. of the U. S. as Chmn. of the Natl. Defense

Rsch. Com., a governmental agency established for the purpose of supplementing the work of the Army and Navy in development of devices and instrumentalities of war; Dir. of the newly established Office of Scientific Rsch. and Development charged with the duty of mobilizing the scientific effort of the country, of initiating in co-operation with the Army and Navy broad programs of rsch. where needed, of advising the Pres. as to the status of scientific rsch. and development in their relations to defense, and of continuing rsch. on instrumentalities and materials of war and in the field of med.; continued in this post until the OSRD concluded its activities in Dec., 1947; The Natl. Defense Rsch. Com. and a newly formed Com. on Med. Rsch. constituted the two major divisions of the Office; various other scientific agencies of the Govt., notably the Natl. Advisory Com. for Aeronautics—of which Dr. Bush was a member to 1948, serving as Chmn. in 1939-41—as well as the Natl. Acad. of Sci., the Natl. Rsch. Council, and rsch. labs. of ednl. and industrial organizations throughout the country worked in close collaboration with the Office of Scientific Rsch. and Development from its inception; in his capacity first as Chmn. of the NDRC and then as Dir. of OSRD, Dr. Bush was a central figure in the development of nuclear fission culminating in the utilization of atomic bombs to bring the war to an end; his official connection with the project began in June 1940, when the earlier constituted Uranium Com. was made a sub-committee of the newly created NDRC; Decision for an all-out effort in the undertaking was reached after the research had progressed satisfactorily and various administrative reorganizations had been made, so that the difficult question of allocating men and materials in a period of natl. emergency could soundly be answered; interestingly, the decision was announced to those concerned on Dec. 6, 1941; Dr. Bush, as a mem. of the Top Policy Group headed by the Pres. and as Chmn. of the Military Policy Com., shared responsibility for the determination of policy throughout the program, continuing in this work after the task of administration and development had been taken over by the Army in 1943. Pres. Roosevelt in the fall of 1944 called on Dr. Bush for recommendations on ways whereby the lessons learned through the OSRD in time of war might be applied in time of peace “for the improvement of the Natl. health, the creation of new enterprises bringing new jobs, and the betterment of the national standard of living.” Dr. Bush prepared a report, issued in July, 1945, under the title “Sci., the Endless Frontier,” which drew on studies made by four committees of eminent scientists, engineers, and educators, and made specific proposals for the consolidation and utilization of the scientific skill of the nation for the general good, which were reflected in legislation considered by the Congress. Mem.: President’s Rsch. Bd. In July, 1946, appointed Chmn. of the Joint Rsch. and Development Bd. of the War and Navy Depts. to carry out “a strong, unified, integrated, and complete rsch. and development program in the field of natl. defense.” Passage of the Natl. Security Act of 1947 replaced the JRDB with the Rsch. and Development Bd. of the Natl. Military Establishment; served from Sept., 1947 to Oct. 15, 1948, as the first chmn. of this organization. Gen. Int.: Dr. Bush has received patents on gaseous-conduction devices and on cathode arrangements and coatings for grid-controlled arcs. His inventive interests have for years been focused on the application of mechanical and electronic means to reducing the burden of computation, calculation, and repetitive routine on man’s intelligence. One expression of this desire is the network analyzer which, with staff members of the Dept. of Elec. Engrng., he developed at the Mass. Inst. of Tech. in the late 1920’s. This is an electric network on which can be set up the electrical replica in miniature of large and important electrical power systems, for the purpose of investigating their performance under stress. Another and more important result of Dr. Bush’s interest in apparatus to free man’s intelligence for creative effort is the differential analyzer, construction of which began under his direction at the Mass. Inst. of Tech. in 1935, and which is a radically different and improved advance over the first machine of the sort, which he developed there in collaboration with the electrical engineering staff in 1930. The new machine, weighing 100 tons, combined some 2,000

electronic tubes, several thousand relays, about 150 motors, and nearly 200 miles of wire to provide solutions of the differential equations expressing mathematical problems involving as many as 18 variables. Problems in atomic physics, acoustics, ballistics, structures, and electrical machine transients are representative of the tasks for which the analyzer is designed. Other devices such as the rapid selector which scans and selects wanted items from microfilm and the justifying typewriter which produces typescript with an even right-hand margin in one operation, have resulted from Dr. Bush's inventive interest in making machines do more of the pseudo-intelligent work of the world. In the "Atlantic Monthly" for July, 1945, he wrote speculatively and fancifully of a hypothetical machine called the "memex" which utilizing components of this sort, would serve as an extension of man's memory, bringing wanted items before him on a viewing screen by means of an associative index, and permitting him to review at the touch of a finger all his accumulation of data on a desired subject. Awarded the Louis Edward Levy Medal by the Franklin Inst. in 1928 for his work on analyzing devices and the Lamme Medal in 1935 from the Amer. Inst. of Electrical Engrs. for "his development of methods and devices for application of mathematical analysis to problems of electrical engrng." He was also granted the Research Corp. award made by Columbia Univ. in 1939, and the Ballou Medal by Tufts Coll. in 1941. The Edison Medal of the Amer. Inst. of Elec. Engrs. and the Holley Medal of the Amer. Soc. of Mechanical Engrs. were awarded him in 1943, and in 1945 he received the Gold Medal of the Natl. Inst. of Soc. Sci. for distinguished service to humanity, the Roosevelt Memorial Assn. Distinguished Service Medal, and the Marcellus Hartley Public Welfare Medal of the Natl. Acad. of Sciences. The Washington Award was presented to him in 1946 by the Western Soc. of Engrs.; in Jan., 1947, the Hoover Medal for 1946 was awarded by the Amer. Inst. of Elec. Engrs., the Amer. Soc. of Civil Engrs., and the Amer. Inst. of Mining and Metallurgical Engrs., and the Amer. Soc. of Mech. Engrs. to him as an "engineer, educator, and administrator, who, in critical time of need, was in a most special sense an organizer, guiding spirit, and driving force of the nation's achievements in physical and medical science." The Distinguished Service Medal of Tufts Coll. came to Dr. Bush in June, 1947; on Feb. 11, 1948, he was made Knight Commander of the civilian division of the Most Excellent Order of the British Empire, and on May 27 of that year he received the Medal for Merit with bronze oak leaf cluster from Pres. Truman in ceremonies at the White House; the medal of the Industrial Rsch. Inst., Inc., was presented to him in Feb., 1949; in Jan., 1951, he received the John Fritz Medal and Certificate for 1951, an award sponsored by the Amer. Soc. of Civil Engrs., the Amer. Inst. of Mining and Metallurgical Engrs., the Amer. Soc. of Mech. Engrs., and the Amer. Inst. of Elec. Engrs.

BUSHNELL, John (White), Assoc. Prof. of Horticulture, Ohio Agri. Expt. Sta., Wooster, Ohio.



PHYSIOLOGY AND CULTURE OF VEGETABLE CROPS. b. Minneapolis, Minn., Mar. 12, 1893. s. Harley G. and Mary (Blymyer) B. Edn.: B.S., Univ. of Mo., 1916; M.S., Univ. of Minn., 1918; Ph.D., Univ. of Chicago, 1923. m. Dyllone Hempstead, 1922. c.: John Hempstead; Robert; Clifford; William. Exp.: Asst. in Horticulture, Minn. Agri. Expt. Sta., St. Paul, Minn., 1917-23; Asst. Hort., Ohio Agri. Expt. Sta., Wooster, Ohio, 1923-25; Assoc. Hort., ibid., 1925—.

Mem.: Amer. Soc. of Hort. Sci.; Amer. Soc. of Plant Physiol.; Potato Assn. of Amer.; Gamma Alpha; Sigma Xi. Contrb. to Proc. of Amer. Soc. of Hort. Sci.; Amer. Potato Jour.; Agron. Jour. Special Int.: Soil Requirements of Vegetable Crops.

BUSHNELL, Leland D., Prof. of Bacteriol., Kans. State Coll., Manhattan, Kans. **BACTERIOLOGY.**

BUSHYAGER, Glenn Ray, Prof. and Head of Dept. of Math., Morningside Coll., Sioux City 6, Ia., 1921 Morningside Ave., Sioux City 6, Ia. **MATHEMATICS.** b. Jeannette, Pa., Nov. 19, 1897. s. Elijah and Annetta Rosetta (Laufer) B. Edn.: B.S., Allegheny Coll., 1922; M.A., Pa. State Coll., 1924. m. Myrna A. Conver of Emmenton, Pa., Mar. 25, 1937. d. Samuel and Clara Conver. c.: Myrna Diane; Glenn Ray, II. Exp.: Grad. Asst. in Physics, Allegheny Coll., 1921-22; Instr. in Math., Pa. State Coll., 1922-28; Instr. in Math., Univ. of Pittsburgh, 1928-30; Asst. Prof. of Math., Univ. of Detroit, 1930-32; Prof. and Head of the Dept. of Math., Lawrence Inst. of Tech., 1932-46; Prof. and Hd., Dept. of Math., Morningside Coll., 1946—. Mem.: Phi Beta Kappa; Phi Kappa Phi; Kappa Delta Pi; Math. Assn. of Amer. Author: Some lesson sheets in the Introduction to Col. Algebra, 1940. War Record: World War I, S.A.T.C., 1918. Travel: Mex.; Can. Hobbies: Fishing, Golf, Travel. Listed in: W.W.A.; A.M.S.

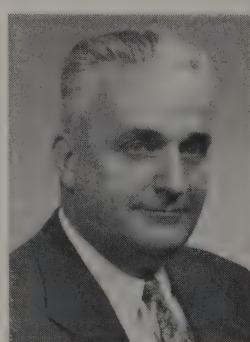
BUSS, Irven O., Prof., Wildlife Management Div., Dept. of Zool., State Coll. of Wash., Pullman, Wash.



WILDLIFE AND NATURAL HISTORY. b. Wis., Feb. 24, 1908. s. Frank H. and Alvina (Voelker) B. Edn.: B.S., The Stout Inst., 1933; M.S., Univ. of Wis., 1939; Ph.D., ibid., 1942. m. Katherine Graslie of Spring Valley, Wis., Nov. 15, 1941. d. Mr. and Mrs. John H. Graslie. Exp.: 1940-42, Leader, Wis. Pheasant Rsch. Proj., Wis. Conservation Dept.; 1945-48, Chf. Wildlife Rsch.; 1948-50, Prof., Wildlife Management, W. S. C. Hon. Pos.: Chairman, Comm. on Prof. Stand-

ards for Wildlife Soc. Mem.: Sigma Xi; A.O.U.; Soc. of Mammal.; Wis. Acad. of Sci. and Letters; Arctic Inst. of North Amer. Ph.D. Dissertation: Wis. Pheasant Populations. War Record: 1942-45, 1951-53, Lt. Comdr., U.S.N.R. Listed in: Who's Who in Amer.; Amer. Men of Sci.; Who Knows What. Special Int.: Wildlife Rsch. and Natural History Rsch.

BUSSART, James Everett, Entomologist, Velsicol Corp., 330 E. Grand Ave., Chicago 11, Ill.



ENTOMOLOGY. b. Paris, Ill., July 9, 1903. s. Ora and Lillie (Comstock) B. Edn.: B.S., Univ. of Ill., 1926; M.S., ibid., 1935. m. Olive Mapes, Aug. 4, 1927. c.: Dean Allyn. Exp.: Biol. Tchr., Twp. H. S., Arthur, Ill., 1926-29; Biol. Tchr., Community H. S., Wheaton, Ill., 1929-40; Nursery Inspector, Ill. Dept. of Agri., Springfield, Ill., 1940-43, also summers of 1924, 26, 27, 28, 29, 31, 36, 37, 38, 39; Entomologist, Calif. Spray Chem. Corp., Richmond, Calif., 1943-47; Entomologist, Velsicol Corp., Chicago, Ill., 1947—.

Mem.: Amer. Assn. of Econ. Entomol.; Entomol. Soc. of Amer.; Entomol. Soc. of Canada; Fla. Entomol. Soc.; Life Mem., Ill. State Hort. Soc.; Kappa Phi Kappa; The Chicago Farmers. Contrb. to: Annals of Entomol. Soc. of Amer.; Agril. Chem. Mag.; Soap and Sanitary Chem., etc. Special Int.: Insecticides; Tachinidae.

BUSS, Edward George, Asst. Prof. and Acting Hd. of Poultry Dept., 1219 W. Magnolia, Ft. Collins, Colo. **POULTRY GENETICS AND PHYSIOLOGY.** b. Concordia, Kans., August 28, 1921. s. George

and Kathryn (Luginsland) B. Edn.: B.S., Kan. St. Coll., 1943; M.S., Purdue Univ., 1949. m. Dorothy Ruth Arvidson of Lafayette, Ind., May 7, 1949. d. Robert and Ollie Arvidson. c.: Ellen Ruth and Norman Edward. Exp.: Asst. Prof., Colo. A. and M. Coll., 1949-50; Asst. Prof., *ibid.*, 1950-53. Mem.: Poultry Sci. Assn.; A.A.U.P.; Amer. Soc. for Animal Production; A.A.A.S. Contrb. to: Two articles written for Poultry Sci., One article published in J. Heredity, 1950. War Record: R.O.T.C., 1939-43. Officer, U.S.A., 1943-46. Hobby: Hunting.

BUSSELL, Frank P., Prof. Emer. Plant Breeding, Cornell Univ., 205 Wyckoff Ave., Ithaca, N. Y. PLANT BREEDING.

BUSSEY, Ruth Cruikshank, Staff Mem., The Psychological Corp., 522 Fifth Ave., N. Y., N. Y. PSYCHOLOGY.

BUSSEY, W. H., 1421 E. River Rd., Minneapolis, Minn.

BUSSOW, Carl Frederick, Technical Dir., A. W. Dow, Inc., 801 Second Ave., N. Y. 17, N. Y.



CHEMISTRY AND CHEMICAL ENGINEERING. b. Union City, N. J., Mar. 11, 1899. s. August and Caroline (Kohler) B. Edn.: B.S., Cooper Union, 1922; B.S., Poly. Inst. of Brooklyn, 1930. m. Ethel Agnes Jones, June 15, 1935. c.: Carl William. Exp.: Chemist, Butterworth-Judson Corp., Newark, N. J., 1918-22; Chf. Chemist, Dow & Smith, N. Y., N. Y., 1922-35; Technical Dir., A. W. Dow, Inc., Consulting Chemists, 1935—. Mem.: Fellow, A.I.C.; Amer.

Chem. Soc.; A.A.P.T.; A.A.A.S.; A.S.T.M.; N. Y. Acad. of Sci.; Cooper Union Chem. Soc.; Assn. of Consulting Chemists & Chem. Engrs.; Natl. Geog. Soc. Contrb. to: A.S.T.M. Bull.; Proc. A.S.T.M.; Proc. Assn. Asphalt Paving Technologists. Special Int.: Bituminous Paving and Waterproofing and Related Fields.

BUSWELL, Arthur Moses, Chf., Ill. State Water Survey, Box 232, Urbana, Ill. WATER CHEMISTRY.

BUSWELL, James Oliver, Jr., Pres. and Prof. of Theol. and Philos., Natl. Bible Inst., 340 W. 55th St., N. Y., N. Y. THEOLOGY AND PHILOSOPHY.

BUSZEK, Rev. John Joseph, Tchr. of Physics and Edn., St. Mary's Coll., Orchard Lake, Mich. PHYSICS, EDUCATION.

BUTCHER, Earl Orlo, Assoc. Prof. of Anatomy, Coll. of Dentistry, N. Y. Univ., N. Y., N. Y. ANATOMY.

BUTLER, Albert Quigg, Hd., Dept. of Chemical Control, Mallinckrodt Chemical Works, St. Louis, Mo. CHEMISTRY.

BUTLER, Bert S., Prof. of Geol. and Hd. Dept., Univ. of Ariz., Tucson, Ariz. GEOLOGY.

BUTLER, Bertram T., Retired, 186 Crescent St., Leonia, N. J. GEOLOGY.

BUTLER, C. L., Jr., Technical Command, Edgewood Arsenal, Edgewood, Md. CHEMISTRY.

BUTLER, Elmer Grimshaw, Prof. of Zool. and Chmn., Dept. of Biol., Princeton Univ., Princeton, N. J. ZOOLOGY, EMBRYOLOGY.

BUTLER, Gurdon Montague, Dean, Coll. of Engrng., Univ. of Ariz., Univ. Sta., Tucson, Ariz. MINERALOGY, PETROLOGY.

BUTLER, Joe Beaty, Prof. of Civil Engrng., Mo. Schl. of Mines, Rolla, Mo. HYDRAULICS. b. Omega,



Okla., May 11, 1895. s. George and Bessie May (Gordon) B. Edn.: B.S. in C.E., Okla. A. and M. Coll., 1915; B.S. in Edn., *ibid.*, 1924; C.E., Mo. Schl. of Mines, 1922; M.S. in C.E., *ibid.*, 1924. m. Jessie Ethel Eyler of Collinsville, Okla., Nov. 23, 1919. d. Mr. and Mrs. P. M. Eyler. c.: Betty Jo (Mrs. J. R. Snowden). Exp.: Railroad and Highway Survey and Constr., 1915-20; with C.E. Dept., Mo. Schl. of Mines, 1920—; Prof. and Chmn. of Dept., 1931—; Supervisor of Southern Mo. Country Highway Planning and Mapping Studies, 1934-40. Hon. Pos.: Middle Mo. Soc., Pres., A.S.C.E., Organization Pres., Mo. Soc., P. E., Dir., N.S.P.E., Div. Vice-Pres., Amer. Road Bldrs. Assn.; Co. Chmn., Amer. Red Cross. Mem.: Lions Club; Phi Kappa Phi; Kappa Delta Pi; Chi Epsilon. Author: Fluid Flow, 1926; Hwy. Planning, 1938. Contrb. to: Better Roads. War Record: Lt., 109th Engrs., U. S. Army, 1917-19. Hobby: Work in Engrng. Soocs. and Clubs. Listed in: Who's Who in Amer. Special Int.: Hydraulics, Highway Planning, Civil Engrng.

BUTLER, Karl Douglas, G. L. F. Schl. Cooperative Admin., Terrace Hill, Ithaca, N. Y. PLANT PATHOLOGY.

BUTT, Ferdinand Hincley, Asst. Prof. of Entomol., Cornell Univ., Ithaca, N. Y. ENTOMOLOGY.

BUTTERFIELD, Thomas Edward, Prof. Emer. Mechanical Engrng., Lehigh Univ., 1736 W. Union Blvd., Bethlehem, Pa. MECHANICAL ENGINEERING.

BUTTERWORTH, Theron Hervey, Assoc. in Health Edn., World Health Organization, Palais des Nations, Geneva, Switzerland. PUBLIC HEALTH



EDUCATION. b. N. Y. City, Mar. 31, 1904. s. Samuel Fowler and Elizabeth Pierce (Rockwell) B. Edn.: A.B., Princeton Univ., 1927; M.S., Univ. of Wis., 1929; Ph.D., *ibid.*, 1931; M.S.P.H., Univ. of N. C., 1945. m. Alice Hermione Sumner, June 22, 1931. c.: Nancy Geraldine; Shirley Gibbs; Charles Sumner and Mary Elizabeth. Exp.: Bacteriol.-in-Chg., Fermented Milks Div., Walker-Gordon Labs., Inc., Plainsboro, N. J., 1931-33; Spec. Tech. Adv. to Vice-Pres., Borden Co., Cheese and Produce Div., N. Y. C., 1933-34; Part Time, Rsch. Bacteriol., *ibid.*, Syracuse, N. Y., 1934-37; Lab. Tech., San Antonio Health Dept., San Antonio, Tex., 1937-38; Chf. Milk Sanitarian, *ibid.*, 1939-41; Part Time Lab. Tech., Ft. Sam Houston Induction Center, *ibid.*, 1941; Spec. Rsch. Bacteriol. Borden Milk Co., *ibid.*, 1941; Supvr. of Milk Sanitation, Houston Health Dept., Houston, Tex., 1941-42; Assoc. Milk Specialist, U. S. Pub. Health Service, Dist. 4, New Orleans, La., 1942-44; Milk Specialist, U. S. Pub. Health Service, Food and Milk Sect., Washington, D. C., 1945-46; Health Edn. Cons., Office of Public Health Edn., *ibid.*, 1946-48; Asst. Chf., Div. of Pub. Health Edn., *ibid.*, 1948-51; Assoc. in Health Edn. and Deputy Chf., Health Edn. of the Pub. Sect., World Health Organization, Geneva, Switzerland, 1951—. Hon. Pos.: Chmn. of Com. on Applied Lab. Methods, Internatl. Assn. of Milk Sanitarians, 1940-41; Sec., Pub. Health Edn. Sect., Amer. Pub. Health Assn., 1950; Lectr., Schl. of Pub. Health, Univ. of Calif., Berkeley, Calif., 1948; Lectr. in Health Edn., Schl.

of Pub. Health, Johns Hopkins, Baltimore, Md., 1948-49; Chmn., Mem. Com., Pub. Health Edn. Sect., Amer. Pub. Health Assn., 1951; Chmn., Nominating Com., *ibid.*, 1951. Mem.: Amer. Pub. Health Assn., Fellow; A.A.A.S.; Adult Edn. Assn.; Amer. Assn. for Health; Phys. Edn. and Recreation; Amer. Acad. of Polit. and Soc. Sci.; Sigma Xi. Contrb. to: Amer. Jour. of Pub. Health; The Milk Dealer; Jour. of Milk Tech.; Modern Sanitation; The H. S. Jour.; Sci.; The Milk Plant Monthly. Special Int.: Pub. Health Edn.; Group Discussion Methods; Milk and Food Bacteriol. and Sanitation.

BUTTOLPH, Leroy James, Engr., General Electric Co., Lamp Dept., Engrng. Div., Nela Park, Cleveland, Ohio. **BIOPHYSICS**.

BUTTS, Donald C. A., Dir. of Lab., United Fruit Co., Pier 3, North River, N. Y., N. Y. **TROPICAL MEDICINE**.

BUWALDA, John Peter, Prof. of Geol. and Chmn., Div. of Geol. Sciences, Calif. Inst. of Tech., Pasadena, Calif. **STRUCTURAL ENGINEERING, GEOLOGY**.

BYBEE, Hal Pleasant, Prof. of Geol. and Geologist in Chg. Univ. Lands, Univ. of Tex., Austin, Tex. **PETROLEUM GEOLOGY**.

BYCK, Harold Theodore, Rsch. Chemist, Shell Development Co., 4560 Horton St., Emeryville, Calif. **PHYSICAL CHEMISTRY**.

BYERLY, Perry, Prof. of Seismology, Dir. of Seismographic Stations, Univ. of Calif., Berkeley 4, Calif. **SEISMOLOGY**. b. Clarinda, Iowa, May 28, 1897. s. Perry and Pauline (Watson) B. Edn.: A.B., Univ. of Calif., 1921; M.A., *ibid.*, 1922; Ph.D., *ibid.*, 1924. m. Lillian Lizee, Apr., 1941. Exp.: Instr. in Physics, Univ. of Nev., Reno, Nev., 1924-25; Prof. of Seismology, Univ. of Calif., 1925—. Hon. Pos.: Chmn., Dept. of Geol. Sci., Univ. of Calif.; Pres., Section of Seismology, Amer. Geophysical Union; Secy., Seismological Soc. of Amer. Mem.: Natl. Acad. Sci.; Wash. Acad. Sci.; Soc. of Exploration Geophysicists; Earthquake Engrng. Rsch. Inst.; Fellow, Geol. Soc. Amer.; Fellow, Royal Astron. Soc.; Seismological Soc. Amer.; Sigma Xi; Theta Tau. Author: Seismology, 1942; Contrb. to: Bull. Seismological Soc. Amer. War Record: Private, C.A.C., 1918.

BYERLY, Theodore Carroll, Poultry Husbandman, Poultry Investigations, Bureau Animal Indus., Beltsville, Md. **PHYSIOLOGY**.

BYERS, Charles Francis, Asst. Dean, Coll. of Arts and Sci., Univ. of Fla., Gainesville, Fla. **ZOOLOGY**.

BYERS, Horace Robert, Prof. and Chmn., Dept. of Meteorol., Univ. of Chicago, Chicago, Ill. **METEOROLOGY**. b. Seattle, Wash., Mar. 12, 1906. s. Charles Hopkins and Harriet (Ensinger) B. Edn.: A.B., Univ. of Calif., 1929; M.S., Mass. Inst. of Tech., 1932; Sc.D., *ibid.*, 1935. m. Frances Clark, Oct. 6, 1927. c.: Henrietta B. (Mrs. T. W. Bilhorn). Exp.: Jr. Meteorol., U. S. Weather Bur., Oakland, Calif., 1928-29; Rsch. Asst., Scripps Inst. of Oceanography, La Jolla, Calif., 1932-33; Instr. in Meteorol., Trans-World Airlines, Kansas City, Mo., 1933-34; Meteorol.,



U. S. Weather Bur., Washington, D. C., 1935-40; Assoc. Prof., Univ. of Chicago, Chicago, Ill., 1940-44; Prof., *ibid.*, 1945—; Chmn., *ibid.*, 1949—; Dir., U. S. Govt. Thunderstorm Proj., 1945-49. Hon. Pos.: Panel Chmn., Rsch. and Dev. Bd., Dept. of Defense, 1947-50; Subcom. Mem., Natl. Adv. Comm. for Aeronautics. Mem.: Amer. Meteorol. Soc.; Amer. Geophys. Union; Inst. of Aeronautical Sci.; Amer. Geog. Soc.; Royal Met. Soc.; Sigma Xi. Author: Synoptic and Aeronautical Meteorol., 1937; Gen. Meteorol., 1944. Contrb. to: Amer. Meteorol. Soc. Jour.; Bull., *ibid.*; Trans., Amer. Geophys. Union; Tellus; Monthly Weather Rev. Special Int.: Thunderstorms; Cloud Physics; Atmospheric Elec.

BYLER, William H., Vice-Pres., U. S. Radium Corp., Mt. Kemble Ave., Morristown, N. J. **CHEMISTRY**. b. Prairie Home, Mo., Dec. 16, 1904. s. William H. and Lutetia (Mills) B. Edn.: B.S., Central Mo. State Coll., 1927; A.B., *ibid.*, 1927; M.A., Univ. of Mo., 1931; Ph.D., *ibid.*, 1937. m. Thelma Tyson, Aug. 24, 1929. Exp.: Prof. of Chem. and Phys., Hannibal-LaGrange Coll., 1931-35; Grad. Asst. in Chem., Univ. of Mo., 1935-37; Rsch. Chem., General Elec. Co., 1937-38; Asst. Biochemist, N. Y. State Dept. of Health, 1938-39; Dir. of Rsch., U. S. Radium Corp., 1939-50; Vice-Pres., *ibid.*, 1950—. Mem.: Amer. Chem. Soc.; Amer. Electrochem. Soc.; Amer. Inst. of Chemists; A.A.A.S.; Sigma Xi; Kappa Delta Pi. Contrb. to: Jour. of Amer. Chem. Soc.; Rev. Sci. Inst.; Jour. Phys. Chem.; Jour. Optical Soc. Amer.; Jour. Amer. Electrochem. Soc. Special Int.: Luminescence.

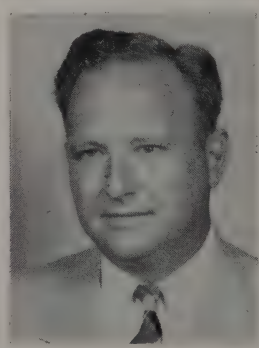
BYRD, Elon Eugene, Prof. of Zool., Univ. of Ga., Athens, Ga. **PARASITOLOGY**.

BYRD, Willie Oliver, Technical Asst. to the Dir., Mapping and Charting Rsch. Lab., Ohio State Univ.



Rsch. Foundation, 2593 W. Hardin Rd., Columbus 10, Ohio. **GEODESY; PHOTOGRAMMETRY; CARTOGRAPHY**. b. Augusta, Ga., Oct. 28, 1907. s. John David and Clara (White) B. Edn.: B.S., Ga. Schl. of Tech., 1927. m. Pauline Hatcher, Dec. 10, 1932. c.: George David. Exp.: Inspector, Ga. Highway Dept., 1927-28; Practicing Civil Engr., Augusta, Ga., 1929-31, 1933-35; Civil Engr. with Highway Contractor, Ga., S. C. and Ky., 1931-33; County Engr., Ga., 1935; Sr. Engrng. Aide—Assoc. Mathematician Maps and Surveys Div., Tenn. Valley Authority, 1936-45; Chf. of Computing Office, Maps and Surveys Div., *ibid.*, 1945-46; Chf. of Computing and Drafting Office, Survey Dept., Pacific Islands Engrs., Guam, M. I., 1946-47; Technical Asst. to the Dir., Mapping and Charting Rsch. Lab., Ohio State Univ. Rsch. Foundation, Columbus, Ohio, 1947—. Mem.: Amer. Soc. of Photogrammetry; Amer. Geophys. Union; Amer. Congress on Surveying and Mapping; Amer. Geographical Soc.; A.A.A.S. Contrb. to: Surveying and Mapping; Photogrammetric Engrng. Special Int.: Surveying; Mapping, Charting.

BYRUM, Woodrow Robert, Dir., Div. of Pharm., Howard Coll., Birmingham, Ala. **PHARMACOLOGY**. b. Phoebus, Va., Jan. 24, 1914. s. R. L. and Alice M. (Clark) B. Edn.: B.S., Med. Coll. of Va., 1937; Ph.D., Ohio State Univ., 1947. m. Mary Cecelia Collier, Apr. 11, 1939. c.: Linda Susan; Nancy Lou; Beverly Ann. Exp.: Asst. Prof., Ohio State Univ., 1947-48; Assoc. Prof., Univ. of Ariz., 1948-50; Prof. and Hd., Dept. Pharmacol., Univ. of Ga., 1950-52; Dir., Division of Pharm., Howard Coll., Birmingham, Ala., 1952—.



Hon. Pos.: Adviser, Kappa Psi and its publication, The Aesculapian, Univ. of Ga., 1951-52; Com. on Plans and Problems, A.A.C.P., 1951-52; Adviser, A.Ph.A. and its publication, The Spur, O.S.U., 1947-48. Mem.: Rho Chi; Sigma Xi; Amer. Pharmaceutical Assn.; A.A.U.P.; Kappa Psi; Exchange Club; Elks. Author: Hosp. Formulary, 1952. Contrb. to: Jour. Amer. Pharmaceutical Assn.; Ariz. Pharmacist; Amer. Jour. Pharmaceutical Edn. Special Int.: Pharmacology.

BYWATERS, James H., Assoc. Geneticist, Rsch. Poultryman, Va., Agri. Expt. Station, Blackburg, Va. **ANIMAL GENETICS**.

CABLE, Louella E., Aquatic Biologist in Chg. Shad Investigations, U. S. Fish and Wildlife Service, College Park, Md. **ICHTHYOLOGY.**

CABLE, Margaret, 1520 San Miguel Ave., Santa Barbara, Calif.

CABLE, Raymond M., Dept. of Biol., Purdue Univ., West Lafayette, Ind. **ZOOLOGY.**

CABLE, W. Arthur, Prof. and Hd., Dept. of Speech, Dir. of Forensics, Univ.



of Ariz., Tucson, Ariz. **SPEECH PATHOLOGY; PSYCHOTHERAPY; THERAPY FOR APHASICS; ENGLISH PHONETICS; NUTRITION; GENEALOGY.** b. Woodland, Barry Co., Mich., June 9, 1890. s. Jeremiah (Jerry) Martin and Annie Lula (Moore) C. Edn.: A.B., Manchester Coll., 1920; Ph.B., Univ. of Chicago, 1920; A.M., State Univ. of Iowa, 1925; Ph.D., Univ. of Denver, 1948. m. Etta May Chambers, June 26, 1913. c.: Donovan Chambers; Dwight Raymond; Evelyn Pearl; Lowell Dean. Exp.: Tchr., 1-room rural Schls., Mason Co., Mich., 1909-10, 1911-12; Supt. of Schls. and Prin., H. S., Vandalia, Mich., 1913-14; Mgr., Schl. and Coll. Dept., Univ. of Chicago Press, 1914-21; Gen. Adv. Mgr., ibid., 1917-19; Mgr., Trade Dept., ibid., 1918-19; Prof. of Pub. Speaking, Mt. Morris Coll., Ill., 1921-23; Instr. in Speech, State Univ. of Iowa, 1923-25; Asst. Prof. of Pub. Speaking, Western Ill. State Normal Schl., Summer, 1925; Asst. Prof. of Pub. Speaking in Dept. of English, Univ. of Ariz., 1925-26; Assoc. Prof., ibid., 1926-28; Assoc. Prof. of Speech, ibid., 1928-34; Secured creation of Dept. of Speech, Univ. of Ariz., 1934; Assoc. Prof. and Hd. of Dept., ibid., 1934-37; Prof. of Speech and Hd. of Dept., 1937—; Founded Speech Clinic, ibid., 1927, enlarged to Speech and Hearing Clinic, 1937; Dir., ibid., 1927-52; Guest Lectr., Biolinguistic Phonetics, Univ. of Denver, summers 1943-46. Hon. Pos.: Founder and 1st Pres., Chicago Church of the Brethren Fellowship Assn., 1920-21; 1st Secy.-Treas., United Alumni Assn. of Church of Brethren, 1921-23; State Chmn., (national) Intercoll. Speech Peace Assn., 1924—; Organized Ariz. Jr. Coll. Debating League, 1925; Organized Ariz. Jr. Coll. Oratorical Assn., 1925; Led enlargement into Ariz. Jr. Coll. Speech Arts League, 1928; Led Reorg. into Ariz. Intercoll. Speech League, 1952; Pres., ibid., 1952-53; State Dir., Ariz. H. S. Debating League, 1925—; Reorg. into Ariz. H. S. Speech Arts League, 1930; Secy., Ariz. State Drama League, 1928-32; Instr. in Parliamentary Law, Tucson Delphian Soc., 1927-28; Pres., Pacific Forensic League, 1928-29, 1947-48; Secy.-Treas., ibid., 1929-30, 1946-47; 2nd Vice-Pres., Speech Assn. of Amer., 1929; Mem., Natl. Advisory Council, Com. on Radio Diction of Amer. Acad. of Arts and Letters, 1929-35; Founder, Western Speech Assn., 1929, and 1st Pres., 1929-30; Mem., Exec. Council, ibid., 1947—; Custodian of Records, ibid., 1948—; Mem. or Chmn., Com. on Constitution, ibid., 1947—; Chmn. or Mem., Com. on Convention Time and Place, ibid., 1949-52; Chmn. of Mem., Nominating Com., ibid., 1952, 1951, 10 previous years; Mem., District Com., West Pt. Natl. Debate Tournament, 1946-52; Mem., Com. on Edn., Natl. Assn. of Parliamentarians, 1951—; Mem., Com. on Communication in Inter-Cultural Relations, Natl. Soc. for the Study of Communication, 1951—; Chmn., Com. on Constitution, ibid., 1952—; Mem. Natl. Council, ibid., 1952—; Mem. Auditing Com., ibid., 1953; Chmn., Speech-Drama-Radio Section of Ariz. College Assn., 1951-52; Mem. of Com. to draft constitution for Ariz. Speech and Hearing Assn., 1952-53; Secy., Admin. Council, Coll. of Fine Arts, Univ. of Ariz., 1951-53; Founder Annual Internatl. Forensic Tournament El Gran Certamen Oratorio Universitario Internacional, at Univ. of Ariz., March, 1952 and Dir., 1952—. Mem.: Phi Delta Pi; Delta Sigma Rho (forensic); Phi Delta Gamma (advisor on or-

ganizing, charter mem., forensic); Tau Kappa Alpha (forensic); Theta Alpha Phi (dramatic); Pi Gamma Mu (social sci.); Internatl. Phonetic Assn.; Internatl. Soc. for General Semantics; Amer. Assn. for Adv. of Sci.; Amer. Speech and Hearing Assn.; Speech Assn. of Amer. (sustaining Mem.); Natl. Soc. for Study of Communication (charter Mem., sustaining Mem.); Natl. Assn. of Parliamentarians; Amer. Sociometric Assn.; Amer. Dialect Soc.; Amer. Assn. of Univ. Profs.; Amer. Forensic Assn. (charter Mem.); Institute of Gen. Semantics; Institute of Amer. Geneal.; Southern Speech Assn.; Western Speech Assn. (founder, charter Mem., sustaining Mem.); Ariz. Coll. Assn.; Ariz. Speech Assn. (charter mem.); Ariz. Speech and Hearing Assn. (charter mem.); Southern Ariz. Soc. for Gen. Semantics (founder, charter mem., 1st Pres.); Pima County Assn. for Mental Health (sponsor). Author, Bks.: Ednl. Blue Bk. and Dir. of the Church of the Brethren, 1708-1923 (with H. F. Sanger), 1923; The Webster-Hayne Debates: A Critical Study in Argumentation, 1925; The Golden Pen, 1927; Cultural and Scientific Speech Edn. Today, 1930; A Program of Speech Edn. in a Democracy, 1932; Learning to Speak Distinctly, 1934; Acoustic Stimulation for Deaf and Profoundly Hard-of-Hearing Children and Adolescents, 1948. Contrb. to: Quarterly Jour. of Speech and Hearing Disorders; Jour. of Edn.; Western Speech; The Gavel of Delta Sigma Rho; The Cue of Theta Alpha Phi; Jour. of Expression; Ariz. Tchr. and Home Jour., etc. totalling 79 Magazine articles, 110 Bk. reviews, 525 newspaper articles; Editor, Mt. Morris Coll. Bull., 1921-23; Bk. Rev. Ed., Ednl. Dept., Platform World, 1929-32; Asst. Ed., Jour. of Expression, 1930-32; Advisory Ed., Speech, 1936-41; Contrib. Ed., Sociatry, 1946-48. Listed in: Internatl. Blue Bk. of World Notables; Amer. Men of Sci.; Biog. Dir. of Amer. Scholars; W. W. in Amer. Edn.; W. W. in Geneal.; W. W. and Why in After-War Edn.; W. W. in the West; W. W. in Ariz.; W. W. for Ariz. Gen. Int.: Established Community Speech Center at Univ. of Ariz., 1934; One of his debaters a Mem. of Natl. Championship Team in Moot Court competitions in N. Y. City, Dec. 13-14, 1951; One of his debaters one of four U. S. students selected in Natl. competitions to make Foreign Debate Tour June-Nov., 1952. Special Int.: The Geneal. of the Cable families (immense research); Human Nutrition; English Phonetics; General Semantics; Parliamentary Law; Univ. Forensics; Arg. and Debate, Speech Comp.; The Tchng. of Speech.

CABOT, Samuel, Pres., Samuel Cabot, Inc., Boston, Mass. **CHEMISTRY.**

CADE, Arthur Rosson, Rsch. Chemist and Bacteriologist, Givaudon, Delawanna, Inc., Delawanna, N. J. **BACTERIOLOGY.**

CADOGAN, William P., Hd., Chem. Rsch. Dept., Processes Rsch., Inc., 2905 Vernon Pl., Cincinnati 19, Ohio. **CHEMICAL ENGINEERING.** b. Revere, Mass., Nov. 2, 1919. s. Cornelius and Mary (Waldron) C. Edn.: Sc.D., M. I. T., 1948. m. Ruth V. Brooks, June 26, 1943. c.: William J.; Jean Katherine; Paula. Exp.: Rsch. Dept., Petroleum Process Design, Standard Oil Co., Ind., 1948-51; Chem. Process Consulting, Processes Rsch., Inc., Cincinnati, Ohio, 1951—. Mem.: Sigma Xi; Tau Beta Pi; Alpha Chi Sigma; Amer. Chem. Soc.; Amer. Inst. of Chem. Engrs. Contrb. to: Indus. and Engrng. Chem. War Record: U. S. Army, 1942-45. Special Int.: Adsorption of Light Hydrocarbon Gases.

CADY, Gilbert Haven, Sr. Geologist and Hd. Coal Div., Ill. State Geol. Survey, 504 W. Oregon St., Urbana, Ill. **COAL GEOLOGY.**

CADY, Osman Horace, Chemist, Los Angeles City Coll., Los Angeles, Calif. **CHEMISTRY.**

CADY, Walter Guyton, Geologist, U. S. Geol. Survey, Gen. Delivery, Montpelier, Vt. **STRUCTURAL GEOLOGY.**

CAGLE, Fred Ray, Prof. of Zool., Chmn., Grad. Dept. of Zool., Tulane Univ., New Orleans, La. **ZOOLOGY.** b. Marion, Ill., Oct. 9, 1915. s. Fred Ray and Agnes (Guiney) C. Edn.: B.E., Southern Ill. Normal Univ., 1937; M.S., Univ. of Mich., 1938;

Ph.D., *ibid.*, 1943. m. Josephine Alexander of Herin, Ill., June 18, 1937. c.: Fred Ray, Jr.; Mary Jo. Exp.: Visiting Lectr. in Zool., Tulane Univ., New Orleans, La., 1946; Assoc. Prof. of Zool., *ibid.*, 1946-49; Dir., Audubon Conservation Camp, 1948 and 1949; Prof. of Zool., Tulane Univ., 1949—; Chmn., Grad. Dept., *ibid.*, 1949—. Mem.: A.A.A.-S.; Sigma Xi; Phi Sigma; Amer. Assn. of Ichthyologists and Herpetologists, etc. Ecol. Monographs; Nat. Hist. Miscellanie; Tenn. Acad. of Sci.; Jour. of Mammal. Ph.D. Dissertation: Growth of the Turtle, *Pseudemys scripta troostii*. War Record: Capt., Air Corps, Aviation Physiol. Listed in: A.M.S.; Who's Who Among Authorities. Special Int.: Systematics, Growth, Herpetology.

CAHILL, George F., Prof. of Urology, Coll. of Physicians and Surgeons, Columbia Univ., N. Y., N. Y. UROLOGY.

CAHN, Lester Richard, Assoc. Prof. of Oral Pathol., Columbia Univ., N. Y., N. Y. PATHOLOGY.

CAINSELL, Charles, Victory Bldg., Ottawa, Canada. GEOLOGY, EXPLORATION.

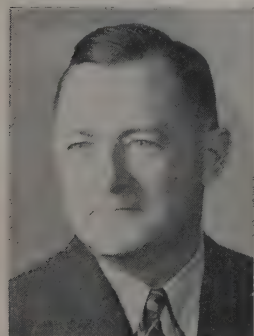
CAIRNS, Robert William, Asst. Dir. of Rsch., Hercules Powder Co., Wilmington, Del. ADMINISTRATION OF INDUSTRIAL RESEARCH AND DEVELOPMENT. b. Oberlin, Ohio, Dec. 23, 1909. s. William DeWeese and Iva (Crofoot) C. Edn.: A.B., Oberlin Coll., 1930; Ph.D., Johns Hopkins Univ., 1932. m. Katharine Kuhn, Oct. 22, 1932. c.: Lindsey Ann; Michael John; Robert Christopher; Stephen William Waldo. Exp.: Rsch. Chemist, Firestone Tire and Rubber Co., summers 1930-33; Fellow, Bartol Rsch. Foundation, 1933-34; Rsch. Chemist, Hercules Powder Co., Wilmington, Del., 1934-40; Asst. to Dir. of Rsch., *ibid.*, 1940-41; Dir., Expt. Station, *ibid.*, 1941-44; Asst. Dir. of Rsch., *ibid.*, 1945—. Hon. Pos.: Chmn., Del. Section, Amer. Chem. Soc., 1943-44; Chmn., Panel on Ammun. and Explosives, Rsch. and Development Bd., 1947-48. Mem.: Amer. Chem. Soc.; Amer. Phys. Soc.; Industrial Rsch. Inst.; Soc. Chem. Indus.; Amer. Inst. of Chem. Engrs.; Comm. Chem. Development Assn.; Phi Lambda Upsilon; Phi Beta Kappa; Sigma Xi. Contrb. to: Jour. Amer. Chem. Soc.; Zeitschrift fur Elektrochemie; Jour. Chem. Edn.; Jour. Indus. and Engrng. Chem.; The Explosives Engr.; Jour. Commerce; Chem. Proc. Special Int.: Chem. Process and New Product Development; Admin. of Chem. Rsch., High Explosives and Propellants.

CALCOTT, William Stansfield, Asst. Chem. Dir. Organic Chemicals Dept., E. I. du Pont de Nemours and Co., Inc., 164 East Ave., Woodstown, N. J. CHEMISTRY.

CALDWELL, A. Lee, Hd. Vitamin Rsch. Dept., Lilly Rsch. Labs., Indianapolis, Ind. PHARMACEUTICAL CHEMISTRY.

CALDWELL, Edward E., Asst. Engr., Western Electric Co., Box 567, Chapel Hill, N. C. PHYSICS.

CALDWELL, Morris Gilmore, Prof. of Sociol., Univ. of Ala., University, Ala. CRIMINOLOGY; JUVENILE DELINQUENCY.



b. Feb. 20, 1893, Arlington, Wis. s. Robert and Lucy (Morrison) C. (dec.). Edn.: A.B., Carroll Coll., Waukesha, Wis., 1926; M.A., Wis., 1927; Ph.D., Wis., 1929; Postgraduate work, Ohio State Univ., 1934. m. Sheila McCready of Ashland, Ohio, July 21, 1934. d. Mr. and Mrs. H. L. McCready; c.: Lucy Ann Caldwell; Morris Robert. Exp.: Prof. of Sociol., Univ. of Ala., 1947—; Assoc. Prof., Univ. of Ala., 1945-46; Natl. Chmn., Coun. on Youth Delinquency, 1943-

45; Director, Wis. Division of Corrections, 1939-43; Prof. of Sociology, Univ. of Ky., 1935-39; Prof. of Sociology and Economics, Westminster Coll.,

1934-35; Prof. of Sociol. and Econ., Ashland Coll., 1929-34. Mem.: Amer. Sociol. Soc.; So. Sociol. Soc.; Amer. Statistical Assn.; A.A.P.S.S.; Natl. Probation and Parole Assn.; Amer. Prison Assn.; Ala. Prob. & Parole Assn.; Natl. Conf. on Family Relations; Ala. Correctional Resch. Assn.; Rural Sociol. Soc.; Alpha Kappa Delta; Pi Gamma Mu; Delta Sigma Nu; Pi Kappa Delta; Univ. Club, Univ. of Ala. Author: A Comparison of the Criminological and Penological Theories of Lombroso, Ferri, and Garofalo, 1927; Male Juvenile Delinquency in Relation to the Home and Comm. Environment, 1929; Social Forces, 1930; Lab. Manual for Introductory Sociol., 1931; Outlines of Collective Behavior, 1932; Child Welfare Legislation of Ky., 1936; Psychiatry, Vol. 1, No. 3, 1938. Contrb. to: J. of Juvenile Rsch.; J. of Crim. Law and Criminol.; Sci. Monthly; Amer. Jour. of Sociol.; Ohio Soc. Sci. Jour.; Soc. Forces; Dir., Univ. of Ala. Rsch. Proj., No. 179, 174, 210. Ph.D. Dissertation: Male Juvenile Delinquency in Relation to the Home and Comm. Environment. Travel: N. Am. Gen. Int.: Conducted Socio. Rsch.; Lectured on Wartime and Post-War Problems of Youth in Middle West and East. Hobbies: Gardening; Athletics. Listed in: Who's Who in Amer.; Biog. Ency. of the World; Who's Who in South and Southwest; Biog. Dir. of Amer. Scholars. Special Int.: Criminology, Corrections, Penology, Juvenile Delinquency, Probation and Parole.

CALDWELL, Elfreda L., Mary Esther, Fla. MEDICAL SCIENCES.

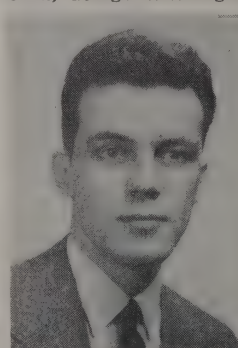
CALDWELL, John E., Hd., Pharmacol. Lab., 1425 W. 42nd St., Chicago, Ill. PHARMACOLOGY.

CALDWELL, Joseph Stuart, Sr. Physiologist, Div. Fruit and Vegetable Crops and Diseases, Bureau of Plant Indus., U. S. D. A., Beltsville, Md. PLANT PHYSIOLOGY.

CALDWELL, Mary Letitia, Assoc. Prof. of Chem., Columbia Univ., N. Y., N. Y. CHEMISTRY.

CALDWELL, Ralph Merrill, Hd., Dept. of Botany and Plant Pathol., Purdue Univ., Lafayette, Ind. PLANT BREEDING.

CALDWELL, Willard Edmund, Assoc. Prof. of Psychol., George Washington Univ., Washington, D. C. COMPARATIVE PSYCHOLOGY; LEARNING THEORY; THEORETICAL EXPERIMENTAL.



b. Flushing, L. I., N. Y., July 10, 1920. s. Howard Eugene and Lillian (Warner) C. Edn.: A.B., Univ. of Fla., 1941; M.A., *ibid.*, 1942; Ph.D., Cornell Univ., 1946. Exp.: Tchng. Asst., Cornell Univ., 1943-46; Prof. and Hd., Dept. of Psychol., Mary Baldwin Coll., Staunton, Va., 1946-47; Asst. Prof. of Psychol., Geo. Washington Univ., Washington Univ., Washington, D. C., 1947-53. Mem.: Amer. Psychol. Assn.; Eastern Psychol. Assn.; A.A.A.S.; Sigma Xi; Phi Chi; Phi Gamma Mu. Contrb. to: Psychol. Rev.; Jour. Psychol.; Jour. Genetic Psychol. Listed in: W. W. in the South and Southwest.

CALEY, Earle Radcliffe, Assoc. Prof. of Chem., Ohio State Univ., Columbus, Ohio. CHEMISTRY.

CALHOUN, Fred Harvey, Prof. of Geol. and Dean, Schl. of Chem. and Geol., Clemson Coll., Clemson, S. C. ECONOMIC GEOLOGY.

CALHOUN, Mary Lois, Prof. and Hd. of Anatomy, Giltner Hall, Mich. State Coll., East Lansing, Mich. HISTOLOGY; HEMATOLOGY; EMBRYOLOGY; TECHNIC. b. Lake City, Iowa, Mar. 7, 1904. d. John C. and Reanna (Johnson) C. Edn.: B.S., Iowa State Coll., 1924; M.S., *ibid.*, 1932; D.V.M., *ibid.*, 1939; Ph.D., *ibid.*, 1945. Exp.: Technician to Instr., Iowa State Coll., 1928-43; Instr., Mich. State Coll., 1943-45; Asst. Prof., *ibid.*, 1945-47;

Assoc. Prof., *ibid.*, 1947-48; Prof. and Hd., *ibid.*, 1948—. Hon. Pos.: Pres., Womens Veterinary Med. Assn., 1952-54. Mem.: Amer. Veterinary Med. Assn.; Womens Veterinary Med. Assn.; A.A.-A.S.; Amer. Assn. Anatomy; Internatl. Assn. Med. Museums; Biol. Photographic Assn.; Phi Kappa Phi; Sigma Xi; Phi Zeta; Gamma Sigma Delta; Sigma Delta Epsilon; Alpha Delta Theta. Contrb. to: Iowa State Coll. Jour. of Sci.; Jour. Inf. Diseases; Proc. Natl. Acad. Sci.; Sci. Special Int.: Digestive Tract of Domestic Fowl; Bone Marrow of the Horse and Cow; Urinary Tract of the Domestic Animals.

CALHOON, Stephen Wallace, Pres. and Rsch. Dir., Stephen Wallace Calhoon, Inc., 196 W. 10th Ave., Columbus 1, Ohio. EXPERIMENTAL PSYCHOLOGY, BIOCHEMISTRY AND ANTI-GAS WARFARE. b. Galena, Ohio, May 20, 1905. s. George W. and Ina (Crosby) C. Edn.: A.B., Otterbein Coll., 1928; M.A., Ohio State Univ., 1931; Sc.D., Univ. of Mich., 1937. m. Helen Jackson, 1929. c.: Stephen Wallace, Jr.; Esther and Ethel; Martha Elizabeth; Hatty C. Exp.: Tehr. and Prin., Ohio H. S., 1928-30; Lab. and Rsch. Asst., Ohio State Univ., Columbus, Ohio, 1931-33; Dean of Edn. and Prof. of Psychol., Marion Coll., Marion, Ind., 1936-37; Bio-Chem. Rsch., Ohio State Univ., Columbus, Ohio, 1939-44; Anti-Gas Warfare Rsch., Columbus, Ohio, 1944; Bio-Chem. Rsch., *ibid.*, 1944—; Pres. and Rsch. Dir., Stephen Wallace Calhoon, Inc., Columbus, Ohio, 1944—. Mem.: Alpha Psi Delta. Contrb. to: Jour. of Exptl. Psychol.; Psychol. Rev.; Jour. of Applied Psychol. War Record: Rsch. in Anti-Gas Warfare with the Chem. Warfare Service. Special Int.: Theory of Dynamic Flow; Bio-Chem. Basis of Mental and Phys. Anomalies; Bio-Chem. Approach to Nutritive Health as a Basis of Mental and Phys. Normality and Improvement.



Private Rsch., Mich 1934-36; Dean of Edn. and Prof. of Psychol., Marion Coll., Marion, Ind., 1936-37; Bio-Chem. Rsch., Ohio State Univ., Columbus, Ohio, 1939-44; Anti-Gas Warfare Rsch., Columbus, Ohio, 1944; Bio-Chem. Rsch., *ibid.*, 1944—; Pres. and Rsch. Dir., Stephen Wallace Calhoon, Inc., Columbus, Ohio, 1944—. Mem.: Alpha Psi Delta. Contrb. to: Jour. of Exptl. Psychol.; Psychol. Rev.; Jour. of Applied Psychol. War Record: Rsch. in Anti-Gas Warfare with the Chem. Warfare Service. Special Int.: Theory of Dynamic Flow; Bio-Chem. Basis of Mental and Phys. Anomalies; Bio-Chem. Approach to Nutritive Health as a Basis of Mental and Phys. Normality and Improvement.

CALINGAERT, George, Dir. of Chem. Rsch., Ethyl Corp., Detroit, Mich. CHEMICAL RESEARCH.

CALIVER, Ambrose, Specialist Higher Education Negroes, U. S. Office of Edn., 1216 Lamont St., Washington, D. C. EDUCATION OF NEGROES.

CALL, Ara O., Manager, Control Labs., Western Condensing Co., 935 E. John St., Appleton, Wis. DAIRY INDUSTRY. b. Dublin, Chih., Mex., Aug. 21, 1909. s. Anson B. and Julia S. (Abegg) C. Edn.: B.S., Iowa State Coll., 1933; M.S., Univ. of Wis., 1944. m. Annie Romney, June 15, 1934. c.: Marjorie; Ara, Jr.; Donald; Duane; Julia Anne; Kathryn Sue. Exp.: Mgr., Queseria Dublin, S. A., Mex., 1933-40; Grad. Asst., Utah State Coll., Logan, Utah, 1941-42; Rsch. Fellow, Univ. of Wis., 1942-44; Mgr., Control Labs., Western Condensing Co., Appleton, Wis., 1944—. Hon. Pos.: Chmn., N. E. Wis. Sect., Amer. Chem. Soc., 1950; Rsch. Comm., Natl. Cheese Inst.; Rsch. Comm., Amer. Dry Milk Inst. Mem.: Amer. Dairy Sci. Assn.; Amer. Chem. Soc.; A.A.A.S.; Wis. Milk Sanitarians; Assn. of Vitamin Chemists; Animal Nutrition Rsch. Council; Gamma Alpha; Phi Sigma. Special Int.: Cheese Making; Whey and Other Milk By-Products; Lactose.

CALL, Leland Everett, Dean and Dir. Emer. of Agri., Kans. State Coll., 1640 Osage St., Manhattan, Kans. AGRONOMY.

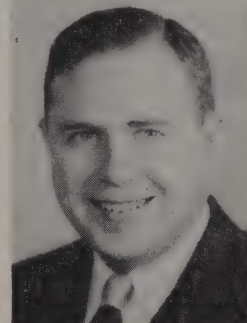
CALLAGHAN, Eugene, N. M. Bureau of Mines & Mineral Resources, N. M. Inst. of Mining & Tech., Socorro, N. M. GEOLOGY.

CALLAGHAN, Robert W., Leader of Food Engrng. Section, General Mills, Inc. Rsch. Dept., 2010 E. Hennepin, Minneapolis, Minn. FOOD ENGINEERING. b. Wabasso, Minn., July 9, 1914. s. P. A. and Bertha (Rector) C. Edn.: B.S., St. Mary's Coll., 1935. m. Bonita Wos, Sept. 2, 1935. c.: Robert; Stephen; Timothy; Mary. Exp.: Instr., Cretin H. S., St. Paul, Minn., 1935-37; Project Leader, General Mills, Inc., Rsch. Dept., Minneapolis, Minn., 1939-44; Leader of Food Engrng. Section, *ibid.*, 1945—. Mem.: Amer. Inst. of Chem. Engrs.; Inst. of Food Technologists.

Special Int.: Development of Continuous Method of Separating Wheat Starch, Hydrolyzing Wheat Gluten and Isolation of Mono-Sodium Glutamate; Cereal Processing, Mfg. of Ready Mixes, Cake, etc.

CALLAHAN, H. D., U. S. Quarry Tile Co., East Sparta, Ohio. CERAMICS.

CALLAHAN, William Paul, Jr., Dir. of Labs., St. Francis Hosp., Wichita, Kans. PATHOLOGY. b. Wichita, Kans., Sept. 20, 1917. s. William Paul and Kathryn (Connor) C. Edn.: B.S., Univ. of Notre Dame, 1939. m. Jo Anne Aylward, June 19, 1941. c.: Patricia Ann; Martha Kathryn; William Paul, III; Joseph Michael. Exp.: Asst. in Pathol., Wash. Univ., Schl. of Med., 1943-44; Instr. in Pathol., *ibid.*, 1944-45; Asst. Chf., Lab. Service, Lawson General Hosp., Atlanta, Ga., 1945-46; Oliver General Hosp., Augusta, Ga., 1946-47; Pathologist, St. Francis Hosp., Wichita, Kans., 1949—; Lectr. in Pathol., Kans. Univ. Schl. of Med., 1951—. Hon. Pos.: Sec. and Treas. of Kans. Soc. of Pathologists, 1950-51. Mem.: Diplomate Amer. Bd. of Pathology; Coll. of Amer. Pathologists; Amer. Soc. Clinical Pathologists; Amer. Assn. of Pathologists and Bacteriologists; Amer. Med. Assn.; Nu Sigma Nu; Sigma Xi; Wichita C. of C. Contrb. to: Arch. of Internal Med.; Cancer; Amer. Jour. Obstetrics and Gynecology; Amer. Jour. Surgery; Jour. Thoracic Surgery; Jour. Clinical Endocrinol.; Medicine; Amer. Jour. Tropical Med.; Proc. Soc. for Exptl. Biol. and Med. War Record: Ist Lt., M. C., 1945-46; Capt., M. C., Oliver General Hosp., 1946-47. Special Int.: Congenital Toxoplasmosis; Tumors of Endocrine Glands; Pulmonary Fibrosis; Exptl. Carcinogenesis of Soft Tissue Sarcomas in Lab. Animals.



1949—; Lectr. in Pathol., Kans. Univ. Schl. of Med., 1951—. Hon. Pos.: Sec. and Treas. of Kans. Soc. of Pathologists, 1950-51. Mem.: Diplomate Amer. Bd. of Pathology; Coll. of Amer. Pathologists; Amer. Soc. Clinical Pathologists; Amer. Assn. of Pathologists and Bacteriologists; Amer. Med. Assn.; Nu Sigma Nu; Sigma Xi; Wichita C. of C. Contrb. to: Arch. of Internal Med.; Cancer; Amer. Jour. Obstetrics and Gynecology; Amer. Jour. Surgery; Jour. Thoracic Surgery; Jour. Clinical Endocrinol.; Medicine; Amer. Jour. Tropical Med.; Proc. Soc. for Exptl. Biol. and Med. War Record: Ist Lt., M. C., 1945-46; Capt., M. C., Oliver General Hosp., 1946-47. Special Int.: Congenital Toxoplasmosis; Tumors of Endocrine Glands; Pulmonary Fibrosis; Exptl. Carcinogenesis of Soft Tissue Sarcomas in Lab. Animals.

CALLINAN, Edward E., 24 E. Fornance St., Norristown, Pa. CERAMICS.

CALLIS, Henry Arthur, Private Practice, 2306 E St., N. E., Washington, D. C. INTERNAL MEDICINE.

CALVERT, Philip Powell, Prof. Emer. of Zool., Univ. of Pa., Philadelphia, Pa. ENTOMOLOGY.

CAMERON, Donald Hoover, Asst. Dir., B. D. Eisen-drath Memorial Lab., 708 Orchard St., Racine, Wis. CHEMISTRY.

CAMERON, George Harvey, Prof. of Physics, Hamilton Coll., CLINTON, N. Y. TEACHING.

CAMERON, Hugh Stuart, Assoc. Prof. of Veterinary Sci., Univ. of Calif. VETERINARY MEDICINE.

CAMERON, Frank Kenneth, Consulting Chem., No. 1, Abernathy Hall, Chapel Hill, N. C. **CHEMISTRY.**



b. Baltimore, Md., Feb. 2, 1869. s. John Malcolm and Elizabeth (Fitz-Patrick) C. Edn.: A.B., Johns Hopkins, 1891; Ph.D., *ibid.*, 1894. m. Katherine Boyle, Sept. 14, 1899 (died, 1903) m. 2nd. Virginia B. Newton, Oct. 6, 1908. c.: Francis and Katherine Elizabeth. Exp.: Rsch. Fellow and Instr. of Chem., Cornell Univ., Ithaca, N. Y., 1894-95; Assoc. Prof. of Chem., Catholic Univ. of Amer., Washington, D. C., 1895-97; Rsch. Asst. and Instr. in Phys. Chem., Cornell Univ., Ithaca, N. Y., 1897-98; Expert, U. S. Dept. of Agri., 1899-1915; Prof. Chem., Univ. of N. C., Chapel Hill, N. C., 1925-46; Prof. Emeritus, 1946—. Mem.: Amer. Chem. Soc.; A.A.A.S.; N. C. Acad. of Sci.; Elishe Mitchell Sci. Soc.; Alpha Chi Sigma; Sigma Xi. Contrb. to: Jour. of Amer. Chem. Soc.; Jour. Ind. Engrng. Chem.; Jour. Phys. and Colloid Chem.; Several Foreign Jours. Author: Les Constituants Mineraux des Solutions des Sols (with James M. Bell), 1907; The Soil Solution, 1911.

CAMERON, Thomas Wright Moir, Prof. of Parasitology, McGill Univ. and Dir., Inst. Parasitology, Macdonald Coll., Que., Can. **PARASITOLOGY.**

CAMP, Carl D., Prof. of Neurol., Univ of Mich., Ann Arbor, Mich. **NEUROLOGY.**

CAMP, Charles Lewis, Prof. and Chmn., Dept. of Paleontol., Dir. Museum of Paleontol., Univ. of Calif., Berkeley, Calif. **VERTEBRATE PALEONTOLOGY.**

CAMP, Frederick Augustus, retired lawyer, Waccabuk, Westchester Co., N. Y.

CAMP, Wendell H., Acad. of Natural Sciences, PLANT TAXONOMY.

CAMPBELL, Carl Graham, Psychometrist, 1 Roland Park Drive, Huntington, West Va. **CHEMISTRY.** b. Gaboon, French Congo, West Africa, January 14, 1885. s. Graham Cox and Laura (Kreiss) C. Edn.: A.B., Univ. of Minn., 1907; A.M., *ibid.*, 1912. m. Nellie Quick of St. Louis, Mo., June 10, 1918. d. Jacob A. Quick. Exp.: Tehng. Schl. in various High Schls. in S. Dak., Minn., and Va., 1907-19; Prof. Chem., Marshall Coll., Huntington, W. Va., 1919-33; Ednl. Adviser, Civilian Conservation Corps, Fifth C. A., 1934-42; Ind. Chemist, Zenith Optical Co., Huntington, W. Va., 1942-45; Pay. and Psychom., Vet. Adminstr., W. Va., 1945—; Score Card for Gen. Chem. Texts; C.C.C. Occupational Dictionary. Hon. Pos.: Chmn. Kanawha Valley Sec., A.C.S.; Pres., W. Va. Acad. of Sci. Mem.: Amer. Chem. Soc.; A.A.A.S.; Phi Delta Kappa; Kappa Delta Pi; Chi Beta Phi; Epsilon Delta. Author: C.C.C. Occupational Dictionary, 1938. Contrb. to: Jour. of Chem. Edn. War Record: First Va. Field Artillery, 1915-17; U.S.P.H.S., 1918. Travel: France and Egypt. Gen. Int.: Hobbies: Gardening; Contract Bridge. Listed in: Amer. Men of Sci. Special Int.: Control and Rsch. in Optical Polishing, Coating and Cleaning.

CAMPBELL, Charles Duncan, Assoc. Prof. of Geol., State Coll. of Wash., Pullman, Wash. **PETROLOGY.**

CAMPBELL, Dan Hampton, Assoc. Prof. of Immunology, Calif. Inst. of Tech., Pasadena, Calif. **IMMUNOLOGY.**

CAMPBELL, Donald Francis, 188 W. Randolph St., Chicago, Ill. **ACTUARIAL.**

CAMPBELL, Donald P., Prof. of Elec. Engrng., Mass. Inst. of Tech., Cambridge, Mass. **ELECTRICAL ENGINEERING.**

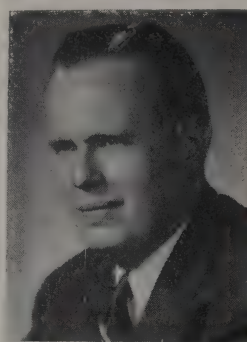
CAMPBELL, Douglas Houghton, Prof. Emer. Botany, Stanford Univ., Stanford, Calif. **BOTANY.**

CAMPBELL, Eva Galbreath, Prof. of Biol., Guilford Coll., N. C. **BACTERIOLOGY.**

CAMPBELL, Frank Leslie, Editor, Scientific Monthly, 1515 Massachusetts Ave., N. W., Washington, D. C. **ENTOMOLOGY.**

CAMPBELL, George W. Jr., 2043 W. 79th St., Los Angeles 47, Calif. **INORGANIC CHEMISTRY.**

CAMPBELL, Ivor E., Supvr. of Inorganic Chem., Chem. Engrng., Battelle Mem. Inst., Columbus, Ohio. **INORGANIC CHEMISTRY AND EXTRACTIVE METALLURGY.**



b. Kenton, Ohio, Oct. 16, 1919. s. Ivor S. and Ethel E. (Blaine) C. Edn.: A.B., Evansville Coll., 1940; Ph.D., Ohio State Univ., 1943; LL.B., Franklin Univ., 1948. m. Agnes Morgan, Oct. 22, 1944. Exp.: Exptl. Engr., Sunbeam Elec. Mfg. Co., 1939-40; Asst., Dept. of Chem., Ohio State Univ., Columbus, Ohio, 1941-43; Rsch. Chemist, Asst. Supvr. of Non-Ferrous Metallurgy and Supvr. of Inorganic Chem. and Chem. Engrng., Battelle Mem. Inst., Columbus, Ohio, 1943—. Mem.: Sigma Xi; Amer. Chem. Soc.; Electrochem. Soc.; Ohio State Bar Assn.; Tau Kappa Alpha; Phi Beta Pi; Pi Epsilon Phi. Contrb. to: Jour. Amer. Chem. Soc.; Jour. of Electrochem. Soc.; Jour. of Metals; Trans., A.I.M.E.; Jour. Chem. Edn. Special Int.: Extractive Metallurgy; Rare Metals; Refractories.

CAMPBELL, Mason Herbert, Dean of the Schl. of Agri. and Dir. of Agri. Expt. Sta., Univ. of R. I., Kingston, R. I. **DAIRY PRODUCTION.**



b. Apr. 8, 1894, Genoa, Ill. s. M. S. and Ida Mary (Gilkerston) C. (both dec.). Edn.: B.S., Univ. of Ill., 1917; M.S., Univ. of Wis., 1918; Ph.D., *ibid.*, 1932. m. Georgia Brownfield of Urbana, Ill., 1919; c. Hubert; Janet. Exp.: Instr., and Assoc. in Dairy Husbandry, Univ. of Ill., 1918-27; Prof. Dairy Production, Univ. of Vt., Burlington, Vt., 1927-41; Production Mgr., Walker-Gordon Lab. of New England, 1941-42; Dean of Schl. of Agri., R. I. St. Coll., and Dir. of the R. I. Agri. Exp. Sta., Kingston, R. I., 1942—. Hon. Pos.: Chmn., Eastern Sec., Amer. Dairy Sci. Assn.; Chmn., Breeds Relation Comm., A.D.S.A. Mem.: Alpha Zeta; Sigma Xi; Gamma Sigma Delta; Phi Sigma; Amer. Dairy Sci. Assn. Ph.D. Dissertation: A Study of the Fat-Globule Size in Milk.

CAMPBELL, Robert Burns, Consulting Geologist, P. O. Box 62, Gulf Hammock, Fla. **PETROLEUM GEOLOGY.**

CAMPBELL, Robert M., Alfred, N. Y. **CERAMICS.**

CAMPBELL, Robert Samuel, Chf. Div. of Range Rsch., U. S. Forest Service, Southern Forest Expt. Station, Mid-City Station, Box 7295, New Orleans, La. **RANGE ECOLOGY.**

CAMPBELL, Roy Elliot, Entomologist in Chg. Truck Crop Insect Lab., U. S. D. A. Bureau Entomol. and Plant Quarantine, 1208 E. Main St., Alhambra, Calif. **ENTOMOLOGY.**

CAMPBELL, Thomas Patterson, Pres., Campbell Investment Co., 367 Albany Hotel, Denver, Colo. **METALLURGY.**

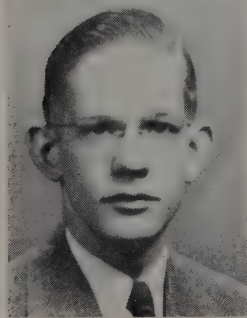
CAMPBELL, William Andrew, Sr. Pathologist, Div. of Forest Pathol., U. S. Dept. of Agri., Schol. of Forestry, Univ. of Ga., Athens, Ga. **FOREST PATHOLOGY AND MYCOLOGY.** b. Paterson, N. J., Jan. 29, 1906. s. Joseph M. and Bertha (Courtright) C. Edn.: B.S., State Tehrs. Coll., 1929; M.A., Univ. of Colo., 1931; Ph.D., Pa. State Coll., 1935. m. Eleanor Ebert, 1936. c.: William A., Jr.; George Ebert; Kathleen. Exp.: Forest Pathologist, Div. Forest Pathol., U.S.D.A., 1936—. Mem.: Mycol. Soc. of Amer.; Amer. Phytopathol. Soc.; Soc. Amer. Foresters. Contrb. to: Mycologia; Phytopathol. and Jour. Forestry. Special Int.: Diseases of Forest Trees; Fungi that Cause Decay and Those Causing Root Rots.

CANFIELD, Donald Treat, Prof. of Elec. Engrng., Purdue Univ., Lafayette, Ind. **ELECTRICAL ENGINEERING; INSTRUMENTATION; ENGINEERING; ECONOMY.** b. Brooklyn, N. Y., Sept. 25, 1895. s. William Chase and Josephine (Beard) C. Edn.: B.S., Worcester Poly. Inst., 1920; M.S., Purdue Univ., 1924; E.E., Worcester Poly. Inst., 1935. m. Dorothy Bartlett, Aug. 25, 1921. c.: Dorothy Ann; William Chase, II. Exp.: Junkes Knitting Machine Co., 1920-21; Staff, Purdue Univ., Lafayette, Ind., 1921—; Consultant, Duncan Elec. Mfg. Co., 1921—. Mem.: A.I.E.E.; A.S.E.E.; Sigma Xi; Phi Gamma Delta; Tau Beta Pi; Scabbard and Blade; Kiwanis. Author: Vector Representation for Elec. Meters, 1931; Legal and Ethical Phases of Engrng., 1936; Business Admin. for Engrs., 1937; Measurement of Alternating Current Energy, 1940; Business, Legal and Ethical Phases of Engrng., 1948. Contrb. to: A.I.E.E.; Engrng. Bull. Purdue. War Record: 2nd Lt., Air Corps, World War I; Major, Civil Air Patrol, World War II; Currently Lt. Col., C.A.P. Special Int.: Energy and Demand Metering.

CANFIELD, Norton, SPEECH AND HEARING.

CANN, Jessie Yereance, Chmn. and Prof., Dept. of Chem., Smith Coll., Northampton, Mass. **PHYSICAL CHEMISTRY.**

CANN, John Rusweiler, Asst. Prof. of Biophys., Univ. of Colo. Med. Center, 4200 E. 9th Ave., Denver 7, Colo. **PHYSICAL CHEMISTRY AS APPLIED TO BIOLOGICAL SYSTEMS.** b. Bethlehem, Pa., Dec. 11, 1920. s. John Henry and Anna (Rusweiler) C. Edn.: B.S., Moravian Coll., 1942; M.S., Lehigh Univ., 1943; M.A., Princeton Univ., 1945; Ph.D., ibid., 1946. m. Minerva Butz, Sept. 7, 1946. c.: Susan Elaine; Richard Louis. Exp.: Raybestos-Mannhattan Rsch. Fellow, Lehigh Univ., 1942-43; Rsch. Asst., Manhattan Project, Princeton Univ., 1943-46; SAM Labs., Carbon and Carbide Chemicals Corp., 1946; Rsch. Assoc., Cornell Univ., 1946-47; Part-time Instr., ibid., 1947; Rsch. Fellow, Calif. Inst. of Tech., 1947-48; Sr. Rsch. Fellow, ibid., 1948-51; Asst. Prof. of Biophys., Univ. of Colo., 1951—. Mem.: Amer. Chem. Soc.; A.A.A.S.; Sigma Xi; Alpha Kappa Alpha. Contrb. to: Jour. Amer. Chem. Soc.; Jour. Immunology; Jour. Biol. Chem.; Jour. Allergy; Sci.; Jour. Phys. and Colloid Chem. Special Int.: Fractionation of Biol. Fluids and Tissues; Electrophoretic Analysis of Protein; Ultracentrifugal Studies on Proteins; Phys. and Immunological Studies on Blood Proteins and Antibodies; Serological Properties of Bacteriophage.



CANNAN, Robert Keith, Prof. and Hd., Dept. of Chem., N. Y. Univ. Med. Coll., N. Y., N. Y. **BIOCHEMISTRY.**

CANNING, Graeme A., 1816 Melrose St., Knoxville, Tenn. **IMMUNOLOGY.**

CANNON, Edward Whitney, Asst. Chf., Applied Math. Div., Natl. Bureau of Standards, 5 Vassar

Circle, Glen Echo, Md. **ELECTRONIC DIGITAL COMPUTERS AND APPLIED MATHEMATICS.** b. Sussex Co., Del., June 20, 1907. s. John Robert and Josephine (Whitney) C. Edn.: B.S., Univ. of Del., 1928; M.S., ibid., 1931; Ph.D., Johns Hopkins Univ., 1935. m. Irene Ellen, 1943. c.: John Edward; Raymond E. Exp.: Student Engr., General Electric Co., 1928-29; Instr. in Elec. Engrng., Univ. of Del., 1929-31; Part-time Instr. at Johns Hopkins Univ., 1931-35; Instr., Asst. Prof., Math. Dept., Univ. of Del., 1935-42; U.S.-N.R., 1942-46; Mathematician, Natl. Bureau of Standards, 1942—. Mem.: Wash. Philos. Soc.; Amer. Math. Soc.; Inst. Math. Statistics; Amer. Physical Soc.; Assn. Computing Machinery; Phi Kappa Tau; Sigma Xi; Phi Kappa Phi; Sigma Tau Pi. War Record. Degaussing Officer, A Naval District, 1942-45; Statistical Engrng. Officer, Bd. Ships, 1945-46. Special Int.: Systems Design and Operation of Automatically-sequenced, Electronic Digital Computers; Logistics Rsch. (Naval Logistics.)

CANNON, Paul Roberts, Univ. of Chicago, Chicago 37, Ill.

CANNON, William Austin, retired, former Lectr. in Botany, Stanford Univ., Stanford, Calif. **BOTANY.**

CANON, Helen, Hd., Dept. of Econ. and Household Mgt., Cornell Univ., Ithaca, N. Y. **ECONOMIC PROBLEMS.**

CANTAROW, Abraham, Prof. of Biochem., Jefferson Med. Coll., 1025 Walnut St., Philadelphia, Pa. **BIOCHEMISTRY.**

CANTRIL, Albert Hadley, Prof. of Psychol. and Dir., Office of Pub. Opinions Rsch., Princeton Univ., Princeton, N. J. **SOCIAL PSYCHOLOGY.** b. Hyrum, Utah, June 16, 1906. s. A. H. and Edna Mary (Meyer) C. Edn.: B.S., Dartmouth, 1928; Ph.D., Harvard, 1931. Hon. Deg.: LL.D., Wash. and Lee Univ., m. Mavis Lyman, June 18, 1932. c.: Albert Hadley, Jr. and Mavis Ann. Exp.: Instr. of Sociol., Dartmouth Coll., Hanover, N. Y., 1931-32; Instr. of Psychol., Harvard Univ., Cambridge, Mass., 1932-35; Asst. Prof. of Edn., Columbia Univ., N. Y. C., 1935-36; Asst. Prof. of Psychol. to Prof. of Psychol., Princeton Univ., Princeton, N. J., 1942—. Hon. Pos.: Past Pres., Inst. for Propaganda Analysis; East. Psychol. Assn. and Soc. for the Study of Psychol. Issues. Mem.: Amer. Psychol. Assn.; World Assn. for Pub. Opinion; Rsch.; Phi Beta Kappa. Author: Psychol. of Radio, with G. W. Allport, 1935; The Invasion from Mars, 1939; The Psychol. of Soc. Movements, 1941; Gauging Pub. Opinion, 1944; The Psychol. of Ego-Involvement, with M. Sherif, 1946; Tensions That Cause Wars, 1949; Pub. Opinion, 1935-46; 1950; The "Why" of Man's Experience, 1950. Contrb. to: Pub. Opinion Quarterly; Jour. Abnormal and Social Psychol.; Psychol. Rev.; Sci.; etc. War Record: Expert Consultant to Secy. of War. Special Int.: Soc. Behavior, Propaganda; Pub. Opinion and Personality.

CANZANELLI, Attilio, Prof. of Exptl. Physiol., Tufts Med. Schl., 416 Huntington Ave., Boston, Mass. **PHYSIOLOGY.**

CAPEN, Samuel P., Chancellor, Univ. of Buffalo, Buffalo, N. Y.

CAPINPIN, Jose Mananjaya, Assoc. Prof. and Hd., Dept. of Botany, Univ. of the Philippines, Coll. of Agri., College, Laguna, Philippines. **CYTOGENETICS AND PLANT GENETICS.** b. Morong, Rizal, Philippines, Oct. 26, 1897. s. Eulogio and Dolores (Mananjaya) C. Edn.: Bach. Agri., Univ. of the Philippines, 1920; B.S., ibid., 1922; M.S., ibid., 1923; A.M., Princeton Univ., 1929; Ph.D., ibid., 1931. m. Dionisia Lapie, Dec. 22, 1923. c.: Marcia L. Exp.: Grad. Asst., Plant Breeding, Univ. of the Philippines, 1920-26; Instr., Plant Breeding, ibid., 1926-28; Sr. Instr., Plant Breeding, ibid., 1928-34; Asst. Prof., Plant Genetics and Botany, ibid., 1934-38; Asst. Prof. of Botany, ibid., 1938-41; Asst. Prof. Agril. Botany, ibid., 1942-47; Assoc. Prof., Botany and Genetics, ibid., 1948—; Assoc. Prof. and Hd. Dept., Agril. Botany, ibid., 1951—; Geneticist, Central Expt. Station, ibid., 1951—.

Hon. Pos.: Pres., Los Banos Biol. Club; Pres., Soc. for the Advancement of Rsch.; Secy., Genetics Section, Natl. Rsch. Council of the Philippines; Geneticist and Plant Breeder, International Rice Commission of F.A.O. Mem.: Sigma Xi; Phi Kappa Phi; Soc. for the Advancement of Rsch.; Philippine Assn. for the Adv. of Sci.; Philippine Statistical Assn.; Los Banos C. of C.; Boy Scouts of the Philippines. Contrb. to: Sci.; Amer. Naturalist; Nature; Cytologia; Philippine Agriculturist; Bull. Natl. Rsch. Council of Philippines; Philippine Jour. Sci. Gen. Int.; Business Mgr., Official Publications, Coll. of Agri., Univ. of Philippines. Special Int.: Cytogenetics; Genetics; Plant Breeding; Genetical Aspects of Human Heredity.

CAPLAN, Samuel James, Supt. and Chf. Chemist, Peerless Soap and Chemical Co., 3850 Oakman Blvd., Detroit, Mich. **CHEMISTRY.**

CAPPS, Forrest Olin, Chf., Edn. Section, Mo. Conservation Commn., Jefferson City, Mo. **SCIENCE, CONSERVATION EDUCATION.**

CAPPS, Joseph Almarin, Clinical Prof. Emer. of Med., Univ. of Chicago, 1215 E. 56th St., Chicago, Ill. **INTERNAL MEDICINE.**

CAPPS, Julian H., Prof. of Chem., Berea Coll., Berea, Ky. **INORGANIC CHEMISTRY.**

CARD, Dana G(eorge), Prof. of Agri. Econ. and Assoc. Econ. in Agri. Prices, Ky. Agri. Exp. Sta., Lexington, Ky. **AGRICULTURAL PRICES AND STATISTICS.** b. Apr. 28, 1898, Lincoln, Nebr. s. Fred Wallace and Addie M. Williams. Edn.: B.S., 1919, M.S., 1925, Ph.D., 1929, Cornell Univ. m.; Helen L. Jones of E. Troy, Pa., Aug. 5, 1927. d.: John R. and Blonde (Calkins) Jones. Exp.: Extension Specialist in Mktg., Ky. Agri. Exp. Sta., 1920-22; Rsch. Asst. in Agri. Mktg., *ibid.*, 1922-28; Asst. Prof. of Agri. Econ., Univ. of Ky., Coll. of Agri., 1928-39; Assoc. Prof. Agri. Econ., *ibid.*,



1929-47; Prof. of Agri. Econ. and Assoc. Econ. in Agri. Prices, *ibid.*, 1947—. Mem.: Amer. Farm Econ. Assn.; Alpha Zeta; Amer. Statistical Assn.; Phi Kappa Phi; A.A.U.P.; Sigma Xi; Rsch. Club, Univ. of Ky.; Univ. of Ky. Faculty Club. Author: Agri. and Forestry, 1945. Ph.D. Dissertation: The Market Price of Burley Tobacco. War Record: S.A.T.C., 1918. Hobbies: Churchwork; Gardening; Statistical Rsch. Listed in: R. U. S.; Who's Who in Ky.; Amer. Men of Sci.; Who's Who in Amer. Special Int.: Agril. Marketing; Prices; Statistical Methods in Agril. Rsch.

CARDER, Frederick, Steuben Div., Corning Glass Works, Corning, N. Y. **CERAMICS.**

CARDIFF, Ira D., Pres., Wash. Dehydrated Food Co., 709 1st Ave., N., Yakima, Wash. **BOTANY, CHEMISTRY.**

CARDON, Philip Vincent, Administrator, Agri. Rsch. Admin., U. S. D. A., 1730 Crestwood Dr., N. W., Washington, D. C. **AGRONOMY.**

CARDWELL, Alvin Boyd, Hd. Dept. of Physics, Kans. State Coll., Manhattan, Kans.; 1502 N. 10th St., Manhattan, Kans. **PHYSICS.** b. Tenn., Oct. 16, 1902; s. John Wesley and Martha (Duff) C. Edn.: B.S., Univ. of Chattanooga, 1925; M.S., Univ. of Wis., 1927; Ph.D., *ibid.*, 1930. m. Edna Zirkle of Tenn., Dec. 27, 1930. d. Dr. and Mrs. G. P. Zirkle. c.: Nancy; Charles Evan. Exp.: Asst. in Phys., Univ. of Chattanooga, 1923-25; Asst. in Phys., Univ. of Wis., 1925-29; Fellow in Phys., Univ. of Wis., 1929-30; Asst. Prof. Phys., Tulane Univ., 1930-34; Assoc. Prof. Phys., Tulane Univ., 1934-36; Prof. Phys., Kans. State Coll., 1936-37; Hd. Dept. of Phys., Kans. State Coll., 1937—; (On leave of Absence, 1944-45-46, as Rsch. Physicist, Clinton Engr.

Works, Tenn. Eastman Corp.); Physicist in Chg., Kans. Agri. Exp. Sta., 1947—. Mem.: Fellow Amer. Phys. Soc.; Fellow, A.A.A.S.; Sigma Xi; Phi Kappa Phi; Gamma Alpha; Gamma Sigma Delta. Author: Kans. Climate and Weather, 1942. Contrb. to: Amer. Jour. of Phys.; Physical Rev.; Proc. of Natl. Acad.; Transactions Kan. Acad. of Sci. Ph.D. Dissertation: Photo-electrical and Thermionic Properties of Iron. Listed in: Amer. Men of Sci.; Who's Who in Amer. Special Int.: Solid State Physics.

CAREY, Cornelia Lee, Assoc. Prof. of Botany, Barnard Coll., Broadway and 119th St., N. Y., N. Y. **BACTERIOLOGY, PHYSIOLOGY.**

CARHART, Raymond Theodore, **SPEECH AND HEARING.**

CARLETON, Paul Whittier, Rsch. Chemist and Hd., Patent Div., Jackson Lab., E. I. du Pont de Nemours and Co., Box 525, Wilmington, Del. **CHEMISTRY.**

CARLISLE, Chester L., Clinical Dir., Veterans Admin. Hosp., Palo Alto, Calif. **NEUROPSYCHIATRY.**

CARLISLE, James Mallory, Med. Dir., Merck and Co., Inc., Rahway, N. J. and Asst. Prof. of Industrial Med., Temple Univ. Med. Schl. **INDUSTRIAL MEDICINE AND CLINICAL RESEARCH.**



b. Thomasville, Ga., Jan. 20, 1904. s. James Mallory and Annie Belle (Carroll) C. Edn.: A.B., Univ. of Ala., 1930; M.D., Temple Univ., 1932. Hon. Deg.: LL.D., Natl. Univ. of Ireland, Dublin, 1951. m. Lillian Burt, Aug. 16, 1934. c.: James Mallory; Margaret Anne; Janet Ruth and Lillian Dixie. Exp.: Plant Physician, Merck and Co., Inc., Rahway, N. J., 1934-36; Med. Dir., *ibid.*, 1936—; Asst. Prof. of Industrial Med., Temple Univ. Med. Schl. Hon. Pos.: Pres., N. J. State Bd. of Health, 1943-44; Commnr., *ibid.*, 1942-44; Pres., N. J. Assn. of Ind. Phys. and Surg.; Dir., Amer. Acad. of Occupational Med. Mem.: A.A.A.S.; Amer. Geriatrics Soc.; Endocrine Soc.; Amer. Pub. Health Assn.; N. Y. Acad. of Med.; A.M.A.; N. Y. Acad. of Sci.; Union Co. Med. Soc.; Amer. Indus. Hygiene Assn.; Alpha Kappa Kappa; Alpha Tau Omega; Rotary Internat.; Mason. Contrb. to: Jour. Med. Soc. of N. J.; Jour. A.M.A.; Indus. Med.; Archives of Phy. Med.; Sight-Saving Rev.; Boletin del Colegio Medico de la Habana; Prin. and Practice of Indus. Med., edited by Fred Wampler, 1943; Internal Med., Musser and Wohl, 1951. Special Int.: Indus. Med.

CARLSON, Anton Julius, Frank P. Hixon Distinguished Service Prof. Emeritus, Univ. of Chicago, Chicago, Ill. **PHYSIOLOGY.** b. Jan. 29, 1875, Sweden. s. Carl Jakobson and Hedvig (Anderson) C. Edn.: A.B., Augustana Coll., 1898; A.M., *ibid.*, 1899; Ph.D., Stanford Univ., 1902. Hon. Deg.: M.D.; Sc.D.; LL.D. m. Esther Naomi Shogren, 1905. c.: Robert Bernard; Alice Esther; Alvin Julius. Exp.: Rsch. Assoc., Carnegie Inst., Stanford Univ., 1903-04; Assoc., Asst. Prof. and and Prof. and Chmn., Dept. of Physiol., Univ. of Chicago, Chicago, Ill., 1904-40;



Frank P. Hixon Distinguished Service Prof. of Physiol. Emeritus, *ibid.*, 1940—. Mem.: Natl. Acad. of Sci.; Natl. Rsch. Coun.; A.M.A.; Amer. Physiol. Soc.; Past Pres.; Amer. Inst. of Nutrition; Amer. Inst. of Chemists; Past Pres., A.A.A.S.; Pres.,

Amer. Biol. Soc.; Amer. Physiol. Soc.; Fed. of Amer. Soc. for Exptl. Biol.; Inst. of Med.; A.A.U.P.; etc. Author: Control of Hunger in Health and Disease; The Machinery of the Body. Contrb. to: Over 200 Rsch. Reports. Special Int.: Physiol.

CARLSON, John Wilford, Assoc. Agronomist, Bureau Plant Indus., U. S. D. A., 87 N. Fifth East St., Logan, Utah. AGRONOMY.

CARLSSON, Victoria Emma, Prof. of Health and Hd., Health Tchng., Women's Coll., Univ. of N. C., Greensboro, N. C. HEALTH, CHEMISTRY.

CARMAN, J. Ernest, Prof. and Chmn., Dept. of Geol., Ohio State Univ., Columbus, Ohio. GEOL-OGY.

CARMICHAEL, Berton Eugene, Farm Mgr., Monocacy Farms, Frederick, Md. AGRICULTURE.

CARMICHAEL, Dan J., Chmn., Forward Planning Com., Merdith Publishing Co., Des Moines, Iowa. BUSINESS MANAGEMENT; A MARKETING AND STATISTICS. b. Apr. 13, 1911, Davenport, Ia. s. Joe and Florence (Lynch) C. Edn.: B.C.S., Drake Univ., 1932; M.B.A., Harvard Univ., 1934. m. Mary Virginia Moran of Melrose, Ia., Sept. 8, 1937. d. Dr. and Mrs. T. A. Moran. c.: Shirley M.; Linda C.; Sheila M. Exp.: Hd. Econ. Dept., Dowling Jr. Coll., Ia., 1934-36; Prof. Bus. Admin., Hd. Dept. Marketing, Coll. of Bus. Admin., Drake Univ., Des Moines, Ia., 1936-40; Prof. of Marketing and Hd. Dept., Boston Coll., Chestnut Hill, Mass., 1940-46; Leave of Absence, Lt. Comdr., U. S. Navy, 1943-45; Lectr., Marketing, Coll. of Bus. Admin., Drake Univ., 1947; Rsch. Assoc., Meredith Publishing, Des Moines Iowa, 1947-50; Chmn. of Forward Planning Com., ibid., 1950—. Mem.: Amer. Statistical Assn.; Amer. Marketing Assn.; Alpha Tau Omega; Des Moines Advertising Club. Contrb. to: Jour. of Marketing. War Record: (see above). Listed in: A.M.S. Special Int.: Marketing Rsch. and Statistics.

CARMICHAEL, Leonard, Secy., Smithsonian Inst., Washington 25, D. C. PSYCHOLOGY. b. Germantown, Philadelphia, Pa., Nov. 9, 1898. s. Thomas Harrison and Emily Henrietta (Leonard) C. Edn.: B.S., Tufts Coll., 1921; Ph.D., Harvard, 1924. Hon. Degs.: L.H.D., Univ. of Maine, 1949; Sc.D., Tufts, 1937; Sc.D., Brown Univ., 1952; LL.D., Boston Univ., 1938; LL.D., Colgate Univ., 1938; LL.D., Northeastern Univ., 1941; LL.D., R. I. State Coll., 1942; LL.D., St. Lawrence Univ., 1943; LL.D., Boston Coll., 1951; LL.D., Harvard Univ., 1952; Litt.D., Portia, 1939; Litt.D., Clark Univ., 1953. m. Pearl Kidston, June 30, 1932. c.: Martha. Exp.: Part-time Instr. in Biology, Tufts Coll., 1923-24; Instr. of Psychology, Princeton Univ., 1924-26; Asst. Prof., ibid., 1926-27; Assoc. Prof. of Psychology, Brown Univ., Providence, R. I., 1927-28; Prof., ibid., 1928-36; Director Psychology Lab., ibid., 1927-36; Director Lab. of Sensory Physiology, ibid., 1934-36; Chmn., Dept. of Psychol. and Dean Faculty of Arts and Sci., Univ. of Rochester, 1936-38; Pres., Tufts Coll. and Dir. of Lab. of Sensory Psychol. and Physiol., 1938-52; Secy., Smithsonian Inst., Washington, D. C., 1953—; Lectr., Harvard Univ., 1927-31; Visiting Prof., Exptl. Psychol., Clark Univ., 1931-32; Visiting Prof. in Psychol., Harvard Univ. and Radcliffe Coll., 1935. Nonacad. appts.: Natl. Roster of Sci. and Specialized Personnel, Organizer and Dir., 1940-44; Natl. Resources Planning Bd., Mem. Sci. Comm., 1941-43; Mem. and Chmn. Bd. of Sci. Dir., Yerkes Lab. of Primate Biol., 1942—; Chmn., Comm. of Sci. Rsch. Personnel, 1941-43; National Research Council: Chmn., Section on Specialized Development Periods, 1935-41; Div. Anthro. and Psychol., Chmn., 1941-44; Comm. on Sel. and Training of Aircraft Pilots, 1940-45; Mem. Comm. on Ser. Personnel Sel. and Training, 1942-45; Soc. for

Rsch. in Child Dev., 1941-44; Emergency Comm. in Psychol., 1941-44; Comm. on Manpower, 1952—; Comm. on Ednl. Policies, Div. of Biol. and Agri., 1952—; Applied Psychol. Panel, Office of Sci. Rsch. and Dev., 1942-45; First U. S. Civil Serv. Region (Boston), Regional Comm. on Admin. Personnel, 1945—; Admin. Special Comm. on Voc. Rehabilitation, Edn. and Trng. Problems, Vet. Admin., Washington, D. C., 1945—; Naval Rsch. Adv. Comm., 1947—; Chmn., Amer. Coun. on Edn., 1947-48; Dir. of Human Resources, Natl. Security Resources Bd., 1948; Mem., Internatl. Union of Scientific Psychol., 1948—; Delegate of Amer. Coun. on Edn. to Attend As Observer, Congress of Univ. of B. E. at Oxford Univ., England, 1948; Adv. Comm. to Natl. Sci. Register, 1950—; Pres., Assn. of N.R.O.T.C. Coll., 1950-51; Chmn., Comm. of New England Natl. Planning Assn., 1950—; Mem., and Vice-Chmn., Harvard Found. for Adv. Study and Rsch., 1951—; Comm. on Spec. Personnel, Office of Defense Mobilization, 1951—; Chmn., Comm. on Area and Lang. Personnel Needs, Office of Defense Mobilization, 1952-53; Comm. on Human Resources, Rsch. and Dev. Bd., 1952—; Mem., Bd. of Scientific Dir., Roscoe B. Jackson Mem. Lab., 1952—; Defense Dept., The Adv. Comm. on Ednl. Opportunities in the Armed Forces, 1952—; Trustee, Univ. of Mass., Dean Acad. and Jr. Coll., Mary C. Wheeler Schl., and Winsor Schl.; Vice-Pres., Ednl. Rsch. Corp., 1950-52; Dir., Somerset Savings Bank, 1942-49; Boston Five Cents Saving Bank; Mem. Bd. of Mngrs., Boston Dispensary. Mem.: Natl. Acad. of Sci.; Amer. Philos. Soc.; Amer. Psychol. Assn.; Soc. of Exptl. Psychol.; R. I. Soc. for Mental Hygiene; Amer. Physiol. Soc.; Soc. for Exptl. Biol. and Med.; Phi Beta Kappa; Sigma Xi; Alpha Omega Alpha; Theta Delta Chi; Defense Orientation Conf. Assn.; Fellow A.A.A.S.; Amer. Acad. of Arts and Sci.; Mass. Psychol. Assn.; Mem. Sons of Amer. Revolution; Newcomen Soc.; Foreign Mem. of the Soc. Francaise de Psychologie; Mem., Assembly of Internatl. Union of Scientific Psychol.; Mem., Ergonomics Rsch. Soc. of England; Providence Art; St. Botolph, Examiner; Algonquin; Century Assn.; Cosmos Club; Country Club of Brookline, Mass. Special Int.: Psychol.

CARMICHAEL, Emmett B., Prof. of Biochem., Med. Coll. and Schl. of Dentistry, Univ. of Ala., Birmingham 5, Ala. BIOCHEMISTRY. b. Shelbyville, Mo., Sept. 5, 1895. s. George Frank and Amelia Grant (Tingle) C. Edn.: B.A., Univ. of Colo., 1918; M.S., ibid., 1922; Ph.D., Univ. of Cincinnati, 1927. m. Lelah Marie Van Hook, Nov. 23, 1921. Exp.: Instr., Organic Chem., Univ. of Colo., Denver, Colo., 1919-24; Instr. of Biochem., Univ. of Cincinnati, Cincinnati, Ohio, 1924-26; Chf. Bacteriol., William S. Merrell Co., Cincinnati, Ohio, 1926-27; Asst. Prof. of Physiol. Chem., Univ. of Ala. and Hd. Dept., ibid., 1927; Assoc. Prof. to Prof., ibid., 1928-45; Prof. of Biochem., ibid., 1945—; Chmn. Dept., ibid., 1945—. Mem.: Sigma Phi Epsilon; Alpha Chi Sigma; Gamma Sigma Epsilon; Sigma Xi; Phi Beta Pi; Acacia; Alpha Epsilon Delta; Amer. Med. Assn.; A.A.A.S.; Soc. of Exptl. Biol. and Med.; Amer. Chem. Soc.; Assn. for Study Internal Secretions; Amer. Soc. Biolog. Chemists; Amer. Physiol. Soc.; Internatl. Coll. of Anesthetists; Amer. Inst. Chem.; Amer. Assn. Hist. Med. Contrb. to: Proc. of Soc. of Exptl. Biol. and Med.; Amer. Assn. Clinical Chemists; Amer. Bd. Clinical Chemists; Trustee Gorgas Scholarship Foundation and Chmn. of Judges; Jour. Pharmacol. and Exptl. Therap.; Amer. Jour. of Physiol.; Physiol. Ecol.; Sci.; Jour. of Med. Assn. State of Ala.; Ecol.; Jour. Biol. Chem. Special Int.: Toxic Proteins; Enzymes; Anesthetics; Demerol and Seasonal Variation in Toxicity of Drugs.

CARMICHAEL, Peter Archibald, Prof. of Philos., Louisiana State Univ., Baton Rouge, La. PHILOSOPHY.



CARNEY, E(dward) Seaton, Prof. of Chem., Seton Hall Univ., 97 Woodbine Ave., Newark 18, N. J.



PHYSICAL CHEMISTRY. b. Jackson, Mich., July 28, 1901. s. Henry M. and Amanda (Grossman) C. Edn.: A.B., Kalamazoo Coll., 1923; A.M., Clark Univ., 1924; Ph.D., Brown Univ., 1928. Exp.: Leeds & Northrup Co., Metallurgist, 1928-29; Amer. Agricultural Chemical Co., 1930; Personal Bus. Enterprises, 1930-46; Keystone Jr. Coll., Instr. in Chem., 1946—; La. Poly. Inst., Assoc. Prof. Phys., 1947; Hartwick Coll., Assoc. Prof. and Acting Hd. Chem. Dept., 1947-48; Prof. and Hd.

Chem. Dept., 1948-49; Staff Mem. Chem. Dept., Shurtleff Coll., 1949-51; Prof. of Chemistry, Seton Hall Univ., South Orange, New Jersey, 1951—. Mem.: Sigma Xi; Amer. Chem. Soc.; Amer. Assn. Phys. Tchrs.; A.A.A.S.; Amer. Institute of Phys. Assn. Phys. Tchrs.; A.A.A.S.; Amer. Inst. of Phys. Contrb. to Jour. Amer. Chem. Soc. Ph.D. Dissertation: Compounds of Germanium and Hydrogen: Some of Their Reactions and Derivatives. I. Preparation of Monogermane. II. Sodium Trihydrogermanides. Hobbies: Amateur Dramatics; Music. Listed in: Amer. Men of Sci. Special Int.: Physical Chem.; Metal-Organic; Metallurgy.

CARNEY, Thomas P., Dir., Organic Chem. Rsch., Eli Lilly and Co., Indianapolis, Ind. **ORGANIC CHEMISTRY.** b. DuBois, Pa., May 27, 1915. s. James P. and Margaret (Senard) C. Edn.: B.S., Univ. of Notre Dame, 1937; M.S., Pa. State, 1939; Ph.D., ibid., 1941; Univ. of Wis., 1943-44. m. Mary E. McGuire, Oct. 3, 1942. c.: Thomas P., Jr.; Sheila; James. Exp.: Reilly Tar and Chem. Co., Indianapolis, Ind., 1937-38; 1941-43; Staff, Eli Lilly and Co., Indianapolis, Ind., 1944—. Mem.: Sigma Xi; Amer. Chem. Soc.; N. Y. Acad. of Sci.; Phi Lambda Upsilon; Alpha Chi Sigma. Author: Lab. Fractional Distillation, 1949. Contrb. to: Jour. Amer. Chem. Soc.; Jour. Pharmacol. and Exptl. Therapeutics; Medicinal Chem. Monographs. Special Int.: Fractional Distillation; Local Anesthetics; Med. Chem.

CAROTHERS, E. Eleanor, 134 Ave. O., E., Kingman, Kans. **ZOOLOGY.**

CAROTHERS, R. B., H. C. Spinks Clay Co., Inc., Box 829, Paris, Tenn. **CERAMICS.**

CARPENTER, Arthur, Pres., Trident Labs., Inc., 282 W. 55th St., N. Y., N. Y. **ARCHAEOLOGY.**

CARPENTER, Arthur Howe, Prof. Emer., Ill. Inst. of Tech., 81 Bell Ave., La Grange, Ill. **METALLURGY, ASTRONOMY.**

CARPENTER, Carlos Lab., Prof. of Plant Sciences, Syracuse Univ., Syracuse, N. Y. **MYCOLOGY.**

CARPENTER, Stanley J., Chf., Entomol. Section, 6th Army Med. Lab., Ft. Baker, Calif. **MEDICAL ENTOMOLOGY.** b. Omer, Ky., Dec. 9, 1904. s. James Tilden and Dora (McClure) C. Edn.: B.S., Milligan Coll., 1930; M.S., Univ. of Tenn., 1932. m. Lorelie Tait, Dec. 20, 1945. c.: Barton. Exp.: Prof. of Zool. and Hd. Dept. of Biol., Harding Coll., Searcy, Ark., 1934-37; Med. Entomol. and Chf. Malaria Investigations Div., Ark. State Health Dept., 1937-41; Entomol., Sanitary Corps, U. S. Army, 1941-46; Assoc. Prof. of Entomol., Rutgers Univ., N. J., 1947; Entomol.,



Regular Army, 1947—.

Mem.: Amer. Soc. of

Tropical Med. and Hygiene; Amer. Mosquito Control Assn.; Amer. Assn. of Econ. Entomol.; Calif. Mosquito Control Assn.; Amer. Soc. of Prof. Biol. Author: The Mosquitoes of the Southern U. S., East of Okla. and Tex., 1946. Contrb. to: Jour. of Natl. Malaria Soc.; Jour. of Econ. Entomol.; Mosquito News; Proc. of the Entomol. Soc. of Wash.; Amer. Jour. of Tropical Med. Special Int.: Biol. and Taxonomy of Culicidae.

CARPENTER, Thorne Martin, retired, 27 Market St., Foxboro, Mass. **NUTRITION.**

CARR, Anna M., **SPEECH AND HEARING.**

CARR, Emma Perry, Prof. of Chem., Mount Holyoke Coll., South Hadley, Mass. **PHYSICAL CHEMISTRY.**

CARR, Francis Easton, Prof. of Math. and Astron., Oberlin Coll., Oberlin, Ohio. **MATHEMATICS, ASTRONOMY.**

CARR, Henry P., Mem. of Staff, Rockefeller Foundation, 49 W. 49th St., N. Y., N. Y. **PUBLIC HEALTH.**

CARR, Malcolm Wallace, Attending Oral Surgeon, St. Luke's Metropolitan Polyclinic, 52 E. 61st St., N. Y., N. Y. **ORAL SURGERY.**

CARR, Marvin St. Clair, Prof. of Chem., Mich. State Normal Coll., Ypsilanti, Mich. **CHEMICAL ENGINEERING.** b. Whitehall, Mich., Dec. 13, 1894. s. Harrison and Susie (Stearns) C. Edn.: A.B., Mich. State Normal Coll., 1922; B.S.E., Univ. of Mich., 1926; Ph.D., ibid., 1929. m. Helen E. Hornberger of Ann Arbor, Mich., Sept. 17, 1921. d. John J. and Kathryn Hornberger. c.: Robert Stearns. Exp.: 1914-16, 1917-18, Supt. of Schl., Ida, Mich.; 1916-17, Instr. Sci., Gaylord, Mich.; 1918, Signal Officers Res. Corps 2nd Lt. Aviation Sect.; 1921-25, Headmaster Hudson Schl. for Boys, Detroit Inst. of Tech.; 1925-29, Instr. Dept. Chem. Engrng., Univ. of Mich., Ann Arbor; 1929-47, Rsch. and Dev. Engr., Electrochem. Dept., E. I. duPont de Nemours and Co.; 1947-49, Asst. to Dir., Rsch. Devel. Dept., Wyandotte Chem. Corp.; 1949—, Appointed Prof. of Chem., Mich. State Normal Coll. Mem.: Amer. Chem. Soc.; Engrng. Soc. of Detroit; Sigma Xi; Tau Beta Pi; Phi Lambda Upsilon; Iota Alpha; Phi Delta Pi; Alpha Chi Sigma; Kiwanis; Niagara Club. Ph.D. Dissertation: Gaseous Explosions—Effect of Tetraethyl Lead on Rate of Rise of Pressure. War Record: World War I; Enlisted Jan., 1918; Commissioned 2nd Lt. Sig. Officers Res. Corps Aviation Sect. Travel: Can. Gen. Int.: Rsch. for Ind. Corp. along lines of Electrodeposition of sodium from molten salt baths; prepn. of vinyl cyanide; conversion of furfural to adiponitrile via furane and tetrahydrofuran and other Indust. Rsch. projects. Hobbies: Clocks; Fishing; Bowling. Listed in: Am. Men of Sci.; Who's Who in the Chem. Ind.; Who's Who in Engrng.

CARR, T. DeWitt, Dean, Schl. of Engrng. and Architecture, Univ. of Kan., Lawrence, Kan. b. Huntington, W. Va., Dec. 8, 1893. s. Thomas Milo and Sarah Alice (Rankin) C. Edn.: Denver Bus. Schl., Denver, Colo.; Huntington, W. Va., H. S.; Marshall Coll., Huntington, W. Va.; U. S. Naval Acad. Preparatory Schl., Annapolis, Md.; B.S., U. S. Naval Acad., U. S. Naval War Coll., Newport, R. I. m. Leta McLendon Adams of Dallas, Texas, Dec. 5, 1925; d. H. H. Adams. Exp.: Ensign, Lt. i.g., Lt., Lt. Comdr., Comdr., Capt., U. S. Navy; Sr. Asst. Engrng. Officer, U. S. S. Wyo., U. S. Navy Submarine Schl.; Naval Aide at Whitehouse, Chief Engr., U. S. S. West Va., 1932-35; Prof. in Engrng., U. S. Naval Acad., Operated Officers and Enlisted Men Engrng. Schls., 1935-38; Dean, Schl. of Engrng. and Architecture, Univ. of Kan., Lawrence, Kans., 1947—. Mem.: Am. Soc. for Engrng. Edn.: Kans. Engrng. Soc.; Tau Beta Pi; Sigma Tau; Army and Navy Club; Univ. Club, Kans. City, Mo. War Record: Engrng. Officer, World War I, Exec. Officer, U. S. Naval Trng. Sta., Great Lakes, Ill. and South West Pacific Duty in World War II. Travel: British Isles; France; Spain; Italy; Australia; New Guinea; Bermuda; Barbados Islands; Brazil; Argentina; Canada; Mexico; Hawaii. Gen. Int.: Won Fleet Trophy in both Engrng. and Athletics. Hobbies: Golf; Fishing.

CARRAGAN, George Howard, Prof. of Physics, Rensselaer Poly. Inst., Troy, N. Y. OPTICS.

CARRIER, George, Harvard Univ., Cambridge, Mass. ELASTICITY AND VIBRATION.

CARRIKER, Melbourne Romaine, Asst. Prof. of Zool., Rutgers Univ., New Brunswick, N. J.



ESTUARINE ECOLOGY, MORPHOLOGY, FUNCTIONING AND ECOLOGY OF THE GASTROPODS, ECOLOGY OF THE LARVAE OF VENUS AND OSTREA. b. Santa Marta, S. Amer., Feb. 25, 1915. s. Melbourne Armstrong and Myrtle Carmelita (Flye) C. Edn.: B.S., Rutgers Univ., 1939; Ph.M., Univ. of Wis., 1940; Ph.D., ibid., 1943. m. Meriel Roosevelt, 1943. c.: Eric; Bruce; Neal. Exp.: Rsch. Asst., Univ. of Wis., Madison, Wis., 1939-41; Instr. to Prof., Rutgers Univ., New Brunswick, N. J., 1946—.

Mem.: A.A.A.S.; A.A.U.P.; Amer. Micros. Soc.; Amer. Soc. of Limnol. and Oceanography; Amer. Soc. of Zool.; Atlantic Estuarine Rsch. Soc.; Ecol. Soc. of Amer.; Soc. of Systematic Zool.; Alpha Zeta; Phi Sigma; Sigma Xi; Sigma Delta Pi. Contrb. to: Amer. Microscopical Soc. Trans.; Biol. Bull.; Ecol.; Ecol. Monographs; Nautilus; Amer. Midland Naturalist; Trans., Wis. Acad. of Sci., Arts and Letters. Special Int.: Ecol., Invertebrate Morphol. and Function.

CARROLL, Franklin Bache, Hd., Dept. of Sci., Frankfort H. S., Philadelphia, Pa.; 17 Elmwood Ave., Narberth, Pa.

CARROLL, Hugh Stanley, Advisor to Korean Govt. on Chem. Indus. and Agril. Chemicals, UNCACK



8201 A. U., APO 59, Postmaster, San Francisco, Calif. ORGANIC CHEMISTRY; CHEMICAL PROCESS INDUSTRIES. b. Milwaukee, Wis., Mar. 31, 1896. s. Charles and Anna (O'Connor) C. Edn.: B.S., Univ. of Notre Dame, 1918; M.S., ibid., 1920; Ph.D., Kans. State Coll., 1931. m. Fay Powers, Oct. 8, 1928. c.: John; Mary; William; Patrick; Bernard. Exp.: Prof. of Chem., Dominican Coll., San Rafael, Calif., 1931-43; Chem. Warfare Officer, Civil Defense, 1942-43;

Rsch. Chemist, Manhattan Project, Univ. of Calif., Berkeley, Calif., 1943-45; Engr., Amer. Distilling Co., 1945-46; Chf., Chemical Industries, Occupation of Japan, 1946-52; Advisor to Korean Govt. on Chem. Indus. and Agril. Chems., 1952—. Mem.: Amer. Chem. Soc.; A.A.A.S.; Amer. Soc. of Military Engrs.; Amer. Assn. of Atomic Scientists; Amer. Philosophical Soc.; Knights of Columbus. Special Int.: Chem. of Acetylene; Chem. of Uranium; Chem. of Alginic Acid.

CARROLL, Isaac Squire, Assoc. Prof. of Math. and Edn., Syracuse Univ., Syracuse, N. Y. MATHEMATICS.

CARROLL, Joseph Francis, Hd., Physics Dept., Regent, Coll. of Engrng., Marquette Univ., Milwaukee, Wis. PHYSICS.

CARROLL, Richard William, Hd., Nutrition Rsch. Div. The Quaker Oats Co., Rsch. Laboratories, 345 E. 25th St., Chicago 16, Ill. BIOCHEMISTRY. b. Fremont, Nebr., Dec. 15, 1917. s. Henry Stewart and Stella (Fleming) C. Edn.: M.D., Univ. of Nebr., 1943. m. Marjorie McDaniel, 1941. c.: Richard W., Jr.; Allan H.; Scott E. and Janet E. Exp.: Rsch. Biochemist, Quaker Oats Co., Chicago,

Ill., 1943-46; Hd., Nutrition Rsch. Div., Quaker Oats Co., Chicago, Ill., 1946—. Mem.: Assn. Vitamin Chemists; Amer. Chem. Soc.; A.A.A.S. Contrb. to: Sci.; Methods of Vitamin Assay, 1951. Special Int.: Nutritional Biochem.

CARROLL, Robert Leon, Chmn. Physics Dept., Fairmont State Coll., Fairmont, West Virginia. MATHEMATICS PHYSICS.



b. Snohomish Co., Washington, Jan. 15, 1910. s. Lillie M. (Ritchie) C. Edn.: A.B., Fairmont State Coll., 1933; M.S., W. Va. Univ., 1940; Ph.D., ibid., 1944. m. Julia Elizabeth Shanley, Oct. 13, 1944. c.: Cynthia Rae and Susette Victoria. Exp.: Tchr. of Sci. and Math., Gary H. S., Gary, W. Va., 1937-39; Grad. Asst. and Tech. Fellow, Physics Dept., W. Va. Univ., Morgantown, W. Va., 1940-44; Guided Missile Rsch., Bureau of Standards, Washington, D. C., 1944-45; Assoc. Project Leader, Proximity Fuze Rsch., ibid., 1945-46; Physics Dept. Chmn., Fairmont State Coll., Fairmont, W. Va., 1946—. Mem.: Sigma Xi; Sigma Pi Sigma; W. Va. Acad. of Sci.; Lambda Delta Lambda. Special Int.: Electronics and the Theory of Control of Atomic Energy for Propulsion of Aircraft and Guided Missiles.

CARROLL, William Ernest, Assoc. Dir., Ill. Agri. Expt. Station, Univ. of Ill., Urbana, Ill. ANIMAL SCIENCE.

CARRUTH, Willis Lee, Prof. of Chem., 2913 N. Adler, Tacoma 7, Wash. PHYSICAL CHEMISTRY. b. Summit, Miss., Feb. 21, 1909. s. Samuel and Myrtis (Kenna) C. Edn.: B.A., Asbury Coll., 1935; M.S., Univ. of Ky., 1938. m. Ruth Chaney of Chicago, Ill., June 25, 1937; d. J. W. and Ida F. Chaney; c.: Willis Lee, II; James Frederick. Exp.: Instr., Asbury Coll., 1935-36; Instr., Univ. of S. Dak., 1936-38; Prof., Lewis and Clark Coll., 1938-44; Registrar and Administrative Sec. of the Faculty, Lewis and Clark Coll., 1942-44; Prof., Neb. Wesleyan Univ., Lincoln, Neb., 1944-46; Prof., Coll. of Puget Sound, Tacoma, Wash., 1946—. Mem.: A.A.A.S.; Amer. Chem. Soc.; Sigma Xi. Contrb. to: Analytical Edition, Indust. and Engrng. Chem. Travel: Can. Hobby: Photography. Listed in: Amer. Men of Sci.; Who's Who in Methodism. Special Int.: Electro Chem. and Applications to Analytical Chem.

CARRUTHERS, John L., Lord Hall, Ohio State Univ., Columbus, Ohio. CERAMICS.

CARSNER, Eubanks, Prin. Pathologist, Div. Sugar Plant Investigations, Bureau of Plant Indus., Soils and Agril. Engrng., U. S. D. A., P. O. Box 31, Riverside, Calif. PLANT PATHOLOGY.

CARSON, William J., Preceptor Surgery, Univ. of Wis., 425 E. Wisconsin Ave., Milwaukee, Wis. SURGERY.

CARTER, Bettina Bush (Mrs. Daniel F. Jackson), Med. Rsch. Dir., Veterans Admin. Hosp. and Asst. Prof. of Bacteriol., Coll. of Med., N. Y. Univ., Syracuse 10, N. Y. IMMUNOLOGY. b. Woburn, Mass., Sept. 4, 1916. d. Arthur Dermont and Ethel (Brown) Bush. Edn.: A.B., Univ. of Mich., 1929; M.S., ibid., 1945; Ph.D., Univ. of Pittsburgh, 1951. m. Daniel F. Jackson. Dec. 15, 1951. c.: Bettina Carter; Anthony Carter; Lawrence Carter. Exp.: Lab. Technician, N. Y. Div. of Labs. and Rsch., 1937-40; Chf. Serologist, La. State Dept. of Health, 1940-41; Chf. Serologist, Ky. State Dept. of Health, 1941-43;



Chf. Serologist, Chicago Branch Lab., Ill. Dept. of Health, 1943-44; Rsch. Immunologist, Inst. of Pathol., West Penn. Hosp., Pittsburgh, Pa., 1944-53; Med. Rsch. Dir., Veterans Admin. Hosp. and Asst. Prof. of Bacteriol., Coll. of Med., N. Y., Univ., Syracuse, N. Y., 1953—. Mem.: Phi Beta Kappa; Phi Kappa Phi; Sigma Xi; A.A.A.S.; Soc. Amer. Bacteriologists; Amer. Chem. Soc. Contrb. to: Jour. Immunology; Amer. Jour. Clinical Pathol.; Pa. Med. Jour.; Proc. Soc. Exptl. Biol. and Med.; etc. Gen. Int.: Isolation of the Rh Red Cell Fraction. Special Int.: Rh Factor; Humoral Antibodies; Serology of Syphilis; Relation of Antibody Formation to Nutritional Deficiencies; Hemolytic Disease of the Newborn; Haptens and Antigens; Complement-fixation.

CARTER, Charles Willard, Jr., Mem. Technical Staff, Bell Telephone Labs., Inc., 140 W. 16th St., N. Y., N. Y.

CARTER, Edgar Brock, Exec. Dir. of Rsch., Abbott Labs., N. Chicago, Ill. **CHEMISTRY.**

CARTER Edna, Prof. Emer. Physics, Vassar Coll., Poughkeepsie, N. Y. **PHYSICS.**

CARTER, Edwin R., Actuary, Wash. Natl. Insurance Co., 735 Ashland Ave., River Forest, Ill.

CARTER, Frederic Edward, Dir. of Physics Dept., Baker and Co., Inc., 113 Astor St., Newark, N. J. **PHYSICAL METALLURGY.**

CARTER, George Selden, Tchr., Morgan Schl. and Proprietor, Genetics Lab. Supplies, Clinton, Conn. **GENETICS.**

CARTER, George W., Prof. and Hd., Dept. of Physics, Wayne Univ., 4841 Cass Ave., Detroit, Mich. **PHYSICS.**

CARTER, Herbert D., 3351 Dorchester Rd., Shaker Heights, Ohio. **CERAMICS.**

CARTER, Herbert Edmund, Prof. of Chem., Univ. of Ill., 401 E. Chem. Bldg., Urbana, Ill. **BIOCHEMISTRY.** b. Mooresville, Ind., Sept. 25, 1910. s. George B. and Edna (Pidgion) C. Edn.: A.B., DePauw Univ., 1930; M.A., Univ. of Ill., 1931; Ph.D., *ibid.*, 1934. Hon. Deg.: D.Sc. DePauw University, 1952. m. Elizabeth DeWees of Hartford City, Ind., Aug. 30, 1933. d. R. E. DeWees. c.: Anne Winsett and Jean Elizabeth. Exp.: Univ. of Ill.; Instr., 1932-35; Assoc., 1935-37; Asst. Prof., 1937-43; Assoc. Prof., 1943-45; Prof., 1945 to date. Hon. Pos.: Sec., Amer. Inst. of Nutrition, 1945-47. Mem.: Phi Beta Kappa; Sigma Xi; Amer. Soc. of Biol. Chem.; Amer. Inst. of Nutrition; Amer. Chem. Soc.; A.A.A.S.; Lambda Chi Alpha; Gamma Alpha; Alpha Chi Sigma; Exchange Club. Author: Editor-in-Chf., Volume I, Biochemical Preparations, 1949. Contrb. to: Jour. Amer. Chem. Soc.; Jour. of Biol. Chem.; Archives of Biochem. Ph.D. Dissertation: Metabolism of Branched Chain Fatty Acids Related to Leucine, Isoleucine and Valine. War Record: Penicillin program under comm. on Med. Rsch. of Office of Scientific Rsch. and Development. Gen. Int.: Received Eli Lilly and Co. Award in Biochem. in 1943. Hobbies: Golf; Bowling; Squash. Listed in: Who's Who in Amer.; Amer. Men of Sci.; Who's Who in Ill. Special Int.: Amino Acid Chem. and Biochem.; Antibiotics; Lipid Chem.

CARTER, James Cedric, Plant Pathol., 383 Natural Resources Bldg., Urbana, Ill. **RESEARCH ON DISEASES OF SHADE AND FOREST TREES, FUNGICIDES AND ANTIBIOTICS.** b. Oct. 25, 1905, Wingate, Ind. s. Robert Nelson and Emma Lucinda (Bittle) C. Edn.: B.S., Agri., Purdue Univ., 1928; M.S., *ibid.*, 1932; Ph.D., *ibid.*, 1934. m. Margaret Lucile Rogers of Crawfordsville, Ind., Aug. 18, 1934. d. Frank and Nanna Rogers. c.: Robert Roger. Exp.: Vocational Agri. Tchr., Green Twp. H. S., Judson, Ind., 1928-30; Asst. in Plant Pathol., Purdue Univ., 1931-34; Spec. Rsch. on Fungicides for Crop Protection Inst., Univ. of Del., summers, 1931, 32; Plant Pathol., Ill. Nat. Hist. Survey, Urbana, Ill., 1934—; Awarded Cita-

tion by Natl. Arborist's Assn. for Work on Wetwood Disease of Elm as outstanding rsch. during 1945 on shade tree preservation; Author over 50 Articles on Shade and Ornamental Tree Diseases, Fungicides and Antibiotics. Mem.: Amer. Phytopathol. Soc.; Natl. Shade Tree Conf.; Midwestern Chapter Natl. Shade Tree Conf. (Charter Mem., Vice-Pres., 1947, Pres., 1948); Ill. Acad. of Sci.; Crop Protection Inst.; Ill. Tech. Forestry Assn.; Sigma Xi; Phi Mu Delta. Ph.D. Dissertation: Diffusible Nature of the Inhibitory Agent Produced by Fungi. Hobbies: Fishing; Photography; Travel. Listed in: Who's Who in the Midwest; Who's Who in Chicago and Vicinity; Who Knows and What; The Naturalists Directory. Special Int.: Fungus, Bacterial, and Virus Diseases of Forest, Shade and Ornamental Trees and Shrubs; especially Oak Wilt, Dutch Elm Disease, Elm Phloem Necrosis, and Elm Wetwood; Fungicides; Antibiotics.

CARTER, John Robert, Assoc. Prof. of Pathol., Dept. of Pathol., State Univ. of Iowa, Iowa City,



Iowa. **PATHOLOGY.** b. Buffalo, N. Y., April 21, 1917. s. John Harvey and Gertrude Anne (Buckpitt) C. Edn.: B.S., Hamilton Coll., 1939; M.D., Univ. of Rochester, Schl. of Med. and Dentistry, 1943. m. Adelaide Briggs, May 8, 1943. c.: Marilyn Anne and Jeanne Catherine. Exp.: Student Fellowship in Pathol., Univ. of Rochester, Rochester, N. Y., 1941-42; Internship and Residency in Pathol., State Univ. of Iowa, Iowa City, Iowa, 1944-46; Instr. in Pathol., *ibid.*, 1944-47; Asst. Prof. of Pathol., *ibid.*, 1947-50; Assoc. Prof., *ibid.*, 1950—. Mem.: Phi Beta Kappa; Alpha Omega Alpha; Amer. Med. Assn.; A.A.A.S.; A.A.P.B.; I.A.M.M.; Wash. Pathol. Soc.; Iowa Soc. of Pathol.; Sigma Xi; A.A.U.P.; Coll. of Amer. Pathol.; A.S.C.P.; Amer. Soc. for Exptl. Pathol.; Soc. for Exptl. Biol. and Med. Contrb. to: Jour. of Exptl. Med.; Amer. Heart Jour.; Amer. Jour. of Med. Sci.; Naval Med. Bull.; Amer. Jour. of Pathol.; Fed. Proc.; Proc., Soc. of Exptl. Biol. and Med. War Record: Asst. Chf. of Pathol., 1946-47; Chf. Pathol., 1947-48, U. S. Naval Med. Center, Bethesda, Md. Special Int.: Blood Clotting and Allied Problems.

CARTER, Marjorie Estelle, Assoc. Prof. of Biol., Valdosta State Coll., Valdosta, Ga. **ZOOLOGY.** b.



Norfolk, Va., Aug. 3, 1905. d. Richard Danbrooke and Annie Louise (McLean) C. Edn.: B.S., Coll. of William and Mary, 1927; M.A., Univ. of Va., 1941; Ph.D., *ibid.*, 1952. Exp.: Tchr. of Phys. Edn., Norfolk Pub. Schls., Va., 1927-35; Tchr. of Biol., Valdosta State Coll., Valdosta, Ga., 1935—. Mem.: Amer. Assn. Univ. Women; A.A.A.S.; Assn. Southeastern Biologists; Va. Acad. Sci.; Tenn. Acad. Sci.; Sigma Xi. Contrb. to: Jour. Elisha Mitchell Scientific Soc. Special Int.:

Invertebrate Zool.; Copepoda.

CARTER, Thomas Chauncey, Prof. of Biol. and Dean of Admin., Northwestern State Coll., Alva, Okla. **PARASITOLOGY.**

CARTER, Thomas M., Chm., Edn. and Psychol., Albion Coll., Albion, Mich. **EDUCATION.**

CARTER, Neal Marshall, Dir., Pacific Fisheries Exptl. Station, Fisheries Rsch. Bd. of Canada, 898 Richards St., Vancouver 2, B. C., Can. CANADIAN GOVERNMENT RESEARCH ON TECHNICALITIES OF FISHERIES PRODUCTS.



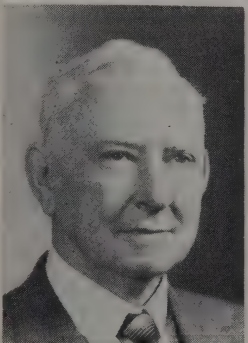
b. Vancouver, B. C., Can., Dec. 14, 1902. s. Albert Edward and Cassie Frances (Marsh) C. Edn.: B.A., Univ. of B. C., 1925; M.A., *ibid.*, 1926; Ph.D., McGill Univ., 1929. m. Kathleen Mary East on May 29, 1926. c.: David Marshall; Bruce Haddon; Helen Louise. Exp.: Lectr. in Chem., Univ. of B. C., Can., 1926-27; Instr. in Organic Chem., McGill Univ., 1928-29; Foreign Travelling Fellowship, Natl. Rsch. Council of Can., 1929-30 (Tenure in Dresden, Germany); Oceanographer, Pacific Biological Station, Fisheries Rsch. Bd. of Can., 1930-33; Dir., Pacific Fisheries Exptl. Station, *ibid.*, 1933—. Hos. Pos.: Bd. of Management, B. C. Rsch. Council; Bd. of Dirs., Chem. Inst. of Can.; Pres., B. C. Acad. of Sci.; etc. Mem.: Fellow, Royal Geographical Soc.; Fellow, Canadian Inst. of Chem. Contrb. to Jour. of Fisheries Rsch. Bd. of Can. Gen. Int.: Canadian Govt. Mission to Japan, July-Dec., 1946 to Assess Technological Knowledge of Japanese Utilization of Marine Products. Special Int.: Technology of Marine and Freshwater Fishery Products.

CARTLEDGE, Groves Howard, Dean of Faculty and Prof. of Chem., King Coll., Bristol, Tenn. INORGANIC CHEMISTRY.

CARTLEDGE, Joseph Lincoln, Assoc. Prof. of Genetics and Assoc. Geneticist, Dept. of Agron. and Genetics, W. Va. Univ., Morgantown, W. Va. GENETICS.

CARTWRIGHT, William Bell, Sr. Entomologist, U. S. Bureau of Entomol. and Plant Quarantine, Box 495, La Fayette, Ind. ENTOMOLOGY.

CARVER, Gail Luke, Prof. Biol., Hd. Dept., Mercer Univ., Macon, Ga. CONSERVATION OF NATURAL RESOURCES ESPECIALLY TIMBER AND WILD ANIMAL LIFE.



b. Feb. 4, 1879, Climax, Mich. s. Chester A. and Rozelia (Hungerford) C. Edn.: Grad., Mich. State Nor. Coll., State Life Certificate, 1900; A.B., Univ. of Mich., 1907; A.M., *ibid.*, 1908; Grad. and Rsch., Columbia Univ., 1912-13; Summers, Univ. of Chicago; Univ. of Mich.: Marine Biol. Lab., Woods Hole, Mass.; Puget Sound Biol. Lab., Wash.; Biol. Lab., Mt. Lake, Va. m. Nettie Pratt of Minneapolis, Minn., Dec. 1913 (deceased); m. Julia Webb of Miami, Fla., Nov., 1941. c.: Robert Elrod (by second wife). Exp.: Dist. and Grade Schl., Mich., Prin. and Tchr., Village Schl., Rutledge, Minn., 1900-01; Civil Engr., Seattle, Wash., 1901-02; Supt. of Schls., Buckley, Wash., 1902-05; Co. Bd. of Edn., Pierce Co., Wash., 1903-05; Act. Prof. Phys. and Astron., Mercer Univ., Macon, Ga., 1907-08; Prof. Biol., *ibid.*, 1908-18; Wesleyan Coll., 1920-24; Prof. Biol., Hd. Dept. Biol., Chmn. Div. Pre-Med. and Pre-Dental Studies, Mercer Univ., 1924—. Mem.: Sigma Xi; Marine Biol. Assn.; A.A.C.A.; A.A.U.P.; A.S.B.T.; N.E.A.; Forest Products Rsch. Soc.; Southern Assn. Sci. and Industry; Amer. Forestry Assn.; Natl. Soc. Biol.; Amer. Genetics Assn.; Cooper Ornithol. Club; Amer. Nature Study Assn.; Rotary; Exec., C. of C.; Men's Garden Club; Music Club; etc. Author: Spec. Articles on Conservation. Con-

tbr. to: Biol. Bull. Ph.D. Dissertation: Studies in Fertility and Heredity of *Drosophila melanogaster*. Travel: U. S.; Canada; Mexico. Hobbies: Travel; Hunting; Farm Interests. Listed in: A.M.S.; Who's Who in South and Southwest; Amer. Naturalists. Special Int.: Genetics, Hygiene and Forestry.

CASAMAJOR, Louis, Prof. of Clinical Neurology, Coll. of Physicians and Surgeons, Columbia Univ., 706 W. 168th St., N. Y., N. Y. NEUROLOGY.

CASE, Ermine Cowles, Prof. Emer. Historical Geol. and Paleontology, Univ. of Mich., Univ. Museums Bldg., Ann Arbor, Mich. VERTEBRATE PALEONTOLOGY.

CASE, Forrest Neil, Sr. Engr., Project Leader, Carbide and Carbon Chemicals, 192 Northwestern Ave., Oak Ridge, Tenn.



LARGE SCALE PRODUCTION PROCESSES FOR URANIUM, THORIUM, PLUTONIUM AND SOLVENT EXTRACTION TECHNIQUES. b. Mansfield, Ohio, June 11, 1919. s. William Ernest and Mary Elizabeth (Au) C. Edn.: B.S., Ashland Coll., 1941. m. Claudia Osborn, 1947. c. William David. Exp.: Tchr. of Chem. and Biol., Ontario Schl., 1942; Analytical Methods of Mfg. T.N.T. and P.E.T.N., 1941-43; Production Supvr., Tenn. Eastman Corp., 1943-47; Sr. Engr. and Project Leader, Carbide and Carbon Chemicals, Oak Ridge, Tenn., 1947—. Mem.: Amer. Chem. Soc.; A.A.A.S.; Bd. Dir., Alor Chemicals (Mfg. Chemical Specialties) Oak Ridge Applies Laboratories. Gen. Int.: Part time consultant to Dry Cleaning and Textile Industry; Emulsion and Surface Chem. Special Int.: Radio Chem. Production Processing, Solvent Extraction, Ion Exchange; Radiation Hazard Control; Surface and Emulsion Chem.

CASE, Harold Clayton M., Prof. and Hd., Dept. of Agri. Econ., Univ. of Ill., Urbana, Ill. FARM MANAGEMENT AND AGRICULTURAL POLICY. b. Dunlap, Ill., Mar. 1, 1890. s. Charles Milton and Eliza Ann (Cramer) C. Edn.: B. S., Univ. of Ill., 1912; M.S., *ibid.*, 1919; Ph.D., Univ. of Wis., 1931. m. Naomi Newburn, Sept. 24, 1919. c. Isabel Marie; Flora Elizabeth; Elinor Naomi. Exp.: Grad. Asst., Animal Husbandry, Univ. of Ill., Urbana, Ill., 1912-13; Asst., Farm Management Demonstration, *ibid.*, 1915-17; Asst. State Leader of Farm Advisers and Assn., *ibid.*, 1917-19; in Charge, Farm Management Extension in Northern and Western States, U. S. Dept. of Agri., Wash., D. C., 1919-21; Asst. Prof. and Asst. Chief Farm Organization and Management, Univ. of Ill., Urbana, Ill., 1922-25; Assoc. Prof. and Assoc. Chief Farm Organization and Management, Univ. of Ill., *ibid.*, 1925-31; Prof. and Chief Farm Management, *ibid.*, 1931-33; Acting Hd. of Dept., *ibid.*, 1931-33; Asst. to Gov. of Farm Credit Admin., Wash., D. C., 1933-34; Prof. Agricultural Econ., Chief Farm Management, Hd. of Dept. of Agricultural Econ., *ibid.*, 1934—. Mem.: Amer. Farm Econ. Assn.; International Conference of Agricultural Econ.; Amer. Econ. Assn.; Amer. Soc. Farm Managers and Rural Appraisers; Sigma Xi; Phi Kappa Phi; Gamma Sigma Delta; Alpha Zeta; Alpha Tau Alpha. Contrb. Author: Book, Principles of Farm Management, Case and Johnston. Contrb. to: Jour. of Farm Economics and author or joint author of a number of Agri. Exp. Sta. bulletins and circulars. Spec. Int.: Agricultural Policy, Land Tenure, and Farm Management.

CASE, Harry Walter, Assoc. Prof. of Engrng. and Assoc. Prof. of Psychol., Coll. of Engrng., Univ. of Calif., L. A. 24, Calif. PSYCHOLOGY. b. Searchlight, Nev., July 21, 1908. s. Harry and Jane Elizabeth (Plowman) C. Edn.: A.B., Univ. of Calif., L. A., 1935; M.A., *ibid.*, 1937; Ph.D., *ibid.*, 1940. m. Margaret Trumbull of L. A., Calif., Aug. 2, 1946. d. Charles and Janet Trumbull. Exp.: Tchn. Asst.,

Univ. of Calif., 1935-39; Rsch. Assoc., *ibid.*, 1940-41; Assoc. in Psychol., Univ. of Ill., 1941-42; Asst. Personnel Mgr. of Engrng., El Segundo, Douglas Aircraft Co., 1942-45; Mgr., Personnel Rsch. Dept., Webster Trng., Safeway Stores, Inc., 1945-46; Consultant Vice-Pres., Engrng., Douglas Aircraft, 1945-46; Assoc. Prof. of Engrng. and Psychol., Univ. of Calif., L. A., 1946—; Diplomate Status, Indus. Psychol., Amer. Bd. of Psychol. Examiners. Mem.: Sou. Calif. Psychol. Assn.; Western Psychol. Assn.; Amer. Soc. for Engrng. Edn.; Sigma Xi; Phi Theta Kappa; Phi Delta Kappa; Phi Gamma Mu; Psi Chi. Author: *The Psychol. of Military Leadership*, 1943. Contbr. to *Jour. Gen. Psychol.*; *Jour. Engrng. Edn.* Ph.D. Dissertation: *Stuttering and Speech Blocking—a Comparative Study of Maladjustment. War Record: U. S. Naval Reserve.* Hobbies: Writing Short Stories; Speaking Engagements; Rsch. on Traffic Problems and Lighting Problems; Gardening. Listed in: A.M.S. Special Int.: Industrial Psychology, Organization and Management, Traffic Rsch.

CASE, Theodore Johnston, Asst. Prof. of Neurophysiol., Dept. of Med., Univ. of Chicago, Chicago, Ill. **NEUROLOGY AND ELECTROPHYSIOLOGY.**

CASEMAN, Austin Bert, Asst. Prof. of Civil Engrng., Dept. of Civil Engrng., State Coll. of Wash., Pullman, Wash. **CIVIL ENGINEERING.** b. Phoenix, Ariz., Feb. 13, 1922. s. Artie B. and Winnie (Yergensen) C. Edn.: B.S., Utah State Agril. Coll., 1947; M.S., *ibid.*, 1948. m. Susan Louise Burleson, Nov. 9, 1946. Exp.: Instr. and Asst. Prof., State Coll. of Wash., Pullman, Wash., 1948—; Summer 1951, Aircraft Designer 'B' for Boeing Airplane Co., Seattle, Wash.; Summer 1952, Structural Engr., GS-9, U. S. Army Corps of Engrs., Walla Walla, Wash. Mem.: Amer. Soc. of Civil Engrs.; Amer. Soc. for Engrng. Edn.; Pi Kappa Alpha; Sigma Xi; Phi Kappa Phi; Sigma Tau; Blue Key; Lions Internatl. Special Int.: Structural Design and Stress Analysis; Use of Models in Analyzing Structures.

CASEY, Albert Eugene, Pathologist and Dir. of Lab., Baptist Hosps., 1907 Wellington Rd., Birmingham, Ala. **PATHOLOGY.**

CASEY, Robert S., Hd., Rsch. Lab., W. A. Sheaffer Pen Co., Denmark Hill, Fort Madison, Iowa. **CHEMISTRY, INDUSTRIAL RESEARCH.**

CASH, Edith Katherine, Assoc. Mycologist, U. S. Plant Indus. Station, 126 Tennessee Ave., N. E., Washington, D. C. **MYCOLOGY.**

CASH, Lillian Claire, Asst. Pathologist, U. S. Plant Industry Station, Beltsville, Md. **PATHOLOGY.**

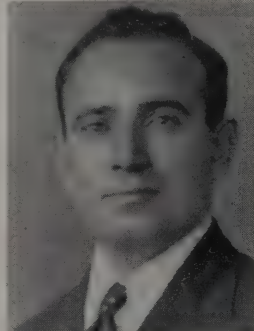
CASLER, William Ashton, Asst. Director Economic Research, Stanford Research. Institute, Palto Alto, Calif. **ADMINISTRATION OF RESEARCH AND DEVELOPMENT WORK.** b. Chicago, Ill., Dec. 2, 1917. s. Ashton and Marguerite (Goldzier) C. Edn.: B.S., Univ. of Okla., 1940. m. Vinita Figner, June 21, 1942. c.: Kathryn; Anne; Barbara; Kenneth. Exp.: Rsch. Engr., Caterpillar Tractor Co., Peoria, Ill., 1940-46; Asst. Chmn., Appl. Mech. Rsch., Armour Rsch. Foundation, Chicago, Ill., 1946-50; Asst. Dir. of Rsch., *ibid.*, 1950-53. Hon. Pos.: Vice-Chmn., Peoria



Sect., and Chmn. of Student Activities for Chicago Section, Natl. Soc. for Automotive Engrs. Mem.: Amer. Soc. Mech. Engrs.; Soc. Automotive Engrs.; Amer. Ordnance Assn.; Amer. Rocket Soc.; Natl. Management Council; A.A.A.S.; Amer. Mfg. Assn.; Theta Kappa Phi; Pi Tau Sigma. Gen. Int.: Consultation on Organization and Management of Industrial Rsch. with Various Foreign Countries. Special Int.: Background Experience and Trng. in Mechanical Engrng., Mechanics Rsch., Automotive and Internal Combustion Engine Rsch.

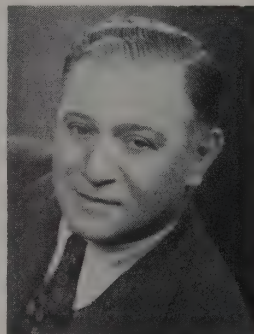
CASPARI, Ernst Wolfgang, Dept. of Genetics, Carnegie Inst. of Wash., Cold Spring Harbor, L. I., N. Y. **GENETICS.**

CASPARIAN, Sarkis M., Hd. of Analytical Dept., Arnold, Hoffman and Co., Inc., Main St., Dighton, Mass. **ORGANIC AND ANALYTICAL CHEMISTRY.** b. Gurun, Armenia, Nov. 29, 1906. s. Manoug and Nazely (Kochunian) C. Edn.: B. Ch.E., Northeastern Univ., 1931; M.A., Columbia Univ., 1942. m. Mary Baghdadian, Sept. 1, 1939. c.: Armen Sergei. Exp.: Tchng. Asst., Columbia Univ., 1940-42; Analytical Rsch. Chemist, The Barrett Div., Allied Chem. and Dye Corp., 1942-44; Organizer and Hd. of the Analytical and Control Lab. of the Dye Plant, Arnold, Hoffman



and Co., Inc., Dighton, Mass., 1944—. Mem.: Amer. Chem. Soc.; A.A.A.S.; Phi Lambda Upsilon. Special Int.: Ultra-violet and Visible Range Spectrophotometry applied to Qualitative and Quantitative Analytical Problems specially of Anthraquinone Dyes.

CASPE, Saul, Assoc. Dir. of Rsch., Philip Morris and Co., 490 W. End Ave., N. Y. 24, N. Y. **BIOCHEMISTRY.** b. N. Y., N. Y., Mar. 1, 1905. s. Abram and Mary (Binko) C. Edn.: B.S., Poly. Inst. of Brooklyn, 1930. m. Helen Lazarus, 1930. c.: Marie Louise; Lynda Wendy. Exp.: Asst. Nutrition Chemist, Coll. of Physicians and Surgeons, Columbia Univ., 1921-23; Development Chemist, H. A. Metz Labs., 1924-30; Rsch. Engr. and Fellow, Casa Biochemica, France, 1930-31; Assoc. Dir. of Rsch., Philip Morris and Co., N. Y., N. Y., 1935—. Mem.: Amer. Chem. Soc.; A.A.A.S.; Pharmaceutical Assn.; N. Y. Biochem. Group; Kiwanis. Contbr. to: Amer. Jour. Pharm.; Amer. Jour. Physiol.; Arch. Biochem.; Indus. and Engrng. Chem.; Jour. Amer. Chem. Soc.; Jour. Amer. Pharm. Assn. Special Int.: Biochem.; Pharmaceuticals; Vitamins and Enzymes.



CASSIDY, Harold Gomes, Assoc. Prof. in Chem., Dept. of Chem., Yale Univ., New Haven, Conn. **CHROMATOGRAPHY; OXIDATION AND REDUCTION OF ORGANIC COMPOUNDS; SEPARATION PROCESSES.** b. Havana, Cuba, Oct. 17, 1906. s. Walter C. and Camilla G. (Casseres) C. Edn.: A.B., Oberlin Coll., 1930; A.M., *ibid.*, 1932; Ph.D., Yale Univ., 1939. m. Kathryn Myra Childs, May 19, 1934. Exp.: Rsch. Chemist, William S. Merrell Pharmaceutical Co., Cincinnati, Ohio, 1933-36; Instr., Oberlin Coll., Oberlin, Ohio, 1936-37; Instr., Yale Univ., New Haven, Conn., 1938-42; Asst. Prof., *ibid.*, 1943-48; Assoc. Prof., *ibid.*, 1948—. Mem.: Amer. Chem. Soc.; A.A.A.S.; Amer. Soc. of Biol. Chemists; Soc. of Sigma Xi; Fellow, N. Y. Acad. of Sci.; Alpha Chi Sigma. Author: *Prin. of Organic Chem.*, with James English, 1949; *Adsorption and Chromatography*, 1951. Contbr. to: Jour. Amer. Chem. Soc.; Analytical Chem.; Annals, N. Y. Acad. of Sci.; Jour. Chem. Edn. Special Int.: Chromatography; Oxidation and Reduction of Organic Compounds; Separation Processes.

CASTETTER, Edward Frank, Prof. and Hd., Dept. of Biol., Univ. of N. Mex., Albuquerque, N. Mex.

CASTLE, Edward Sears, Assoc. Prof. of Physiol., Biol. Labs., Harvard Univ., 16 Divinity Ave., Cambridge, Mass. **PHYSIOLOGY.**

CASTLE, Hempstead, Assoc. Prof. of Botany, Osborn Botanical Lab., Yale Univ., New Haven, Conn. **PLANT MORPHOLOGY.**

CASTLE, Samuel Northrup, Adv. Engr., "Mamalu", Waimanalo, Oahu, Hawaii.



ENGINEERING. b. Feb. 6, 1880, Honolulu, T. H. s. Charles Carson and Harriet Angeline (Castle) C. Edn.: Halle Gymnasium, Germany; Oahu Coll., Hawaii; Hamilton Coll.; A.B., Harvard, 1901; Cornell Univ., 1902-04. m. Anna Ellison Lindsley of New Rochelle, June 2, 1903. d. Frederick Haviland and Alice Lindsley Haviland. c.: Anna Haviland (dec.); Northrup Haviland. Exp.: Turbine Design, Westinghouse Mach. Co., 1904; Turbine Test, Gen. Elect. Co., 1905; Shops, Allis Chalmers

Co., 1905-06; Constrn. Engr., *ibid.*, N. Y. Dist., 1906-08; Europe, Investigation hydro-electric and electro-metallurgical practices, 1908-09; Commercial Spec. Engrng. Problems and Calculations, General Electric Co., New York, 1909-15; In Charge of Field, Electric Steel Furnace Work, *ibid.*, 1918-19; Lectr., U. S. Army Artillery Schl., Sandy Hook, 1910-14; Exec. Sec., Elect. Furnace Prod. Comm., War Industries Bd., 1917-18; Private Practice, 1918—. Mem.: Fellow, A.A.A.S.; Fellow, Amer. Inst. E. E.; A.S.M.E.; A.S.C.E.; Amer. Inst. Mining and Metall. Engrng.; Soc. Automotive Engrs.; A.M.S.; Act. Mem., A.I.C.E.; Act. Mem., A.I.S.I.; Fellow A.I.I.E.; Mil. Eng. Mem. Soc. Amer. Mil. Engrs.; Amer. Ordinance Assn.; N. Y. Elect. Soc. Harvard Engrng. Soc., Life Mem., First Sec.; Engrng. Assn. of Hawaii; Organizing Chemn., Pension Bd., City and Co. of Honolulu, 1935-36; Sec., Bd. of Regents, Univ. of Hawaii; Hawaiian Sugar Planters Assn.; Castle and Co., Ltd., Dir.; etc.; Mason (K T., 32 degree, Shriner); Independent; Engr.; Univ., N. Y.; Honolulu Automobile; Cornell of Hawaii; Harvard of Hawaii; Oahu Country; Pacific Club, Univ. of Hawaii; Alpha Delta Phi; Theta Nu Epsilon. Listed in: A.M.S.; Who Knows—and What; World Who's Who; World Biog.; Who's Who in Amer.; Who's Who in Engrng.; Who's Who in Commerce and Indust.; Bus. Exec. of Amer.; etc.

CASTLE, William Augustus, Prof. of Biol., Mary Washington Coll. of the Univ. of Va., Fredericksburg, Va. **ZOOLOGY.**

CASTLE, William Bosworth, Boston City Hosp., Boston 18, Mass.

CASTLE, William Ernest, 421 Spruce St., Berkeley 8, Calif.

CASTO, Frank Monroe, Dean Emer. and Prof. Emer. Orthodontics, Western Reserve Univ., Box 868 La Jolla, Calif. **ORTHODONTICS.**

CASWELL, Albert Edward, Prof. and Hd., Dept. of Physics, Univ. of Ore., Eugene, Ore. **PHYSICS.**

CATHCART, John Almon, Rsch. Chemist, Mfg. Expt. Div., Eastman Kodak Co., 65 Kemphurst Rd., Rochester 12, N. Y.

POLYMERS. b. Sparta, Ill., Jan. 17, 1916. s. William Finley and Eva (Wylie) C. Edn.: B.S., Monmouth Coll., 1937; Ph.D., Ohio State Univ., 1941. m. Florence Noble, June 16, 1941. c.: William; Janet. Exp.: Asst. Prof. of Chem. and Math., Monmouth Coll., Monmouth, Ill., 1942-45; Rsch. Chemist, Rsch. Labs. and Mfg. Expts. Div., Eastman Kodak Co., Rochester, N. Y., 1945—. Mem.: Sigma Xi; Gamma Alpha; Phi Lambda Upsilon. Con-



thr. to: Jour. of Organic Chem.; Jour. Amer. Chem. Soc. Special Int.: Polynuclear Hydrocarbons; Organic Synthesis; Polymers.

CATRON, Lloyd Fullenwiser, Pathologist and Dir. of Labs., City Hosp., 525 E. Market St., Akron, Ohio. **PATHOLOGY.**

CATTELL, McKeen, Assoc. Prof. of Pharmacol., Cornell Univ. Med. Coll., N. Y., N. Y. **PHARMACOLOGY.**

CATTELL, Psyche, Psychologist, Private Practice and Guidance Clinic, 314 N. West End Ave., Lancaster, Pa. **PSYCHOLOGY.**

CATTELL, Raymond B., Rsch., Prof., Univ. of Ill., Urbana, Ill. **PSYCHOLOGY.**

CATTELL, Ware, Editor the Am. Naturalist and Biological Scientist, The Science Press, Lancaster, Pa. **BIOPHYSICS.**

CAUGHEY, Robert Andrew, Prof. of Structural Engrng., Ia. State Coll., Ames, Ia. **STRESSES AND STRAINS IN STRUCTURAL MEMBERS.** b. Aug. 12, 1885, McKeesport, Pa. s. Joseph Young and Mary (McClure) C. Edn.: B.S. in C.E., Pa. State Coll., 1907; C.E., *ibid.*, 1916. m. Elva Bradshaw of Dravosburg, Pa., Dec. 27, 1911. d. Mr. and Mrs. A. S. Bradshaw Exp.: Pa. Railroad, Rodman, N. Y. Tunnel Extension, 1907-08; State of N. Y., in Chg. of Highway Construction on L. I., June-Dec., 1908; Instrumentman, A. G. Shaw, Pittsburgh, Pa., 1909, Feb.-May; Draftsman, Amer. Bridge Co., Ambridge, Pa., 1909-10; Pa. State Coll. Instr. in Civil Engrng., 1910-14; Asst. Registrar, part time, 1911-13; Asst. Prof. of Civil Engrng., 1914-18; Assoc. Prof. C. E., 1918-19; Ia. State Coll.: Assoc. Prof. of Structural Engrng., 1919-30; Prof. of Structural Engrng., 1930—. Various summer jobs with Bridge and Bldg. Cos. Hon. Pos.: Sec., Ia. State Chapt., Phi Kappa Phi, 1930-32; Vice-Pres., Ia. State Chapt., *ibid.*, 1933-34; Pres., Ia. State Chapt., *ibid.*, 1934-35; Sigma Xi; Treas., 1933-35; Tau Beta Pi; Amer. Soc. of Civil Engrng.; Ia. Engrng. Soc.; Amer. Concrete Inst. and A.S.E.E.; S.A.R. Author: Reinforced Concrete, 1936; Papers to Various Publications. Contrb. to: Amer. Soc. C. E., Trans.; Structural Engrng., London; Co-author, Ia. Engrng. Exp. Sta. Bull., No. 75 and 172. Travel: U. S.; Rail and Auto. Gen. Int.: Reading; Walking; Auto Travel. Listed in: Who's Who in Engrng.; A.M.S. Special Int.: Indeterminate Stresses, Impact, Prestressed Concrete—Theoretical and Experimental Analysis.

CAUSEY, David, Prof. of Zool., Univ. of Ark., Fayetteville, Ark. **ANIMAL PARASITOLOGY.**

CAUWENBERG, Winfred J., Dir. of Development, Calco Chem. Div., Am. Cyanamid Co., Piney River Works, Piney River, Va. **CHEMISTRY.**

CAVE, Harry Winfield, Hd., Dept. of Dairying, Okla. A. and M. Coll., Stillwater, Okla. **DAIRY HUSBANDRY.**

CAVELTI, John Elmer, Prof. of Chem., Carnegie Hall Chem., Allegheny Coll., Meadville, Pa. **PHYSICAL CHEMISTRY.**

CAVINS, Gertrude Witherspoon, Prof. of Chem., and Sci. Edn., San Jose State Coll., San Jose, Calif. **CHEMISTRY AND SCIENCE EDUCATION.** b. Upper Lake, Calif., May 28, 1909. d. H. E. and Maude (Sleeper) Witherspoon. Edn.: A.B., San Jose State Coll., 1929; M.A., Stanford Univ., 1934; Ed.D., *ibid.*, 1942. m. C. Earle Cavins, Sept. 7, 1947. Exp.: Asst., San Jose State Coll., San Jose, Calif., 1929; Instr., *ibid.*, 1935; Asst. Prof., *ibid.*, 1940; Assoc. Prof., *ibid.*, 1946; Prof., *ibid.*, 1951—. Mem.: Amer. Assn. of Sci.; Amer. Chem. Soc.; Natl. Assn. of Sci. Tchr.; Pacific Southwestern Assn. of Chem. Tchr.; Elementary Sci. Assn.; Delta Gamma; Kappa Delta Pi; Pi Lambda Theta. Special Int.: Analytical Chem. and Sci. Edn.

CERESIA, George Brusch, Hd., Dept. of Chem., Coll. of St. Rose, Albany 3, N. Y. **PHARMACEUTICAL CHEMISTRY.** b. Troy, N. Y., Nov. 21, 1915. s. Sylvester and Mary (Brusch) C. Edn.: A.B., Univ. of Ala., 1937; M.S., Purdue Univ.,

1945; Ph.D., *ibid.*, 1949. m. Margaret Elizabeth, May, 1941. c.: Margaret; George; Mary-Grace; June-Marie; Richard; Charles. Exp.: Lab. Asst., Adirondack Electric Steel Foundry, Watervliet, N. Y., 1939-40; Lab. Asst., Republic Steel Blast Furnace, Troy, N. Y., 1940-42; Technician I, General Aniline and Film Corp., Rensselaer, N. Y., 1942-44; Asst. Chemist, Norfolk Navy Yard, Portsmouth, Va., 1945-46; Rsch. in Titanium Development, Allegheny-Ludlum Steel Corp., Watervliet, N. Y., 1950-51; Asst. Chemist, General Aniline and Film Corp., Rensselaer, N. Y., 1951—; Lab. Asst., Purdue Univ., Lafayette, Ind., 1946-49; Part-time Instr., St. Rose Coll., Albany, N. Y., 1951-52; Asst. Prof., Hd., Dept. of Chem., *ibid.*, 1952—. Hon. Pos.: Moderator of St. Rose Affiliate of the Amer. Chem. Soc. Mem.: Amer. Chem. Soc.; Capital District Biochemical Colloquium; Sigma Iota; Alpha Phi Delta. Co-author: Fundamentals of Organic Chem.; Outlines of Organic Chem.; Objective Tests in Organic Chem. Contrb. to: Jour. Amer. Chem. Soc.; Encyclopedia of Chem. Technol. Special Int.: Incorporation of Radioactive Carbon in the Synthesis of Alpha Amino Acids; Synthesis of Higher Acetylenes and Comparison of the Physical Properties of Their Condensation Products; Manufacture of Organic Dyes.

CAYLOR, Richard Lee, Prof. Biol., Delta St. Coll., Cleveland, Miss. **BOTANY**. Jan. 11, 1894,



Bullock Co., Ala. s. Richard W. and Mary (Baskin) C. Edn.: B.A., Miss. Coll., 1922; M.A., Peabody Coll., 1931; Ph.D., L.S.U., 1944. m. Marie Conley, June 7, 1925; (2) Nora Marble, Apr. 10, 1942. c.: John Richard; R. L., Jr.; (dec.); Robert L.; and Marie. Exp.: Clarke Coll., 1922-24; Mt. Home Coll., 1924-27; Jonesboro Coll., 1927-30; Supt. Schls., Green Forest, Ark., 1930-31; Instr., Biol., Delta St., 1931-37; Prof. Biol., *ibid.*, 1937—. Hon. Pos.: Dir. and Founder of the Gulf Coast Rsch. Lab., Ocean Springs, Miss.; Pres. Miss. Acad. of Sci. On Bd. of Dir. Mem.: A.A.A.S.; District Supv. Tri Beta; Miss. Acad.; Rotary; Fellow, A.A.A.S. Author: Algae of Miss. Water Supplies, 1944, and others. Ph.D. Dissertation: See Author. Travel: Europe; Panama; Honduras; Nicaragua. Hobbies: Nature; Gardening; Fishing. Listed in: A.M.S.; Who Knows—and What. Special Int.: Studies of Miss. Algae.

CHADWICK, Theodore Avery, Prof. of Architecture, Kans. St. Coll., 1100 Pomeroy St., Manhattan,



Kans. **ARCHITECTURE AND ARCHITECTURAL ENGINEERING**. b. Sept. 5, 1904, Minneapolis, Minn. s. Harry Joseph and Katherine (Weaver) C. Edn.: B.S., Arch., N. Dak. St., 1927; Spec. Student, Grad. Work in Arch. and Design, Planning, Mass. Inst. of Tech. under Jacques Carlu, 1931-32. m. Elizabeth Gerould of Hanover, N. H., Jan. 12, 1934. d. Prof. and Mrs. John H. Gerould. c.: Curt Hassbrouck. Exp.: Instr. in Arch. Design, Kans. St. Coll., 1927-28; Chief

Draftsman and Designer, Meth. Episcopal Ch., S., 1928-31; Pvt. Practice, 1932-34; Suprv., N. Y. City Housing Auth., 1934-36; Chief Draftsman, U. S. P. H. S., 1936-37; Arch. Associated with Jens Frederick Larson, Dartmouth Coll. Arch., 1938-40, 1945-46; War Work with E. I. du Pont de Nemours and Co., Inc. as Concrete Designer; Prod. Eng. at Eastern Aircraft, Gen. Motors Corp.,

Trenton, N. J.; Layout Designer at Fleetwings Inc., Div. of Kaiser Cargo, Bristol, Pa.; Instr. in Descriptive Geom., Dartmouth Coll., Navy Trng. Program, 1943-45; Lectr. in Arch., Univ. of Tex., summer, 1946; Asst. Prof. of Arch., Univ. of Tex., 1946-47; Prof. of Arch., Kans. St. Coll., 1947—; Prof. License, New York State. Mem.: Chamber of Commerce; Chmn., City Beautification Com.; Congregationalist; Corporate Mem., A. I. A.; Amer. Soc. for Engrng. Edn.; Sigma Phi Delta; Alpha Tau Omega; Kappa Tau Delta; Frieze and Cornice, M. I. T. Gen. Int.: Land Usage, Pub. by N. Y. Housing Auth. Publication; Designs published in Hosp. Mag.; Designer of New Chapel and Engr. Bldg. at K.S.C. Hobbies: Golf; Skiing; Gardening; Hiking; Engrng. Listed in: Who's Who in Midwest; Who's Who in the World. Special Int.: Churches; Coll. Bldgs.; Arch. Engrng.

CHAFFEE, E. L., Prof., Cruft Lab., Harvard Univ., Cambridge, Mass. **COMMUNICATION ENGINEERING**.

CHAIKOFF, I. L., Div. of Physiol., Univ. of Calif. Schl. of Med., Berkeley, Calif. **BIOCHEMISTRY**.

CECIL, Russell Lafayette, Prof. of Clinical Med., Cornell Univ. Med. Coll., 1300 York Ave., N. Y., N. Y. **INTERNAL MEDICINE**.

CEDERBERG, William Emanuel, Prof. of Math., Augustana Coll., Rock Island, Ill. **MATHEMATICS**.

CERMAK, Frank, 1542 Union St., Schenectady, N. Y. **CERAMICS**.

CHACE, Edward Mackay, Consultant, 1842 N. Gramercy Pl., Hollywood, Calif. **FOOD TECHNOLOGY**.

CHACE, Fenner Albert, Jr., Curator, Div. Marine Invertebrates, U. S. Natl. Museum, Washington, D. C. **CARCINOLOGY**.

CHADWELL, Harris Marshall, Assoc. Dir., The Natural Sciences, Rm. 5500, Rockefeller Foundation, 49 W. 49th St., N. Y., N. Y. **PHYSICAL CHEMISTRY**.

CHADWICK, Lewis Charles, Prof. of Hort., O.S.U., Columbus, Ohio. **HORTICULTURE**. b. Randolph Center, Vt., August 13, 1902. s. Charles A. and Mary L. (Blodgett) C. Edn.: B.S., Univ. of Vt., 1925; Ph.D. Cornell Univ., 1931. m. Evalina Lockwood of Ithaca, N. Y., Aug. 19, 1929. d. H. B. Lockwood. c.: Barbara Alice. Exp.: Asst. in Ornamental Hort., Cornell Univ., 1925-27; Instr., *ibid.*, 1925-29; Asst. Prof. of Hort., Ohio State Univ., 1929-37; Assoc., *ibid.*, 1937-47; Prof., *ibid.*, 1947; Assoc. in Hort., Ohio Agri. Exp. Sta., 1947; Assoc. Prof., 1937-47; Prof., 1947-49; Hort. Ext., O.S.U., 1949—. Mem.: Amer. Soc. for Hort. Sci.; Amer. Assn. of Plant Physiol.; Amer. Assn. of Bot. Gardens; Natl. Shade Tree Conference; Sigma Xi; Alpha Zeta; Gamma Sigma Delta; Pi Alpha Xi; Pi Kappa Phi. Author (with Alex Laurie): The Modern Nursery, 1931; Commercial Flower Forcing, Balkiston Co., 1934. Contrb. to: Proc. Amer. Soc. Hort. Sci. Ph.D. Dissertation: Studies in Plant Propagation. Hobbies: Sports. Listed in: Who's Who in Commerce and Industry.

CHAIKELIS, Alexander S., Asst. Prof. of Biol., Coll. of the City of N. Y., 139th St. and Convent Ave., N. Y., N. Y. **PHYSIOLOGY**.

CHAKMAKJIAN, Haroutioun Hovanes, Asst. Prof. of Biochem., Tufts Coll. Med. Schl., 416 Huntington Ave., Boston, Mass. **CHEMISTRY**.

CHALKLEY, Lyman, Asst. Dir., Office of Scientific Rsch. and Development, Cosmos Club, Washington, D. C. **CHEMISTRY**.

CHAMBERLAIN, Clark Wells, Prof. of Physics, Mich. State Coll., East Lansing, Mich. **PHYSICS, ENGINEERING**.

CHAMBERLAIN, Deane Marsh, Veterinary Pathologist, Roscoe B. Jackson Memorial Lab., Bar Harbor, Maine. **VETERINARY PATHOLOGY**. b. Alton, N. H., Feb. 6, 1922. s. Kenneth W. and

Anna (Ulrich) C. Edn.: B.S., Univ. of N. H., 1943; D.V.M., Ohio State Univ., 1949; M.Sc., *ibid.*, 1951. m. Eugenia M. Strobl, Aug. 4, 1945 c. Eric Bruce; Deane Mark. Exp.: Herdsman, Univ. of N. H. Livestock Barns, 1943-45; General Practice, Concord, N. H., 1949-50; Instr., Dept. of Vet. Pathol., Ohio State Univ., Columbus, Ohio, 1950-51; Asst. Prof., *ibid.*, 1951-53; Veterinary Pathologist, Roscoe B. Jackson Memorial Lab., Bar Harbor, Maine, 1953—. Mem.: Am. Vet. Med. Assn.; A.A.A.S.; Phi Zeta; Phi Sigma; Phi Mu Delta; Audubon Soc. Special Int.: Vet. Pathol. in the areas of infectious diseases of domestic animals and animal oncology.

CHAMBERLAIN, Joseph P., 510 Kent Hall, Columbia Univ., N. Y., N. Y. SOCIAL, ECONOMIC SCIENCES.

CHAMBERLAIN, William Edward, Prof. and Hd., Dept. of Radiology, Temple Univ. Med. Schl. and Hosp., 3401 N. Broad St., Philadelphia, Pa. RADIOLOGY.

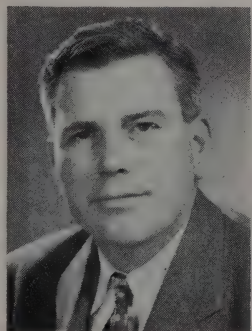
CHAMBERLIN, Edwin Martin, Owner, Edwin M. Chamberlin and Assoc., Industrial Relations Consultants, 17 Bow Rd., Belmont, Mass. PSYCHOLOGY.

CHAMBERLIN, Joseph Conrad, Entomologist, Chg. Forest Grove Field Station, U. S. Dept. of Agri., Bureau Entomol. and Plant Quarantine, Box 278, Forest Grove, Ore. ENTOMOLOGY.

CHAMBERLIN, Ralph Vary, Prof. of Zool., Emeritus, Univ. of Utah, 3408 Oakwood St., Salt Lake City 6, Utah. ZOOLOGY AND ENTOMOLOGY. b. Salt Lake City, Utah, Jan. 3, 1879. s. William H. and Eliza Frances (Brown) C. Edn.: B.S., Univ. of Utah, 1898; Ph.D., Cornell Univ., 1905. Hon. Deg.: Sc.D., Univ. of Utah, 1942. m. Daisy Ferguson, 1899. m. 2nd Edith Simons, June 28, 1922. c.: James R.; Beth; Della; Ruth; Richard Eliot; Frances A.; Helen; Shirley; Edith; Martha Sue. Exp.: Prof. of Biol. and Dean of Med. Schl., Univ. of Utah, Salt Lake City, Utah, 1904-08; Prof. of Zool., Brigham Young Univ., Provo, Utah, 1908-11; Harrison Rsch. Fellow and Lectr. in Zool., Univ. of Pa., Philadelphia, Pa., 1911-13; Museum of Comp. Zool., Curator of Arachnida, Myriapoda and Vermes, Harvard Univ., Cambridge, Mass., 1913-25; Prof. of Zool. and Hd. of Biol. Dept., Univ. of Utah, Salt Lake City, Utah, 1925-48; Prof. Emeritus, *ibid.*, 1948—. Mem.: Fellow, A.A.A.S.; Entomol. Soc. of Amer.; Amer. Soc. of Zool.; Amer. Soc. of Natur.; Biol. Soc. of Wash.; Utah Acad. of Sci.; N. Y. Acad. of Sci. Author: *The Meaning of Organic Evolution*, 1911; *Lycosidae of N. Amer.*, 1908; *Tropical Pacific Annelida*, 1919; *Myriapoda of Australian Region*, 1920; *Lithobiomorpha of N. Amer.*, 1925; *Life and Phil. of W. H. Chamberlin*, 1926; *Memories of John R. Park*, 1949; *Life Sci. in Utah*, 1950. Contrb. to: About 500 articles in Various Biol. and Nature Jours. Special Int.: Arachnida, Myriapoda, Annelida of World; Evolution and Speciation; Indians of Great Basin.

CHAMBERLIN, Rollin T., Prof. of Geol., Univ. of Chicago, Chicago, Ill. GEOLOGY.

CHAMBERS, Carl Covalt, Dean, Moore Schl. of Elec. Engrng., Univ. of Pa., 200 S. 33rd St., Philadelphia 4, Pa. ELECTRICAL ENGINEERING. b. Philadelphia, Pa., May 8, 1907. s. George Gailey and Anna (Covalt) C. Edn.: B.S., Dickinson Coll., 1929; Sc.D., Univ. of Pa., 1934. m. Margaret Morrison, June 14, 1930. c.: Jane Nancy; James Morrison; Elizabeth Gailey. Exp.: Engr., Vacuum Tube Div., RCA Mfg. Co., Camden, N. J., 1929-32; Special Rsch. Fellow, Bartol Rsch. Foundation, Swarthmore, Pa., 1932-33; Tehr. and Dean, Moore Schl. of Elec.



Engrng. and Dir. of Air Force Project Big Ben, Univ. of Pa., 1933—. Mem.: Amer. Phys. Soc.;

Franklin Inst.; A.A.A.S.; Sigma Xi; Pi Mu Epsilon; Eta Kappa Nu; Phi Delta Theta; Phi Beta Kappa; Tau Beta Pi; Fellow, Amer. Inst. of Elec. Engrs.; Sr. Mem., Inst. of Radio Engrs.; Amer. Standards Assn.; Amer. Soc. for Engrng. Edn.; Internatl. Electrotech. Commn. Special Int.: Elec. Engrng.

CHAMBERLIN, Thomas R., Entomologist, U. S. Bureau Entomol. and Plant Quarantine, 424 Univ. Dr., Madison, Wis. ENTOMOLOGY.

CHAMBERS, Arthur Douglas, retired, 509 Lore Ave., Wilmington, Del. CHEMICAL ENGINEERING.

CHAMBERS, Merritt Madison, Asst. Dir., Commission on Implications Armed Services Ednl. Programs, Amer. Council Edn., 744 Jackson Pl., Washington, D. C. EDUCATIONAL ADMINISTRATION.

CHAMBERS, Robert Rsch. Prof., Dept. of Biol., Washington Square Coll., Univ. of N. Y., N. Y., N. Y. EXPERIMENTAL CELL BIOLOGY.

CHAMBERS, William H., Chf., Toxicology Branch, Med. Div., Chemical Corps, Army Chem. Center Edgewood Arsenal, Md. PHYSIOLOGY.

CHAMPLIN, Manley Jerome, Sr. Prof. and Hd. Dep. of Field Husbandry, Univ. of Saskatchewan, Sask., Can. AGRONOMY.

CHANCE, Harrison Levi, Dept. of Plant Sciences, Univ. of Okla., Norman, Okla. BOTANY.

CHANDLER, Asa, Prof. of Biol., Rice Inst., Houston, Tex. PARASITOLOGY.

CHANDLER, David Culbertson, Assoc. Prof. of Limnology, Ohio State Univ., Stone Lab., Put-in-Bay, Ohio. LIMNOLOGY.

CHANDLER, Simon B., Hd. and Prof. of Gross Anatomy, Dept. of Anatomy, W. Va. Univ. Schl. of Med., Morgantown, W. Va. GROSS ANATOMY.

CHANDLER, Wallace Larkin, retired, 626 Abbott Rd., East Lansing, Mich. PARASITOLOGY.

CHANDLER, William Henry, Prof. of Horticulture Emeritus, Univ. of Calif. at Los Angeles, 341 S. Almont Dr., Beverly Hills, Calif. HORTICULTURE. b. Butler, Mo., July 31, 1878. s. Winfield Scott and Mary Wade (Lewis) C. Edn.: B.S., Univ. of Mo., 1905; M.S., *ibid.*, 1906; Ph.D., *ibid.*, 1914. Hon. Deg.: LL.D., Univ. of Calif., 1949. m. Nancy Caroline Steele, Sept. 6, 1905. c.: Caroline; William Lewis; Mary Martha; Ruth Steele. Exp.: Asst. in Hort., Univ. of Mo., 1905-07; Instr., *ibid.*, 1947-10; Asst. Prof., *ibid.*, 1910-13; Prof. of Pomology, Cornell Univ., 1913-23; Vice Dir. of Rsch., Coll. of Agri., 1920-23; Prof. of Pomol., Univ. of Calif., Berkeley, Calif., 1923-38; Prof. of Hort., Univ. of Calif. at Los Angeles, 1938-48; Asst. Dean, Coll. of Agri., *ibid.*, 1938-43; Emer. Prof., *ibid.*, 1948—. Mem.: Amer. Soc. Hort. Sci.; Amer. Soc. Plant Phys.; Bot. Soc. Amer.; Natl. Acad. Sci.; Sigma Xi. Author: *Fruit Growing*, 1925; *North Amer. Orchards*, 1928; *Deciduous Orchards*, 1942; *Evergreen Orchards*, 1950. Contrb. to: *Proc. Amer. Soc. Hort. Sci.*; *Botanical Gazette*; etc. Gen. Int.: Zinc Treatment to Save Dying Orchards. Special Int.: Killing of Plant Tissue by Cold; Sap Studies with Horticultural Plants; Zinc Deficiency in Orchards; Pruning Fruit Trees and Ornamental Woody Plants.

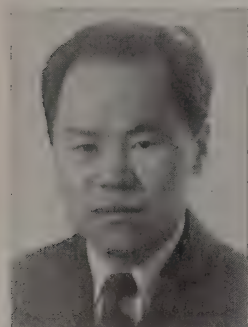
CHANDRASEKHAR, S., Yerkes Observatory, Williams Bay, Wis. ASTRONOMY.

CHANEY, Newcomb K., Rsch., Consultant, Amer. Gas Assn., 420 Lexington Ave., N. Y., N. Y. INDUSTRIAL CHEMISTRY.

CHANEY, Ralph Works, Prof. of Paleontol., Univ. of Calif., Berkeley 4, Calif. PALEOBOTANY. b. Chicago, Ill., Aug. 24, 1890. s. Fred A. and Laura (Works) C. Edn.: B.S., Univ. of Chicago, 1912; Ph.D., *ibid.*, 1919. Hon. Deg.: D. Sci., Univ. of Ore., 1944. m. Marguerite Seeley, June 1, 1917. c. Richard W.; Ellen C. Lynch; David H. Exp.: Sci. Tehr., Francis W. Parker Schl., 1914-17; Instr., Asst. Prof. of Geol., State Univ. of Iowa, 1917-22;

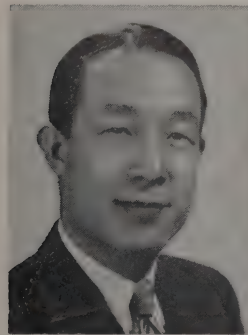
Rsch. Assoc., Carnegie Institution of Wash., 1921—; Prof. of Paleontol. and Curator of Paleobotany, Univ. of Calif., Berkeley, Calif., 1931—; Asst. Dir., Radiation Lab., *ibid.*, 1944-45. Hon. Pos.: Advisory Bd., Natl. Park Service; Dir., Save-the-Redwoods League. Mem.: Natl. Acad. Sci.; Am. Philos. Soc.; Geol. Soc. Am.; Paleontol. Soc. Am.; Calif. Acad. Sci.; Botanical Soc. Amer.; Soc. Study of Evolution; Sigma Xi; Gamma Alpha; Sigma Alpha; Sigma Alpha Epsilon; Theta Tau. Co-author: The Goshen Flora of Central Ore., 1933; Pliocene Floras of Calif. and Ore., 1944. Contrb. to: Paleontol.; Carnegie Inst.; Trans. Amer. Philos. Soc.; Am. Jour. Sci.; Jour. Geol.; Am. Jour. Bot.; etc. Gen. Int.: Many periods of field work in Asia, including visit to grove of living Metasequoias in 1948. Special Int.: Tertiary Deposits of Western N. Am. from Calif. to Alaska, of Mongolia, Manchuria, China, Japan; Modern Forests of the Northern Hemisphere, for Comparison with Vegetation of the Past.

CHANG, Chia Wei, Assoc. Prof. and Assoc. Agron., N. Mex. Coll. of Agri. and Mech. Arts, State Coll., N. Mex. SOIL CHEMISTRY AND SOIL PHYSICS. N. Mex. SOIL CHEMISTS. b. Anking, China, Aug. 28, 1907. s. Chung-Ta Chang (dec.) and Han-Chu Chin (dec.) Edn.: B.S., Univ. of Nanking, China, 1931; M.S., Univ. of Calif., 1936; Ph.D., *ibid.*, 1940. m. Yu-Chieh Chang of Shantung, China, Jan. 18, 1934. d. Rev. and Mrs. Joseph C. T. Wang. c.: Berken; George; Betty; and Alice. Exp.: 1933-34, Instr. and Jr. Soil Tech., Natl. Cent. Univ., Nanking, China; 1940-41, Tehng. and Rsch.



Fellow, Univ. of Calif.; 1942-44, Rsch. Assoc., Cornell Univ.; 1944-48, Chf. Chem., Natl. Reconditioning Co., N. Y.; 1948—, Assoc. Prof. and Assoc. Agron., N. Mex. Coll. of Agri. and M.A., State Coll., N. Mex. Hon. Pos.: Agent Soil Scientist "CC" U. S. Soil Conservation Service Region 6. Mem.: Sigma Xi; Soil Sci. Soc. of Amer.; Amer. Soc. of Agron.; Western Soc. of Soil Sci.; Cosmopolitan Club; The Presbyterian Two-By-Two Club. Contrb. to: Soil Sci.; Agron. Jour. Ph.D. Dissertation: An Experimental Study of the Development of "Adobe" Structures in Soils. Travel: China; Japan; Hawaii; Can. Hobbies: Travel; Gardening; Selected Movie. Listed in: Amer. Men of Sci.; Who Knows and What; Companion Volume to Who's Who in Amer. Special Int.: Alkali Soils, Especially Those located in N. Mex.

CHANG, Sze-Hou, Rsch. Prof. of Communications, Northeastern Univ., 79 Tufts St., Arlington 74, Mass. COMMUNICATION ENGINEERING. b. Ningpo, Chekiang, China, Sept. 23, 1913. s. Sheng-Foo and Hung Shih. Edn.: B.S. in E.E., Chiao-Tung Univ., 1934; M.S., Harvard Univ., 1946; Ph.D., *ibid.*, 1948. m. Kee Chieh Chu. Oct. 23, 1934. c.: Ellen; Julia; Amy; Francis. Exp.: Asst. in Elec. Engrng., Tsing-Hua Univ., 1934-38; Instr., Radio Rsch. Inst., *ibid.*, 1938-39; Lectr., Hunan Univ., 1939-41; Assoc. Prof., Chiao-Tung Univ., 1941-44; Prof., *ibid.*, 1944-45; Rsch. Engrg., Cambridge Rsch. Center, 1946-48; Assoc. Prof. of Electronic Rsch., Northeastern Univ., Boston, Mass., 1948-51; Rsch. Prof. of Communications, *ibid.*, 1951—. Mem.: I.R.E.; Acoustical Soc.; Sigma Xi; Tau Beta Pi; Eta Kappa Nu. Contrb. to: I.R.E. Proc.; Jour. Acoustical Soc.; Chinese Inst.

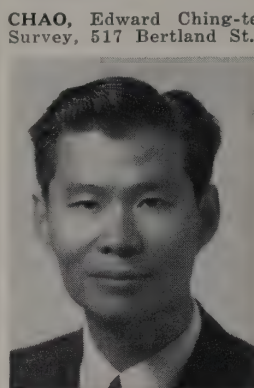


of Engrng. Special Int.: Network Theory; Super-regeneration Study; Representation and Statistical Properties of Speech Sounds; Information Theory.

CHANG, Hsiang-Tung, Assoc., Rockefeller Inst. for Med. Rsch., 66th St. and York Ave., N. Y. 21, N. Y. PHYSIOLOGY. b. China, Nov. 27, 1907. Edn.: B.S., Univ. of Peking, 1933; Ph.D., Yale Univ., 1946. Exp.: Asst. Rsch. Fellow, Inst. of Psychol., Academia Sinica, 1934-42; Tehng. Officer in Physiol., Chinese Army Med. Coll., 1942-43; Rsch. Fellow, Instr. and Asst. Prof., Yale Univ., 1944-52; Assoc., Rockefeller Inst. for Med. Rsch., N. Y., N. Y., 1952—. Mem.: Chinese Psychol. Soc.; Chinese Zool. Soc.; Sigma Xi. Contrb. to: Chinese Jour. Physiol.; Jour. Neurophysiol.; Jour. Comp. Neurol.; Jour. Anat.; etc. Special Int.: Structural Organization and Electrical Activity of the Central Nervous System.

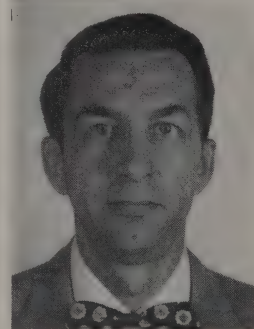
CHANT, Clarence Augustus, Prof. Emer. and Astrophysics Dir. Emer., David Dunlop Observatory, Univ. of Toronto, Richmond Hill, Ont., Can. ASTRONOMY.

CHAO, Edward Ching-te, Geologist, U. S. Geol. Survey, 517 Bertrand St., Alexandria, Va. GEOLOGY. b. Soochow, China, Nov. 30, 1919. s. T. C. and Ting-cheng (Tung) C. Edn.: B.Sc., Natl. Assoc. Univ. of Southwest China, 1941; Ph.D., Univ. of Chicago, 1948. m. Vera L. Chao, Mar. 27, 1942. c.: Katherine S. M.; Evelina S. L.; Daniel K. H. Exp.: Geol., Geol. Survey of Szechuan Province, China, 1941-45; Geol., U. S. Geol. Survey, 1949—. Mem.: Geol. Soc. of Wash., D. C.; Petrologist's Club; Amer. Geophys. Union; Geol. Soc. of Amer.; Sigma Xi. Contrb. to: Geol. Survey of Szechuan; Norsk Geologisk Tidsskrift. Special Int.: Petrology; Milit. Geol.



CHAPANIS, Alphonse, Assoc. Prof. of Psychol. and Rsch. Scientist, Johns Hopkins Univ., 1315 St. Paul St., Baltimore, 2, Md. EXPERIMENTAL PSYCHOLOGY. b. Meriden, Conn., Mar. 10, 1917. s. Anicatas and Mary (Barkevich) C. Edn.: B.A., Univ. of Conn., 1937; M.A., Yale Univ., 1942; Ph.D., *ibid.*, 1943. m. Marion Rowe, Aug. 23, 1941. c.: Roger; Linda. Exp.: Statistician, State Dept. of Health, Franklin, Tenn., 1939-40; Aviation Psychologist, Aero Med. Lab., Wright-Patterson Air Force Base, Dayton, Ohio, 1942-46; Rsch. Psychologist, Johns Hopkins Univ., Baltimore, Md., 1946—. Mem.: Amer. Psychol. Assn.; A.A.A.S.; Amer. Physiol. Soc.; Eastern Psychol. Assn.; Inter-Soc. Color Council; Optical Soc. Amer.; Amer. Inst. of Phys.; Sigma Xi. Co-Author: Applied Exptl. Psychol.; Human Factors in Engrng. Design, 1949. Contrb. to: Jour. Exptl. Edn.; Jour. Ednl. Psychol.; Jour. Exptl. Psychol.; Air Surgeon's Bull.; Personnel Psychol.; Psychol. Rev.; etc. War Record: Second Lt. to Capt., Army Air Forces, 1943-46. Special Int.: Visual Psychophysiol.; Engrng. Psychol.; Expt. Psychol.; Human Engrng.; Statistics and Exptl. Design.

CHAPIN, Alice C., SPEECH AND HEARING.



CHAPIN, Francis Stuart, Prof. and Chm., Dept. of Sociol. and Dir., Schl. of Social Work, Univ. of Minn., Minneapolis, Minn. SOCIOLOGY.

CHAPLINE, William Ridgely, Jr., Chf., Div. of Range Rsch., Forest Service, U. S. D. A., Washington, D. C. **FOREST RANGE RESEARCH.**

CHAPIN, Theodore Sheffield, Consulting Geologist, Cities Service Co., 1938 California St., San Marino, Calif. **GEOLOGY.** b. Peking, China, Apr. 25, 1876. s. Lyman Dwight and Clara Labaree (Evans) C. Edn.: B.S., Occidental Coll., 1908; M.A., Stanford Univ., 1913. m. Katherine Maud Darling, Oct. 7, 1911. c.: Roy Evans; Patti Darling; Theodore. Exp.: Geologist, U. S. Geol. Survey, 1910-20; Geologist, Cities Service Co., N. Y., 1920-50; Consulting Geologist, *ibid.*, San Marino, Calif., 1951—. Mem.: Fellow, Geol. Soc. Amer.; Amer. Assn. Petroleum Geologists; Asociacion Mexicana de Geologos Petroleros; Sigma Xi; Kappa Sigma. Contr. to: U. S. Geol. Survey Bull.

CHAPMAN, Arthur Barclay, Asst. Prof. of Genetics, Univ. of Wis., Madison, Wis. **GENETICS.**

CHAPMAN, Clifford Warren, Prof., Schl. of Pharmacy, Univ. of Md., Baltimore, Md. **PHARMACOLOGY.**

CHAPMAN, Dwight W., Jr., Asst. Rsch. Dir., The Washington Post, Washington, D. C. **PSYCHOLOGY.**

CHAPMAN, Homer Dwight, Prof. of Soils and Plant Nutrition, Univ. of Calif., Citrus Experiment Sta., Riverside, Calif. **SOIL AND PLANT NUTRITION.** b. Darlington, Wis., Oct. 4, 1898. s. Faithful William and Nettie (Merriam) C. Edn.: B.S., Univ. of Wis., 1923; M.S., *ibid.*, 1925; Ph.D., *ibid.*, 1927. m. Daisy Ernst, Mar. 10, 1928. Exp.: Asst. in Soils, Univ. of Wis., 1925-27; Asst. Chem., Univ. Calif., 1927-37; Assoc. Chem., *ibid.*, 1938; Chem. and Prof. Soils and Plant Nutrition, *ibid.*, 1944; Chmn., Div. Agri. Chem., *ibid.*, 1938-44; Chmn., Div. Soils and Plant Nutrition, 1944—. Mem.: Amer. Chem. Soc.; Soil Sci. Soc. of Amer.; Amer. Soc. of Agronomy; Amer. Soc. for Horticultural Sci.; Western Soc. of Soil Sci.; Alpha Gamma Rho; Sigma Xi; Phi Lambda Upsilon; Gamma Alpha; Phi Sigma; Kiwanis; Present Day Club. Contr. to: Soil Sci.; Jour. Plant Physiology; Proceedings Hort. Sci. Soc. Amer.; Proceedings Amer. Soc. for Horticultural Sci.; Univ. of Calif. Hilgardia. War Record: Pvt., W. W. I. Special Int.: Soil Chem.; Plant Nutrition.

CHAPMAN, James Everett, Retired Asst. Prof. of Agron., N. Mex. Coll. of Agri. and Mech. Arts, R. R. 1, Box 423, Miamisburg, Ohio. **SOILS; SOIL FERTILITY; SOIL CONSERVATION; DRY FARMING.** b. Waterville, Minn., Apr. 25, 1887. s. Norton Everett and Frankie Elizabeth (Crowther) C. Edn.: B.A., Carleton Coll., 1910; M.S., Univ. of Minn., 1915. m. Effie Mae Whitney, Nov. 25, 1915. c.: Naomi. Exp.: Extension Instr. in Soils, Univ. of Maine, 1915-16; Instr. and Asst. Prof., N. Dak. Agril. Coll., Fargo, N. Dak., 1922-31; Soil Conservation Service Rsch., 1938-47; Asst. Prof., N. Mex. Coll. Agri. and Mech. Arts, State Coll., N. Mex., 1947-52; Retired, *ibid.*, 1952. Mem.: Soil Sci. Soc. of Amer.; Amer. Soc. Agron.; Fellow, A.A.A.S.; Sigma Xi; Mason. Contr. to: Sci. Special Int.: Soil Survey; Fertility Studies of Alfalfa, Wheat, Sugar Beet Seed and Cotton; Relation of Hard Subsoil Layers to Cotton Yields; Quick Test Methods for Soil Deficiencies for Farm Service.

CHAPMAN, Kenneth Milton, Rsch. Assoc., Lab. of Anthropol., Santa Fe, N. Mex. **DECORATIVE ARTS OF AMERICAN INDIANS.**

CHAPMAN, Paul Jones, Prof. of Entomol., N. Y. State Agri. Expt. Station, Cornell Univ., Geneva, N. Y. **ENTOMOLOGY.**

CHAPMAN, Seville, Cornell Aeronautical Lab., Inc., Box 235, Buffalo 21, N. Y. **ATMOSPHERIC PHYSICS.**

CHAPPELLE, Benjamin Franklin, Hd., Dept. of Foreign Language, Univ. of Nev., Reno, Nev. **HISTORY AND PHILOSOPHY SCIENCE.**

CHAPMAN, Mary Lucile, Assoc. Prof. of His., East Tenn. State Coll., 805 Lake St., Johnson City, Tenn. **HISTORY.** b. Louisville, Ky. d. Napoleon Bonaparte and Ida Belle (Porter) C. Edn.: A.B., Univ. of Ky., 1928; M.A., *ibid.*, 1937; Ph.D., *ibid.*, 1945. Exp.: Tehr., Public Schls., Ashland, Ky., 1921-40; Supvr. of Social Studies, *ibid.*, 1940-45; Hd. of History Dept. and Curriculum Consultant, *ibid.*, 1945-46; Asst. Prof. of History, Marshall Coll., Huntington, W. Va., 1946-48; Assoc. Prof. of History, East Tenn. State Coll., Johnson City, Tenn., 1948—.



Hon. Pos.: Secy., Ky. Council for the Social Studies, 1940-42; Vice Pres., 1942-44; Pres., *ibid.*, 1944-46. Mem.: Tenn. Edn. Assn.; Southern Historical Assoc., Kappa Delta Pi; A.A.U.W. Special Int.: The Far East and Foreign Affairs.

CHARGAFF, Erwin, Assoc. Prof. of Biochem., Coll. of Physicians and Surgeons, Columbia Univ., N. Y., N. Y. **CHEMISTRY.**

CHARIPPER, Harry Adolph, Prof. and Chmn., Dept. of Biol., N. Y. Univ., 100 Washington Square East, N. Y., N. Y. **HISTOLOGY, HEMATOLOGY.**

CHARIVEY, J. G., Inst. for Advanced Study, Princeton, N. J. **METEOROLOGY.**

CHARLES, Cecil Marvin, Assoc. Prof. of Anatomy, Washington Univ. Schl. of Med., St. Louis, Mo. **INTERNAL MEDICINE AND ANATOMY.**

CHARLES, Grace Miriam, retired, 934 Park Ave., River Forest, Ill. **BIOLOGY.**

CHARLES, Vera K., U. S. Bureau Plant Indus., 2039 New Hampshire Ave., N. W., Washington, D. C. **BOTANY.**

CHARLIER, Marie Helen Glennon, Major, U. S. Army, Prof. of Geog. and Geol., Finch Coll., N. Y. C., "Blancmanoir," Grove St., Chester, N. J. **REGIONAL GEOGRAPHY WITH EMPHASIS ON MEDICAL GEOGRAPHY (ENVIRONMENTAL MEDICINE) AND NURSING EDUCATION.** b. Stockport, United Kingdom, Mar. 26, 1912. d. William Francis and Mary-Ann (Hanratty) Glennon. Edn.: R.N., Clara Maas Memorial Hosp. Schl. of Nursing, Newark, N. J., 1931; Cert., Belleville Isolation Hosp., N. J., 1932; Certif., Columbia Univ., 1934 and 1938; Dipl., Aviation Cadet Center, AAF, San Antonio, Tex., 1943; Cert., Comm. and Gen. Staff Coll., 1944 and 1951; Ph.D., cum laude, Friedrich-Alexandra Univ., Erlangen, Bavaria, 1947 and 1948; Julian-Maximiliana Univ., Wuerzburg, Bavaria, 1948; Industrial Coll. of the Armed Forces, Wash., D. C., 1952; Ed.D., N. Y. Univ., 1953. m. 2nd. Roger H. Charlier, Oct. 8, 1946. Exp.: Asst. Operating Rm. Supvr., Newark, Mem. Hosp., Newark, N. J., 1932; Instr., Schl. of Nursing, Surgical Nursing and Operation Rm. Tehng., 1934; Supvr., O. R. and Instr., Schl. of Nursing, 1937; Supvr., Oper. Rm. Med. Center, Jersey City, N. J., 1940; Supvr., O. R. and Surgical Edn. Schl. of Nursing, Newark Mem. Hosp., Newark, N. J., 1942; Military Service: Asst. Chf. Nurse, AAF Hosp., Walker AAF Field, 1943-44; Normandy, Ardennes, Holland, Germany Campaign: Asst. Chf. Nurse and O. R. Supvr., 123 Ev. Hosp. until 1946; O. R. Supvr., 116 Gen. Hosp., Nuernberg, Bavaria, 1947; Various Assignments in Army until 1951; Chf. Nurse, 84th Med. Gp., 84th All-Weather Fighter Wg., 1951; N. J. Mil. Distr., 1952; Asst. Prof., Polycultural Univ., Wash., D. C., 1951; Prof., Finch Coll., 1953—. Mem.: Assn. Amer. Geographers; Natl. Geographic Soc.; N. J. League of Nursing Edn.; Clara Maas Mem. Hosp. Alumni Assn.; Amer. Nursing Assn.; Chmn., Internatl. Relations Com. Chester Woman's Club. Author: Ill. Guide of Operating Room Techn., 1937; Florida, ein Kontinent fuer sich, 1948; The Milk Bank of the Saar, 1953; Med. Edn. in N. Amer.,

1953; Tehng. Surgery to Nurses, 1953. War Record: 2nd Lt., 1943; 1st Lt., 1944; Capt., 1946; Maj., 1948. Special Int.: Applied Geography and Nursing Edn.

CHARLIER, Roger Henri Livien Constance Louise, Hd., Dept. of Phys. Sciences and Math., Finch Coll., N. Y. C., "Blancmanoir"



Grove St., Chester, N. J. BIOLOGY AND HUMAN GEOGRAPHY (INCLUDING MEDICAL GEOGRAPHY). b. Antwerp, Belgium, Nov. 10, 1915. s. Armand A. J. and Paulina Bernadina (Uyterhoeven) C. Edn.: Dipl. Human., Royal Coll., Antwerp, 1939; Dipl. Colonial Univ., Antwerp, 1940; B.S., Free Univ. of Brussels, 1941; B.S., State Univ. of Liege, 1943; B.S., *ibid.*, 1943; Anthropol. Inst. Liege, D.Sc., 1944; M.S., Free Univ. of Brussels, 1945;

LL.M., Univ. of Paris, 1946; LL.D., *ibid.*, pending; Ph.D., magna cum laude, Friedrich-Alexandra Univ., Erlangen, 1947; Cert., Industrial Coll. Armed Forces, 1953; Sc.D., State Univ. of Ghent, pending. m. Marie H. Glennon, Oct. 8, 1946. Exp.: Prof., Baudouin Coll., Brussels, 1942; Priv. Asst. Anthropol., Inst. Liege, 1944; during occupation of Belgium, served with Resistance, arrested, imprisoned in camps, released, 1944. Repres. Belgium at Dac-Rau and Nuernberg War Crimes Trials, 1945-47; Maj., Belgian Army, World War II; Tech. Advisor, 20th Century Fox, 1948; Voice of Amer. (Contbr.), 1949; Foreign Correspondent, 1946-51; Asst. Prof. and Hd., Dept. of Western Cultures, Polytech. Univ., Washington, D. C., 1951; Hd., Dept. of Physical Sci. and Math., Finch Coll., N. Y., 1952-; States Wide Lectr., 1952-53. Hon. Pos.: Hon. Chmn., Council of Resistance Organizations of the province of Limburg; Maj. (hon. res.) Belgian Army. Mem.: A.A.A.S.; Assn. Amer. Geographers; Alumni Erlangen Univ.; Royal Geographic Soc. Belgium; Com. Mem., Finch Bldg. Fund. Author: Mathématiques Générales, 5 vol. 1941; Cours de Géogr. Gén., 1942; Antwerpen, eine Beitrage z. historis. und wirtschaftl. Stadtgeogr., 1947; An Introduction to the Sciences and the Scientific Method, 1953; I Was a Male War Bride, 1947, 1948, 1952, 1953, Motion Picture Version of Same. Contbr. to: Bull. Soc. R. Geogr. War Record: 2nd Lt., 1940, Maj., 1944; Action in Underground in Belgium; Combat in Antwerp, Ardennes, Holland; Liais. Off. to HRH Prince Bernard of the Netherlands. Gen. Int.: Two Novels, one motion picture, over 450 articles in Reader's Digest, Balt. Sun, LeSoir, Dernière Heure, Volksgazet, etc.; Radio Scripts. Special Int.: Geography of Western and Central Europe; Internatl. Relations; Hygiene.

CHARLTON, David Berry, Owner, Mgr., Charlton Labs., P. O. Box 1048, Portland, Ore. BACTERIOLOGY.

CHARNOCK, Leonard William Hooson, Prof. of Biology, Eureka Coll., Eureka, Ill. BIOCHEMISTRY. b. January 1, 1894, Cape Town, Cape of Good Hope, Union of South Africa (Naturalized Citizen, 1925). s. Frederick and Kate (Williams) C. Edn.: B.S., Univ. of Cape Town, Bishop Coll., 1914; M.A., *ibid.*, 1916; Ph.D., *ibid.*, 1929; Hon. Sc.D., *ibid.*, 1944. Exp.: Ferris Institute, Pharmacy Dept., Jr. Instructor, 1914; Univ. of Mich., Med. Coll., Instructor in Graduate Work, 1914-16; Dir. Dept. Ligature and Sutures, Johnson and Johnson, N. J., 1921-29; *ibid.*, The Kendall Co., Bauer and Black Div., Boston and Chicago, Rsch. Dept., Don Baxter Rsch. Lab., Glendale, Calif., 1936-38; Mgr. Vanol Chem. Co., Highland Park, Mich., 1939-41; Assoc. Prof., Eureka Coll., Eureka, Ill., 1941-—. Mem.: Hon. Life Trustee, Univ. of Cape Town; Sigma Zeta; A.A.U.P.; A.A.A.S.; Phila. Acad. of Sci.; Mason; Republican; Episcopal Club; etc. Author: Co-author (with F. K. Kilmer), Lister and the Ligature, 1923; Absorbable Membranes Specifically in Surgery, 1926; etc. Ph.D. Dissertation: Absorbable Membranes. Travel: N.

Amer.; S. Africa; Holy Land; Europe. Hobbies: Sail Boating; Collecting Data on Botanic Drugs. Listed in: Who's Who in Ill. and Chicago; Who's Who in Midwest; A.M.S.; Distinguished Alumni of Univ. of Mich. Special Int.: Botanic Drugs; Therapeutic Values in Drugs for Pharmacy.

CHARNY, Charles, STERILITY.

CHARTERS, Werrett Wallace, Maple City, Mich. EDUCATION.

CHASE, Agnes, Hon. Custodian Grasses, U. S. Natl. Herbarium, Smithsonian Inst., Washington, D. C. GRAMINEAE.

CHASE, Aurin Moody, Asst. Prof. of Biol., Princeton Univ. Princeton, N. J. GENERAL PHYSIOLOGY.

CHASE, Dana, 360 N. Michigan Ave., Chicago 1, Ill. CERAMICS.

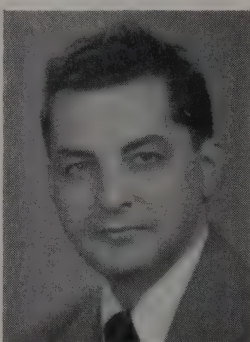
CHASE, Eleanor Frances, Assoc. Prof. of Chem., State Tchrs. Coll., Framingham, Mass. CHEMISTRY.

CHASE, Ethel Winifred Bennett, Assoc. Prof. of Botany and Adviser to Women, Liberal Arts Coll., Wayne Univ., 4841 Cass Ave., Detroit, Mich. ECOLOGY.

CHASE, Florence Meier, 1813 Parkside Dr., N. W., Washington, D. C. ALGEOLOGY.

CHASE, Merrill Wallace, Assoc., Rockefeller Inst. for Med. Rsch., 66th St. and York Ave., N. Y., N. Y. IMMUNOLOGY.

CHATENEVER, Alfred, Rsch. Engr., Assoc. Prof. of Petroleum Engrng., Univ. of Okla., Norman, Okla. PHYSICAL CHEMISTRY, PETROLEUM ENGINEERING.



b. N. Y., N. Y., May 1, 1916. s. Simon and Rose (Davis) C. Edn.: B.S., Coll. of the City of N. Y., 1936; M.A., Columbia Univ., 1937; Ph.D., N. Y. Univ., 1948. m. Blanche Picker, Aug. 10, 1940. c: Richard; Deborah; David. Exp.: Chf. Chemist and Hd. of Rsch. and Development Sections, Aquatic Chem. Lbs., N. Y., N. Y., 1938-42; Sr. Chemist, Matam Corp., N. Y., N. Y., 1942-43; Rsch. Scientist and Section Leader, Manhattan District Project, N. Y., N. Y., 1944-46; Technical Dir., Aquatic Chem. Labs., N. Y., N. Y., 1946-47; Private Consultant, N. Y., N. Y., 1948-49; Rsch. Engr., Assoc. Prof. of Petroleum Engrng., Univ. of Okla., Norman, Okla., 1949-—. Mem.: Amer. Chem. Soc.; A.A.A.S.; Natl. Assn. of Corrosion Engrs.; Sigma Xi; Amer. Inst. of Mining and Metallurgical Engrs.; Pi Epsilon Tau. Contbr. to: Jour. Amer. Chem. Soc.; Oil and Gas Jour.; World Oil; Jour. Petroleum Tech. Special Int.: Multiphase Fluid Flow in Porous Media; Kinetics of Ionic Reactions in Solution; Gaseous Diffusion; Physical Chemical Measurements; Water Conditioning; Corrosion.

CHAWNER, William D., Geologist, Carter Oil Co., Tulsa, Okla. PETROLEUM GEOLOGY.

CHEADLE, Vernon Irvin, Prof. and Hd., Dept. of Botany and Dir. of Grad. Studies, R. I. State Coll., Kingston, R. I. MORPHOLOGY, ANATOMY.

CHEEVER, David, Assoc. Prof. Emer. Surgery, Harvard Med. Schl., 193 Marlboro St., Boston, Mass. SURGERY.

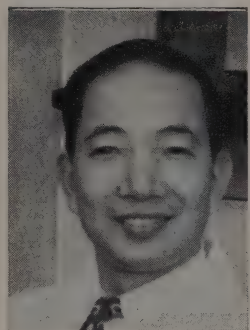
CHEN, Ko Kuei, Prof. of Pharmacol., Indianapolis Univ. Med. Center, 519 W. Hampton Dr., Indianapolis, Ind. PHARMACOLOGY.

CHEIN, Isidor, Prof. Psychol. N. Y. Univ., N. Y., N. Y. SOCIAL PSYCHOLOGY. b. Mar. 5, 1912.



N. Y. C. s. Max and Rebecca (Zatal) C. Edn.: B.S., C. of City of N. Y., 1932; M.A., Columbia, 1933; Ph.D., *ibid.*, 1939. m. Norma Cohen of N. Y. C., Sept. 12, 1937. d. Harry and Sarah Cohen. c.: Orin Nathaniel; David Beryl; Judith Avis; Deborah Ann. Exp.: Lectr. in Psychol., C. of City of N. Y., 1937-49; Rsch. Assoc., Mayor's Comm. on Unity, N. Y. C., 1945-46; Rsch. Assoc., Assoc. Dir., Dir., Comm. on Community Interrelations of Amer. Jewish Cong., 1946-52; Acting Dir., Rsch. Center for Mental Health, N. Y. Univ., 1952-53; Prof. Psychol., *ibid.*, 1953—. Mem.: Fellow, Amer. Psychol. Assn.; Fellow, A.A.A.S.; Amer. Statistical Assn.; World Assn. for Public Opinion Rsch.; N.A.I.R.O. Contrb. to: Amer. Psychol.; Human Relations; Internatl. Jour. of Opinion and Attitude Rsch.; Jour. of Abnormal and Soc. Psychol. Ph.D. Dissertation: An Empirical Study of Verbal, Numerical, and Spatial Factors in Mental Organization. Listed in: A.M.S.; Internatl. Dir. of Opinion and Attitude Rsch.

CHEN, Tze-Tuan, Prof. of Zool., Univ. of Co. Calif., Los Angeles 7, Calif. b. Oct. 4, 1906.



Foochow, China. Edn.: A.B., Fukien Christian Univ., 1928; A.M., Oberlin Coll., 1930; Ph.D., University of Pa., 1934. Exp.: Instr., Zool., Fukien Christian Univ., Foochow, China, 1926-28; Instr. Zool., Univ. of Pa., Phila., Pa., 1930-34; Sterling Rsch. Fellow, Yale Univ., 1934-36; Johnston Scholar, Johns Hopkins Univ., 1936-38; Rsch. Fellow, *ibid.*, 1938-39; Rsch. Assoc., Protozool., Schl. of Hygiene and Pub. Health, Johns Hopkins Univ., 1939-40; Rsch. Assoc., Zool., Univ. of Calif., Los Angeles, Calif., 1940-41; Lect. in Zool., *ibid.*, 1941-46; Sr. Mem., Academia Sinica, Shanghai, China, 1946-47; Prof. Biol., Minn. S. T. C., Bemidji, Minn., 1947-49; Dir., Int. of Biol. Rsch., *ibid.*, 1949; Visiting Prof. Zool., Univ. of So. Calif., Los Angeles, Calif., 1949 summer; Assoc. Prof., *ibid.*, 1949-51; Prof., *ibid.*, 1951—. Mem.: Lambda Sigma; A. S. Protozool.; Soc. Exp. Biology and Medicine; Amer. Society Naturalists; Sigma Xi; A.A.A.S.; National Malaria Society; New York Acad. of Sci.; Amer. Soc. Zool.; China Sci. Soc.; Chinese Natural Sci. Assn.; Chinese Zool. Soc. Contrb. to: Sci. Jours. Ph.D. Dissertation: Chromosomes in the Opalinid Ciliate Infusorians. Travel: China; Japan; Mexico; Can.; U. S. Listed in: A.M.S.; Who Knows and What.

CHENAULT, Roy Lee, Rsch. and Development Engr., Oil Well Supply Co., Oil City, Pa. MECHANICAL ENGINEERING.

CHENEY, Elliott Ward, Assoc. Prof. of Physics, Lehigh Univ., Bethlehem, Pa. PHYSICS.

CHENEY, Horace Bellatti, Hd. Dept. of Soils, Ore. State Coll., Conwallis, Ore. SOIL FERTILITY. b. Emerson, Ia., Dec. 15, 1913. s. Harold and Annie (Bellatti) C. Edn.: B.S., Ia. State Coll., 1935; Ph.D., Soil Fertility, Ohio State Univ., 1942. m. Dorothy Remsen of River Forest, Ill., Sept. 3, 1940. d. T. G. Remsen. c.: Roberta; Katherine Ann; Harold Remsen. Exp.: 1935-37, Jr. Soil Surveyor, Soil Conservation Service; 1937-39; Extension Agronomist, Ia. State Coll.; 1939-42, Ohio Agri. Sta., Wooster, Ohio; 1942-52, Asst. Prof.,

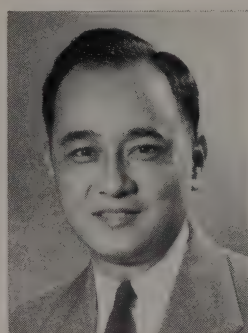
Assoc. Prof. and Prof. of Agronomy, Iowa State Coll., 1952—. Hon. Pos.: Chmn. Agronomist Education Division, Amer. Soc. of Agron., 1947. Mem.: Amer. Soc. of Agron.; Farm House; Cardinal Key; Phi Kappa Phi; Gamma Sigma Delta; Alpha Zeta; Soil Sci. Soc. of Amer.; Soil Conservation Soc. of Amer.; A.A.A.S.; Iowa Acad. of Sci.; Rotary. Ph.D. Dissertation: Current and Residual Effects of Sulfate of Ammonia on Timothy and Corn Special Int.: Soil Fertility; Soil Management.

CHENEY, Monroe George, Pres., Anzac Oil Corp., Box 846, Coleman, Tex. GEOLOGY.

CHENEY, Walter Lynn, Prof. of Physics, Geo. Washington Univ., Washington, D. C. PHYSICS.

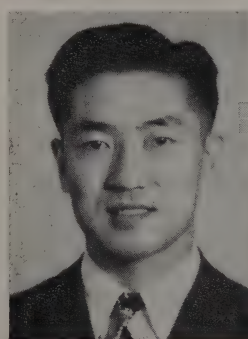
CHENEY, William Fitch, Jr., Hd., Dept. of Math., Univ. of Conn., Storrs, Conn.

CHENG, Ch'eng-K'un, Assoc. Prof. of Sociology, Univ. of Hawaii, Honolulu, T. H. INSTITUTIONS:



MARRIAGE AND FAMILY CRIMINOLOGY; ECOLOGY. b. Amoy, China, Jan. 10, 1907. s. Teh Pek Lian and Ang Gim (Hui) C. Edn.: B.A., Yenching Univ., 1932; M.A., Univ. of Wash., 1937; Ph.D., *ibid.*, 1945. m. Eleanor A. Albao, May 14, 1949. Exp.: Instr., Natl. Univ. of Shantung, Tsingtau, 1932-33; Secy., China Branch of Internatl. Labor Office, 1934; Asst. Prof. of Sociol., Univ. of Amoy, China, 1935-36; Visiting Prof., West China Union Univ., China, 1940-41; Asst. Prof. of Sociol., Univ. of Wash., 1942-48; Assoc. Prof. of Sociol., Univ. of Hawaii, 1948—. Mem.: Univ. of Wash. Rsch. Soc.; Am. Sociol. Soc.; A.A.U.P.; Pi Sigma Alpha; Alpha Kappa Delta. Author: The Dragon Sheds its Scales, 1952. Contrb. to: China Monthly; Social Forces; Amerasia. Gen. Int.: Forum Speaker, Adult Edn. Program of the Univ. of Wash. between Oct. 1943 and Mar. 1944; Bd. Mem., Univ. of Hawaii Y.M.C.A. Special Int.: China; Hawaii; Southeast Asia.

CHENG, David Keun, Assoc. Prof. of Elec. Engrng., Syracuse Univ., Syracuse 10, N. Y. COMMUNICATION ENGINEERING.



b. Kiangsu, China, Jan. 10, 1918. s. Han J. and Ying (Hsui) C. Edn.: B.S., Natl. Chiao-Tung Univ., 1938; S.M., Harvard, 1944; Sc.D., *ibid.*, 1946; Charles Storror Scholar, Harvard, 1943-44; Gordon McKay Scholar, *ibid.*, 1944-46. m. Enid Kwok, Mar. 27, 1948. c.: Eugene Alan. Exp.: Rsch. Engr. and Resident Representative in Shanghai and India. Central Radio Corp. Natl. Resources Commn. of China, 1938-43; Instr., China Radio Inst., 1940; Electronics Engr. and Project Engr., Cambridge Field Stal, AMC, USAF, Cambridge, Mass., 1946-48; Asst. Prof. of Elec. Engrng., Syracuse Univ., Syracuse, N. Y., 1948-50; Assoc. Prof., *ibid.*, 1951—. Sr. Project Engr., Air Force Rsch. Projects, 1950—; Resident Program Chmn., Syracuse Univ. Grad. Program at International Business Machine Corp., Endicott, N. Y., 1952-53; Consultant, IBM, 1952-53. Mem.: A.A.A.S.; A.A.U.P.; Chinese Inst. of Engrs.; Inst. of Radio Engrs.; Sigma Xi; Eta Kappa Nu. Contrb. to: Proc. of Inst. of Radio Engrs.; Proc. of Chinese Inst. of Engrs.; Rsch. Reports of Air Force and Syracuse Univ. Special Int.: Electric Oscillations; Methods of Modulation in Radio Communication; Electron Tubes and Circuits; Electromagnetic Field Theory.

CHERKIN, Arthur, Dir. of Rsch., Don Baxter, Inc., Glendale, Calif. **BIOCHEMISTRY.**

CHERONIS, Nicholas Demetrius, Chm., Dept. of Physical Sci., Wright Br., Chicago City Coll., Chicago, Ill. **ORGANIC CHEMISTRY.**

CHERNICK, S. S., Natl. Inst. of Health, Bethesda, Md. **BIOCHEMISTRY.**

CHERRINGTON, Ernest Hurst, Jr., Dean of Coll. Prof. and Hd., Dept. of Physics and Astron., Centenary Coll. of La., Shreveport, La. **ASTOPHYSICS.**

CHERRY, Floyd Hildreth, Prof. Emer., Univ. of Calif., 1924; Monterey Ave., Berkeley, Calif. **ENGINEERING.**

CHESLEY, Leon C., Chf. Chemist, Margaret Hague Maternity Hosp., Jersey City, N. J. **BIOCHEMISTRY.**

CHESNEY, Alan Mason, Assoc. Prof. of Med. and Dean Medical Faculty, Johns Hopkins Univ., Baltimore, Md. **MEDICINE.**

CHESNUT, Roy William, Mem. of Technical Staff, Bell Telephone Labs., Inc., 463 West St., N. Y., N. Y. **ELECTRICAL ENGINEERING.**

CHESTER, Kenneth Starr, Dir. of Rsch., Rsch. Foundation, Okla. A. and M. Coll., Stillwater, Okla. **PLANT PATHOLOGY.**

CHESTER, Webster, Prof. of Biol., Colby Coll., Waterville, Maine. **ZOOLOGICAL SCIENCES.**

CHEVALLEY, Claude, 463 Riverside Dr., N. Y. 27, N. Y.

CHICKERING, Arthur Merton, Prof. of Biol., Chm. Div. of Sci. and Math., Albion Coll., Albion, Mich. **ARANEOLGY.**

CHICKERING, Henry T., Asst. Prof. of Clinical Med., Columbia Univ., Schl. of Med., N. Y., N. Y. **INTERNAL MEDICINE.**

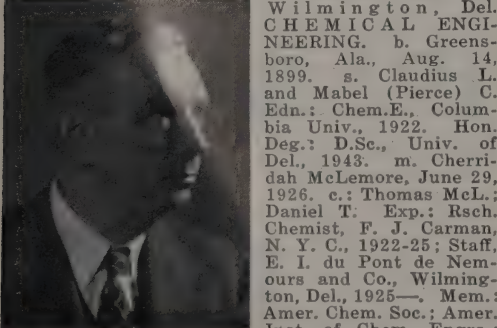
CHILD, Charles Manning, Lectr. in Biol., Jordan Hall, Stanford Univ., Stanford, Calif. **DEVELOPMENTAL BIOLOGY.**

CHILDERS, Norman Franklin, Dept. of Horticulture, N. J. Agri. Expt. Station, New Brunswick, N. J. **HORTICULTURE.**

CHILDS, John Lawrence, Prof. of Edn., Tehrs. Coll., Columbia Univ., N. Y., N. Y. **PHILOSOPHY OF EDUCATION.**

CHILTON, St. John P., Assoc. Prof. and Assoc. Pathologist, La. State Univ., Baton Rouge, La. **PLANT PATHOLOGY.**

CHILTON, Thomas Hamilton, Tech. Dir., Development Engrng. Div., Engrng. Dept., E. I. du Pont de Nemours and Co., Wilmington, Del. **CHEMICAL ENGINEERING.**



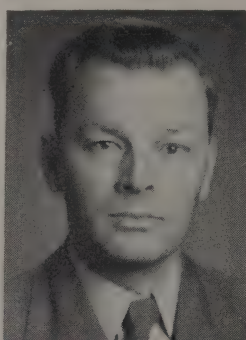
CHILTON, Thomas Hamilton, Tech. Dir., Development Engrng. Div., Engrng. Dept., E. I. du Pont de Nemours and Co., Wilmington, Del., 1925—. Mem.: Amer. Chem. Soc.; Amer. Inst. of Chem. Engrs.; Amer. Soc. of Mech. Engrs.; Amer. Soc. for Engrng. Edn.; Tau Beta Pi; Sigma Xi; A.A.A.S.; Phi Lambda Upsilon; Omega Chi Epsilon. Contr. to: Indus. and Engrng. Chem.; Trans., Amer. Inst. of Chem.

Engrs.; Chem. Engrng. Progress. Special Int.: Chem. Engrng. Unit Operations.

CHINARD, Gilbert, Prof. of French Literature, Princeton Univ., Princeton, N. J. **FRANCO-AMERICAN RELATIONS.**

CHIPMAN, John, Prof., Mass. Inst. of Tech., Cambridge, Mass. **METALLURGICAL THERMODYNAMICS AND PHYSICAL CHEMISTRY OF STEELMAKING.**

CHIPMAN, Robert A., Assoc. Prof. of Elec. Engrng., McGill Univ., Montreal, Que., Can. **RADIO-FREQUENCY MEASUREMENTS.**



CHIPMAN, Robert A., Assoc. Prof. of Elec. Engrng., McGill Univ., Montreal, Que., Can., 1946-47; Assoc. Prof., ibid., 1947—. Mem.: I.R.E.; Acoustical Soc. of Amer.; A.A.U.P. Contr. to: Proc. Phys.-Soc. of London; Jour. of Applied Physics; Proc. Inst. of Radio Engrs.; Electronics. Special Int.: High-Frequency Measurements, Radar, Current-Noise from Resistors, Radiation from Transmission Lines, History of Science.

CHISDES, Meyer, Chemist in Chg. of Testing Lab. The Port of N. Y. Authority, 111 8th Ave., 1647 Nostrand Ave., Brooklyn, N. Y. **CHEMISTRY.**

CHITTENDEN, F. Dudley, Factory Mgr., Painesville Ohio Plant, Naugatuck Chemical Div. of U. S. Rubber Co., 987 Cadle Ave., Mentor, Ohio. **RUBBER; PLASTICS.**



CHITTENDEN, F. Dudley, Factory Mgr., Painesville Ohio Plant, Naugatuck Chemical Div. of U. S. Rubber Co., 1942-45; Development Manager, Naugatuck Chemical Div. of U. S. Rubber Co., 1945-50; Factory Mgr., Painesville, Ohio Plant, Naugatuck Chem. Div., ibid., 1950—. Mem.: Amer. Chem. Soc.; Amer. Inst. Chem. Engrs.; Gamma Alpha; Alpha Chi Sigma; Sigma Xi.

CHOATE, Helen Ashhurst, Assoc. Prof. of Botany, Smith Coll., Northampton, Mass. **PLANT PHYSIOLOGY.**

CHOLLAR, Robert G., Dir. of Rsch., The Natl. Cash Register Co., Dayton, Ohio. **CHEMISTRY—PLASTICS.**

CHRISTENSEN, Bernard Victor, Dean, Coll. of Pharm., The Ohio State Univ., Columbus 10, Ohio. **PHARMACOGNOSY; PHARMACOLOGY.** b. Westfield, Wis., Apr. 15, 1885. s. Gunder and Wilhelmina (Detert) C. Edn.: M.S., Univ. of Wis., 1925; Ph.D., ibid., 1927. m. Maude Scott of Tomahawk, Wis., 1911. c.: Phyllis Ann. Exp.: Trch. in Rural Schl., Marquette Co., Wis., 1905-06; Prin.

St. Graded Schl., Modena, Wis., 1906-08; Prin., H. S., Prentice, Wis., 1909-11; Prin., H. S. Friendship, Wis., 1911-13; Prin., H. S., Baldwin, Wis., 1913-16; Supt. of Pub. Schls., Arcadia, Wis., 1917-19; Supt. of Pub. Schls., Augusta, Wis., 1919-23; Instr. in Pharm., Univ. of Wis., 1924-27; Prof. of Pharmacognosy and Pharmacology, Schl. of Pharm., Univ. of Fla., 1927-39; Dir., Schl. of Pharm., ibid., 1933-39; Dean, Coll. of Pharm., Ohio State Univ., 1939—. Mem.: Amer. Pharm. Assn., Pres., 1941-42, Mem. Coun., 1941—; Ohio State Pharm. Assn.; Plant Sci. Seminar, Pres., 1931-32; A.A.A.S.; Amer. Inst. of the Hist. of Pharm.; Amer. Assn. of Coll. of Pharm., Pres., 1948-49; Chmn., Exec. Com., 1943-48; Amer. Coun. on Pharm. Edn.; Amer. Foundation for Pharm. Edn., 1943-48; Sigma Xi; Rho Chi; Gamma Alpha; Phi Sigma; Beta Phi Sigma. Author: Some Drug Plants of Fla.; Collection of Medicinal Plants; Med. Plants of Fla.; Collection and Cultivation of Med. Plants of Fla. Contbr. to: Jour. of Amer. Pharm. Assn.; Amer. Jour. of Pharm. Edn. Ph.D. Dissertation: The Various Forms of Calcium Carbonate. Hobbies: Gardening; Reading. Listed in: Who's Who in Amer.; Who's Who in the Western Hemisphere; Biographical Ency. of the World; A.M.S.; Who's Who in the Midwest. Special Int.: Pharmacognosy and Pharmacology.

CHRISTENSEN, Frederick Waldemar, 503 S. Seventh St., Osage City, Kans. ANIMAL NUTRITION.

CHRISTENSEN, Herbert E., 2433 Oregon St., Berkeley, Calif. PHARMACOLOGY.

CHRISTENSEN, Jonas J(ergen), Prof. and Acting Chf. of Plant Pathol., Univ. of Minn., Univ. Farm, St. Paul 8, Minn. PLANT PATHOLOGY. b. Aug. 22, 1892, Hutchinson, Minn. s. Chris C. and Christina (Borg) C. Edn.: B.S., 1921, M.S., 1922, Ph.D., 1925, Univ. of Minn. m. Hildur Minerva Lundeen of Isanti, Minn., 1922. d. Mr. and Mrs. August Lundeen. c.: Philip; Donn; Robert. Exp.: Rural Schl. Tehr., N. Dak., 1915-16; Field Agt., Minn., Fed. Hort. Bd., Summer, 1919, State Potato Inspector, Summer, 1920; Univ. of Minn. and Agri. Exp. Sta.; Instr., 1920-25;

Asst. Prof., 1925-31; Assoc. Prof., 1931-38; Prof. of Plant Pathol., 1938—; Agri., U.S.D.A., 1922-37; Bur. of Plant Indust. to 1934; Bur. of Entomol. and Plant Quarantine to 1937. Mem.: Fellow, A.A.A.S.; Minn. Acad. of Sci.; Amer. Phytopathol. Soc.; Amer. Mycol. Soc.; Amer. Genetic Soc.; Bot. Soc. of Amer.; Indian Phytopathol. Soc.; Hon. Mem. of Jap. Phytopathol. Soc.; Amer. Agron. Soc.; Alpha Zeta; Gamma Sigma Delta; Sigma Xi; Gamma Alpha; Biol. Club. Hon. Premier Seed Grower. Author: Contbr. to: Phytopathol.; Mycol.; Phytopathologische Zeitschrift; Bot. Rev.; Jour. Agri. Rsch. Tech. Bull. Ph.D. Dissertation: Physiological Specialization and Mutation in Helminthosporium Satinum. War Record: Sgt., U.S.A.M.C., 1917-19. Travel: Europe; Japan; Mexico; and Most of Latin Amer. Countries. Gen. Int.: Held Guggenheim Mem. Fellowship for Stud. in Germany and Other Countries, 1929-30; Visiting Expert, N.R.S. SCAP, Japan, 1950; Pres. Amer. Phytopathol. Soc., 1943; Pres., Minn. Chapt., Sigma Xi, 1949. Hobby: Botanizing. Listed in: A.M.S.; Biog. Ency. of the World; Who's Who in Amer.; Who Knows—and What.

CHRISTENSEN, Leo Martin, Dir., Rsch. and Engrng. Div., Natl. Agrol. Co., Lincoln, Nebr. CHEMICAL ENGINEERING.

CHRISTENSEN, Leroy Dean, Entomologist and Asst. in Chg., Div. Fruit Insect Investigations, Rm. 4134, South Bldg., U. S. Bureau of Entomol.

and Plant Quarantine, 4836 Loughboro Rd., N. W., Washington, D. C. ENTOMOLOGY.

CHRISTIAN, Henry Asbury, Hersey Prof. Emer. of Theory and Practice Physics, Harvard Univ., 20 Chapel St., Brookline, Mass. MEDICINE.

CHRISTIAN, John Edward, Prof. of Pharmaceutical Chemistry and Co-ordinator of Bio-Nucleonics Research, Purdue Univ., Schl. of Pharmacy, West Lafayette, Ind. PHARMACEUTICAL CHEMISTRY; RADIOACTIVE TRACERS. b. Indianapolis, Ind., July 12, 1917. s. George and Okel (Waltz) C. Edn.: B.S., Purdue Univ., 1939; Ph.D., ibid., 1944. m. Catherine Spooner of Storm Lake, Iowa, July 23, 1948. d. John and Lucile Spooner. Exp.: Retail Pharmacist, 1 Year, Registered Pharmacist in Ind.; Control Chemist, Upjohn County, Kalamazoo, Mich., 1939-40; Rsch. Fellow, Purdue Univ., 1940-44; Postdoctoral Research Fellow, ibid., 1944; Asst. Prof. of Pharm. Chem., ibid., 1945; Assoc. Prof. of Pharm. Chem., ibid., 1947; Prof. of Pharm. Chem., ibid., 1950; Coordinator of Nucleonics Rsch., ibid., 1948—. Hon. Pos.: Sigma Xi Rsch. Award, 1950 to the Mem. of the Univ. Staff Who Has Contributed Most to Rsch. During the Preceding Yr. Mem.: Amer. Pharm. Assn.; Chem. and Radiological Def. Com. for State of Ind.; Amer. Soc. of Bacteriol.; Amer. Chem. Soc.; A.A.A.S.; Sigma Xi; Rho Chi; A.A.U.P.; Phi Lambda Upsilon; Kappa Psi; Optimists Internatl. Author: Quantitative Pharmaceutical Analysis, 1949; A Chapter in Constructive Uses of Atomic Energy, 1949. Ph.D. Dissertation: The Synthesis of Derivatives of 5-Aminoquinoline. Contbr. to: Jour. of Amer. Chem. Soc.; Jour. of Bacteriol.; Jour. of Amer. Pharm. Assn., Editorial Advisor; and many others. Gen. Int.: Served on Numerous Committees of the Amer. Pharm. Assn. Listed in: A.M.S.; Who Knows—and What. Special Int.: Radioactive Tracers, Quantitative Pharmaceutical Analysis.

CHRISTIANSEN, Irving Kroyer, Prof. of Accounting, John Carroll Univ., 2496 Traymore Rd., Univ. Heights, Cleveland 18, Ohio. BUSINESS ADMINISTRATION: ACCOUNTING AND MANAGEMENT. b. Evanston, Ill., Apr. 7, 1909. s. Hans Kroyer and Ellen Helena (Gustavson) C. Edn.: B. of Edn., Wis. State Coll., 1936; M.A., Univ. of Iowa, 1940; Ph.D., ibid., 1947. m. Helen Susanna Solverson, Aug. 17, 1940. c. Charlane Jean; Steven Irving. Exp.: Clerical Duties. Auditor of Expenditures Office, C. B. & Q. R.R. Co., Chicago, Ill., 1926-28; Accounting Dept.

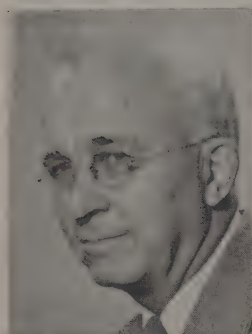
and Timekeeper, R. C. Wieboldt Construction Co., Chicago, Ill., 1928-29; Accounting Dept., Yates Am. Mach. Co., Beloit, Wis., 1929-31; Crew Mgr., Crowell Publishing Co., N. Y., 1932-33; Instr. in Commerce, Milwaukee Vocational Schl., 1936-42; Instr. of Accounting, Univ. of Iowa, 1942-43; Lectr. in Accounting, Univ. of Hawaii, 1944-45; Asst. Prof. of Accounting, Drake Univ., 1947; Asst. Prof. of Accounting, Ore. State Coll., 1947-48; Assoc. Prof. of Accounting, San Jose State Coll., 1948-49; Assoc. Prof. of Accounting, Univ. of Miss., 1949-50; Prof. of Accounting, John Carroll Univ., Cleveland, Ohio, 1950—; Business Consultant, 1950—. Mem.: Sigma Tau Gamma; Delta Sigma Pi; Pi Omega Pi; V.F.W.; Amer. Accounting Assn.; Cleveland, Ohio RONS chapter of the Reserve Officers Assn. War Record: Private, U. S. Army, July-Sept. 1943; Lt., U. S. N. R., 1943-46; Admin. and Mgt. Officer, South Pacific, 1944-45. Special Int.: Absenteeism in Industry; The Marketing of Raw Milk by Producers within the Chicago Area.

CHRISTIE, Arthur Carlisle, Private Practice, Gaithersburg, Mo. RADIOLOGY.

CHRISTIE, Jesse Roy, Nematologist, Central Fla. Expt. Station, Sanford, Fla. **NEMATOTOLOGY.**

CHRISTMANN, Ludwig Jacob, Dir. of Basic Nitrogen Lab., Am. Cyanamid Co., Stanford, Conn. **CHEMISTRY.**

CHRISTOFFERSON, Halbert Carl, Prof. of Math. and Dir., Seed. Edn., Miami Univ., Oxford, Ohio.



MATHEMATICS b. Jan. 5, 1894, Racine, Minn. s. Hans and Carrie (Berg) C. Edn.: A.B., Univ. of Minn., 1917; M.A., Univ. of Chicago, 1923; Ph.D., Columbia Univ., 1933. m. Christina Guannitz, Minneapolis, Minn., 1919. d. Herman and Anna Guannitz. Exp.: Tehr., Prin., Supt., and H. S. Prin. at Reading, Maple Lake, Red Wing, Minn., 1917-23; Prof., Math., S. T. C., Oshkosh, Wis., 1923-27; Instr., Math., Tehrs. Coll., Columbia, 1927-28, and Summers, 1927, 1928, 1946; Prof.,

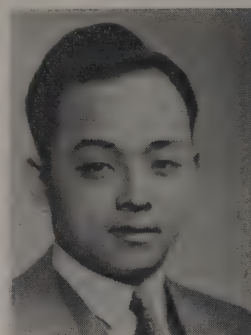
Math., Miami Univ., Oxford, Ohio, 1928—; Dir. of Secondary Edn., ibid., 1934—; Acting Dir., Edms., 1946-47; Prof. of Math., Univ. Trng. Command, Florence, Italy, 1945, Aug.-Dec.; Visiting Prof. of Edn., Univ. of Wis., 1947, Summer; Specialist in Secondary Edn., Office of Military Govt., Wiesbaden, Germany, Jan., 1948-Sept., 1949; Acting Dir. Student Tehng., 1949-51. Hon. Pos.: Pres., Natl. Coun. Tehrs. Math., 1938-40; Dir., ibid.; Math. Ed., Schl. Sci. and Mathematics; Chmn. of Comm. Responsible for Authorship of the Following Curriculum Guides for the State of Ohio: Math. (1) Grades 1, 2; (2) Grades 3, 4; (3) Grades 5, 6; (4) Grades 7, 8; (5) Grades 9, 10. Mem.: Natl. Coun. Tehrs. of Math.; Math. Assn. of Amer.; A.A.A.S.; N.E.A.; O.E.A.; Amer. Edn. Rsch. Assn.; A.F.&A. M.; Kiwanis. Author: Geometry Professionalized for Tehrs., 1933; Mastery Workbooks and Diagnostic Tests in Whole Numbers, Fractions, Decimals, Measures, and Percentage, 1934-35; Foundation Skills in Math., and Tests, 1939; Demonstrations and Lab. Experiences in Sci. of Aeronautics, 1942, McGraw Hill. Joint Author of State Every-Pupil Tests in Math. for Grades 3-4, 5-6, 7-8, Algebra, Geometry, and Aeronautics, Dec. and Apr. for Several Years During 1930 to 1942; Mathematical Literary Test H. S. Seniors, Form A&B and Math. Workbook, H. S. Seniors, Pub. by St. Dept. Edn., Columbus, Ohio, 1952. Contrb. to: Math. Tehr.: Schl. Sci. and Math.; Ednl. Forum; Ohio Schls.; Geometry, a Way of Thinking; Functional or Relational Thinking in Second. Mathematics; The Use of Graphs in Representing Relationships; A New Number System; The Learning and Teaching of Geometry, A State Survey; Teaching Directed Numbers; Math., the Lang. of Quantity; Math. that Functions in War and Peace; Installment Buying Interest Rates by a Simple Approximation Formula; Basic Consideration in the Teaching of Math. in the U. S. A., in Mathematical Gazette, England; "Edn. in Germany," Ohio Schls., Nov., 1951; Many Book Reviews; etc. Ph.D. Dissertation: Geometry Professionalized for Tehrs. Collaborator for Coronet Instructional Films, Inc. on "Mathematics, The Lang. of Graphs"; "Percents"; "Decimals are Easy." Author: "Da Steht ein Deutsches Kind"; "Amerikas Dankschuld an Deutschland" in "Levanna" and "Ednl. Reconstruction in Germany" in "Ednl. Forum." Special Int.: Tehng. Mathematics.

CHRISTY, Andrew, Rsch. Physicist, G-M Labs., Inc., 4326 N. Knox Ave., Chicago, Ill. **PHYSICS**

CHRYSLER, Mintin Asbury, Prof. Emer. of Botany, Rutgers Univ., P. O. Box 34, Chaplin, Conn. **BOTANY.**

CHU, Lan Jen, Prof. of Elec. Engrng., Mass. Inst. of Tech., Cambridge, Mass., **ELECTRICAL ENGINEERING.**

CHU, Ju Chin, Assoc. Prof. of Chem. Engrng., Dept. of Chem. Engrng., Poly. Inst. of Brooklyn, 99



Livingston St., Brooklyn 2, N. Y. **CHEMICAL ENGINEERING** b. Dec. 14, 1919, Taitsang, Kiangsu, China. s. Chui Nien and Chih (Wang) C. Edn.: Sc.D., Chem. Engrng., M. I. T., 1946; B.S. Chem., Natl. Tsing Hua Univ., Peiping, China, 1940. m. Ching Chen Lee of Tientsin, China, Feb. 25, 1945. d. Shu Tien Li and Zi Yua Lin. c.: Gilbert Chu; Steven Chu; Morgan Chu. Exp.: Teaching Asst., Natl. Tsing Hua Univ., China, 1940-43; Instr., Chem., Army Med. Acad., Kunming,

China, 1942-43; Chem. Engr. Consultant, Kan Nan Chem. Works, China, 1941-43; Chem. Engr., Shell Chem. Corp., Martinez, Calif., 1946; Asst. Prof. of Chem. Engrng., Wash. Univ., St. Louis, Mo., 1946-49; Consultant, Sr. Consultants, Inc., N. Y., 1950—; Consulting Chem. Engr., Ill. Rsch. and Development Corp., Chicago, Ill., 1949; Assoc. Prof., Chem. Engrng., Poly. Inst. of Brooklyn, Brooklyn, N. Y., 1949; Consultant, Maurice May, Inc., N. Y., 1950—; Consultant, Sun Oil Co., Philadelphia, 1952—. Mem.: Tau Beta Pi; Sigma Xi; Phi Lambda Upsilon; A.C.S.; A.I.Ch.E.; Amer. Petroleum Inst.; Soc. of Chem. Ind., London; A.A.A.S.; A.S.E.E.; Chinese Inst. of Engrng.; Chinese Chem. Soc. Author: Distillation Equilibrium Data (co-author), 1950; Author and Co-Author, 30 Original Research Papers in Technical Jours. Ph.D. Dissertation: Chlorination of Hydrocarbons. Travel: India; China; Australia; Canada; U. S. Gen. Int.: 1948 Recipient of Gen. Grant from Rsch. Corp.; Recipient of Corttrel Grant of Rsch. Corp.; Licensed Professional Engr. of Mo., Ill. Listed in: A.M.S. Special Int.: Chemical Engrng.

CHUBB, Lewis Warrington, Dir., Westinghouse Rsch. Labs., 31 Churchill Rd., Wilkinsburg, Pa. **ENGINEERING**

CHUPP, Charles David, Prof. of Plant Pathology, Cornell Univ., Ithaca, N. Y. **PLANT PATHOLOGY.**

CHURCH, Alonzo, Assoc. Prof. of Math., Princeton Univ., Princeton, N. J. **MATHEMATICAL LOGIC.**

CHURCH, Gaylord, Rear Admiral, CEC, U. S. Navy, retired, 1724 Sunset Dr., Clearwater, Fla. **PUBLIC WORKS ENGINEERING.**

CHURCH, George Lyle, Assoc. Prof. of Botany, Brown Univ., Providence, R. I. **CYTOTAXONOMY.**

CHURCH, James Edward, Meteorologist, Nev. Agri. Expt. Station, 358 Washington St., Reno, Nev. **SNOW.**

CHURCH, Margaret Brooks, Lyndon, Vt. **MYCOLOGY TEACHING.**

CHURCH, Warren Randolph, Assoc. Prof. of Math. and Mechanics, Postgrad. Schl., U. S. Naval Acad., Annapolis, Md. **MATHEMATICS.**

CHURCHILL, Anna Quincy, Asst. Prof. of Microscopic Anatomy, Tufts Coll., 416 Huntington Ave., Boston, Mass. **MICROSCOPIC ANATOMY.**

CHURCHILL, Edward Delos, John Homans Prof. of Surgery, Harvard Med. Schl., 269 Prospect St., Belmont, Mass. **SURGERY.**

CHURCHILL, Herman Richard, Alcoma Arcade, Lake Wales, Fla.

CHURCHILL, O. O., N. Dak. State Coll., Fargo, N. Dak. **AGRICULTURE.**

CHURCHILL, Helen Mar, Asst. Prof. of Biol., Hollins Coll., Hollins Coll., Va. **PARASITOLOGY—DIGENETIC TREMATODES.** b. Lawrence, Kans., Nov. 14, 1907. d. Whitman A. and Lillian (Simmons) C. Edn.: A.B., Univ. of Kans., 1928; M. A., Univ. of Mich., 1936; Ph.D., *ibid.*, 1951. Exp.: Instr. in Biol., William Jewell Coll., Liberty, Mo., 1931-36; Instr. in Zool., Hibbing, Minn., Jr. Coll., 1937-38; Tchng. Asst., Dept. of Zool., Univ. of Mich., 1939-41; Tchng. Fellow, Dept. of Zool., *ibid.*, 1941-42; U. S. Fish and Wildlife Service, Stationed at Patuxent Rsch.



Refuge, Bowie, Md., 1942-45; Natl. Inst. of Health, Mt. Vernon, Iowa, 1945-47; Asst. Prof. of Biol., Hollins Coll., Va., 1947—, Mem.: A.A.A.S.; Va. Acad. Sci.; Assn. Southeastern Biologists; Amer. Soc. Parasitologists; Amer. Microscopical Soc.; Phi Beta Kappa; Sigma Xi; Phi Kappa Phi; Phi Sigma; Beta Beta Beta; Pi Lambda Theta; Alpha Kappa Delta. Contrb. to: Veterinary Med. Special Int.: Germ Cell Cycle of *Echinostoma revolutum*.

CHURCHMAN, C. West, Assoc. Prof., Philos. Dept., Wayne Univ., Detroit, Mich. **PHILOSOPHY OF SCIENCE.**

CICHELLI, Mario Thomas, Chemical Engr., Engrng. Rsch. Lab., E. I. du Pont de Nemours & Co., Wilmington, Del. **CHEMICAL ENGINEERING.** b. Baltimore, Md., Jan. 28, 1920. s. John and Candida (Grue) C. Edn.: B.S., summa cum laude, Loyola Coll., 1940; Ph.D., Johns Hopkins Univ., 1945. m. Genevieve Buettner, June 26, 1943. c.: Richard James; Joanne; David John. Exp.: Asst. in Chem., Loyola Coll., 1938-39; Asst. in Chem., Johns Hopkins Univ., 1941-42; Asst. in Engrng., *ibid.*, 1942-43; Rsch. Engr., Rubber Reserve Contract, *ibid.*, 1943-44; Instr. of Calculus, Loyola Coll., 1943-44; Process Engr., The Kellogg Corp., N. Y., 1944-45; Process Engr., Carbide and Carbon Chemicals Corp., Oak Ridge, Tenn., 1945-46; Rsch. Engr., Mellon Inst. of Industrial Rsch., 1946-50; Chem. Engr., E. I. du Pont de Nemours & Co., Wilmington, Del., 1950—. Mem.: Amer. Inst. Chem. Engrs.; Amer. Chem. Soc.; Sigma Xi; Phi Lambda Upsilon. Contrb. to: Indus. and Engrng. Chem.; Trans. A.I.Ch.E.; Chem. Engrng. Progress. Special Int.: Heat Transfer in Boiling and Condensation, Batch Distillation Theory; Diffusional Separation of Gas Mixtures.

CIOFFARI, Bernard, Prof. of Phys and Math., Coll. of New Rochelle; 40 Hilltop Ave., New Rochelle, N. Y. **PHYSICS.** b. Calitri, Italy, Dec. 14, 1903. s. Constantino and Antonietta (Armiento) C. Edn.: A.B., Cornell Univ., 1927; Ph.D., Columbia Univ., 1937. m. May Rose De Rosa, Apr. 18, 1938. c.: Paul Constantino; Stephen Bernard. Exp.: Asst. Rsch. Engr., Radio Corp. of Amer., 1928-30; Rsch. Engr., RCA Victor Corp., 1930-31; Prof. of Phys. and Math., St. Francis Coll., Brooklyn, N. Y., 1937-41; Assoc. Prof. of Phys. and Math., Coll. of New Rochelle, New



Rochelle, N. Y., 1941-43; Asst. Prof. of Phys., Princeton Univ., 1943-45; Prof. of Phys. and Math., Coll. of New Rochelle, 1945—; Lectr. in Phys., Coll. of the City of N. Y., 1946—. Mem.: Amer. Phys. Soc.; A.A.P.T.; A.A.U.P.; Inst. of Radio Engrs.; Catholic Commn. on Intellectual and Cultural Affairs; Phi Beta Kappa; Phi Kappa Phi; Sigma Xi. Author: Phys. Lab. Manual, 1940; Phys. Lab. Manual, 1944; Experiments in Coll. Phys.,

1951. Contrb. to: Phys. Rev.; etc. Gen. Int.: Rsch. Work in Television, obtaining a patent on a New Television System. Special Int.: Phys.: Optical Systems for Television, Cathode Ray Television, X-Ray Absorption Spectra; Photoelectric Cells; Electronics.

CINNAMON, Carl Arthur, Prof. of Physics and Hd. of Dept., Univ. of Wyo., Laramie, Wyo. **SOLID STATE PHYSICS. PHYSICAL PROPERTIES OF SINGLE CRYSTAL ZINC AND RADIOLOGICAL PHYSICS.** b. Elmira, Ill., Aug. 16, 1901. s. Thomas A. and Ada V. (Powell) C. Edn.: B. S., Univ. of Wyo., 1925; M. A., *ibid.*, 1930; Ph.D., Univ. of Iowa, 1934. m. Ruth M. Davis, June 1926. c. Ruth Marie; Carl Davis. Exp.: Instr. Physics, Univ. of Wyo., Laramie, Wyo., 1926-30; Grad. Asst., State Univ. of Iowa, Iowa State Univ., 1931-32; Asst. Prof., Univ. of Wyo., Laramie, Wyo., 1933-36; Assoc. Prof. *ibid.*, 1937-39; Prof., *ibid.*, 1940—. Mem.: Am. Assn. Physics Tehr.; Am. Physical Soc.; A.A.U.P.; Kappa Sigma; Phi Kappa Phi; Phi Beta Kappa; Sigma Xi; Sigma Pi Sigma; Alpha Epsilon Delta. Contrb. to: Rev. Sci. Inst.; Jour. Applied Physics; Physical Review. Special Int.: Physical Properties of Single Crystal Zinc, Growth Conditions of Single and Mosaic Crystal Zinc, Radiological Physics. Participant in Civil Effects Group, Nevada Bomb Tests, Sp. 1953.

CIRCLE, Sidney Joseph, Rsch. Chemist Proteins, Soya Products Div., The Glidden Co., 8116 S. Essex Ave., Chicago, Ill. **CHEMISTRY OF PROTEINS.**

CLAPP, Clyde Alvin, Prof. Ophthalmology, Univ. of Md., 513 N. Charles St., Baltimore, Md. **OPHTHALMOLOGY.**

CLAPP, Earle H., Retired, U. S. Forest Service, 2121 Mass. Ave., Washington 8, D. C. **FOREST ECONOMY.** b. North Rush, N. Y., Oct. 15, 1877. s. Edwin P. and Ermina (Hart) C. Edn.: B.S., Univ. of Mich., 1905. Hon. Deg.: D.Sc., Univ. of Mich., 1928. m. Helen A. Roberts, Oct. 15, 1908. c.: Stewart; Helen E. Exp.: Forest Asst., U. S. Forest Serv., 1905-08; Chf., Office Forest Mgt., *ibid.*, 1908; Assoc. Regional Forester, *ibid.*, 1908-11; Forest Inspector, *ibid.*, 1912-14; Asst. Chf. in Chg. of Rsch., *ibid.*, 1915-34; Assoc. Chf., *ibid.*, 1935-44; Acting Chf. of the Forest Service, *ibid.*, 1940-42; Retired, *ibid.*, 1945. Mem.: Fellow, Soc. of Amer. Foresters; Cosmos; Sigma Xi. Co-author: How the U. S. Can Meet Its Present and Future Pulpwood Requirements, 1924. Author: Forest Expt. Stations, 1921; A National Program for Forest Rsch., 1926; Supervised A Natl. Plan for Amer. Forestry, 1933; The Western Range: A Great But Neglected Natural Resource, 1936. Contrb. to: Jour. Forestry; Jour. Politics; Public Admin. Rev. Gen. Int.: Organized into a Single Unit Previously Divided Forest and Range Rsch., giving it Status as one of the Major Activities of the U. S. Forest Service; Planned and Helped Obtain Organ's Legislation Designed to Furnish a Scientific Basis for Forest and Range Conservation Nationally, thus resulting in 12 Regional Forest and Range Expt. Stations and the Further Development of a Natl. Forest Products Lab.; Initiated Rsch. in the Behavior and Control of Forest Fires, and in Forest Econ. including a Nation Wide Survey of the Forest Resource to Underwrite sound Regional and National Policy and Advocated Federal Legislation for a comprehensive attack on all important phases of the forest problem, with primary emphasis on public regulation of forest practices on private lands, and greatly increased public ownership.

CLAPP, Grace Lucretia, retired, Windsor Locks, Conn. **BOTANY AND BACTERIOLOGY.**

CLAPP, Robert Temple, Assoc. Prof. of Forestry, Miss. State College, State College, Miss. **FORESTRY.**

CLARE, Robert L., 212 Rector St., Perth Amboy, N. J. **CERAMICS.**

CLARK, Alva B., Vice-Pres. and Dir., Systems Development, Bell Telephone Labs., 463 West St., N. Y., N. Y. **ELECTRICAL ENGINEERING.**

CLARK, Arthur John, Prof. of Chem., Mich. State Coll., East Lansing, Mich. **CHEMISTRY.**

CLARK, Austin Hobart, Curator of Echinoderms, U. S. Natl. Museum, Smithsonian Institution, 1818 Wyoming Ave., N. W., Washington, D. C. **ZOOLOGY.**

CLARK, Benjamin Franklin, Chemist, E. I. du Pont de Nemours and Co., Inc., 80 Wallace Dr., Grand Island, N. Y. **ORGANIC CHEMISTRY.**

CLARK, Bertha May, P. O. Box 674, Newtown, Pa. **THERMODYNAMICS.**

CLARK Byron Bryant, Prof. of Pharmacol., Tufts Coll., Med. Schl., 416 Huntington Ave., Boston, Mass. **PHARMACOLOGY.**

CLARK, Clarence C., Prof. of Sci., N. Y. Univ., N. Y. City. **PHYSICS.** b. Aug. 2, 1894, Owensboro, Ky.



s. Lee and Eleanor (Johnson) C. Edn.: B.S., Phys., Univ. of Ky., 1917; M.S., Univ. of Chicago, 1924; Ph.D., N. Y. Univ., 1932. m. Berenice Bodenhafer of Kendallville, Ind., 1925. d. Eva and Lee B. Exp.: Prin. H. S., Madisonville, Ky., 1920-22; Prin. H. S., Hopkinsville, Ky., 1922-26; Instr. in Phys., N. Y. Univ., 1926-29; Instr. in Gen. Sci., ibid., 1929-32; Asst. Prof., ibid., 1932-36; Assoc. Prof., ibid., 1936-41; Prof., ibid., 1941—; Chmn., Coll. Sci. Courses, ibid.,

1935—; Vice-Chmn., Gen. Cours Group, 1946—; Acting Chmn., 1948-50; Chmn., 1950—; Sci. Consultant, N. Y. C. Police Dept., 1936; ibid., Teaneck, N. J., 1941. Mem.: A.A.A.S.; Illuminating Engr. Soc.; N. Y. Elect. Soc.; N. Y. Acad. of Sci.; Amer. Inst.; Phi Delta Kappa. Author: This Phys. World, 1941; This Living World, 1940. Contrb. to: Schl. Rev.; Engrng. World; Amer. Jour. Physics; Schl. and Soc. Ph.D. Dissertation: Sound Motion Pictures in Classroom Tehng. War Record: 51st Field Art., World War I, 1918-19; Reserve Officer, 1919-41; Active Duty, U. S. Army, 1942-45; Reserve Officer, 1945—. Gen. Int.: Rsch. on Vanadium Oxide as Catalytic Agent for Sulphuric Acid; Ultraviolet Radiation in Sunlamps; Chance Factors in Playing Slot Machines and Pingame Machines; Chief Biologists, Rainbow Bridge Expedition to Navajo Indian Country. Listed in: A.M.S.; Who's Who in Amer.

CLARK, Claude L., Metallurgical Engr., Special Steel Developments, Timken Roller Bearing Co., Steel and Tube Div., Canton 6, Ohio.



STEELS FOR HIGH TEMPERATURE AND HIGH PRESSURE APPLICATIONS; STAINLESS ALLOYS. b. Saginaw, Mich., Mar. 6, 1903. s. Jason and Addie (Leaman) C. Edn.: B.S.E., Univ. of Mich., 1925; M.S.E., ibid., 1926; Ph.D., ibid., 1928. m. Irene M. Hansen, Aug. 12, 1930. c.: Joanne Marie; Claude Leaman. Exp.: Rsch. Engr., Engrng. Rsch. Inst., Univ. of Mich., 1928-40; Special Lectr. in Metallurgy, ibid.,

1930-40; Metallurgical Engr., Timken Roller Bearing Co., Steel and Tube Div., 1940—. Mem.: Amer. Soc. Mech. Engrs.; Amer. Inst. Mining and Met. Engrng.; Natl. Assn. Corrosion Engrs.; Amer. Soc. Met.; Sigma Xi; Iota Alpha; Phi Lambda Upsilon. Contrb. to: Jour. of Amer. Soc. Mech. Engrs.; Trans. Amer. Soc. Mech. Engrs.; Amer. Soc. for Testing Materials; Trans. Amer. Soc. for Testing Materials;

etc. Gen. Int.: Developed First Low Alloy Steels for High Temperature Service; Developed the Widely used Stress-rupture Test. Special Int.: Alloys for High Temperatures; Alloys for High Pressure; Stainless Steels.

CLARK, Clifford Clyde, Asst. to Traffic Engr., 122½ S. Maple Dr., Beverly Hills, Calif. **TRAFFIC**



ENGINEERING. b. Cincinnati, Ohio, May 15, 1913. s. Clifford Clarence and Lulu (Wieber) C. Edn.: B.S., Univ. of Cincinnati, 1936; Grad. Eng., Harvard Univ., 1938. Exp.: Asst. to Traffic Engr., Cincinnati, Ohio, 1939-41; Traffic Engr., Automobile Club of Southern Calif., 1948-50; Asst. to Traffic Engr., Los Angeles County Road Dept., 1950—. Hon. Pos.: Chmn., Southern Calif. Area Group of Western Section, Inst. of Traffic Engrs., 1949-51. Mem.: Los Angeles C. of C.

Contrb. to: Assoc. Editor, Traffic Engrng. Magazine. War Record: U. S. Army, World War II.

CLARK, Daniel Grover, Assoc. Prof. of Botany, Cornell Univ., Ithaca, N. Y. **PLANT PHYSIOLOGY.**

CLARK, Edward Lester, Univ. Examiner and Assoc. Prof. of Psychol., Northwestern Univ., Evanston, Ill. **PSYCHOLOGY.**

CLARK, Eleanor Linton, Voluntary Rsch. Worker, Univ. of Pa., Wister Inst. of Anatomy, Woodland Ave., and 36th St., Philadelphia, Pa. **ANATOMY.**

CLARK, Eliot Round, Prof. of Anatomy, Univ. of Pa., Wister Inst. of Anatomy, Woodland Ave. and 36th St., Philadelphia, Pa. **ANATOMY.**

CLARK, Elizabeth Stults, Asst. Prof. of Plant Pathol., Rutgers Univ. and Plant Pathologist, N. J. Agri. Expt. Station, New Brunswick, N. J. **BOTANY.**

CLARK, Ernest Dunbar, Dir., Northwest Br. Labs., Natl. Canners Assn., 826 Skinner Bldg., Seattle, Wash. **CANNING AND FISHERIES TECHNOLOGY.**

CLARK, Frances Naomi, Sr. Aquatic Biologist, Calif. State Fisheries Lab., Terminal Island, Calif. **FISHERIES BIOLOGY.**

CLARK, Francis Matthew, Assoc. Prof. in Bacteriol., 359 Noyes Lab., Univ. of Ill. **FOOD BACTERIOLOGY AND BACTERIAL NUTRITION.** b. Augusta, Ill., Sept. 26, 1900. s. Abner and Julia (Tool) C. Edn.: B.S., Univ. of Ill., 1923; M.S., ibid., 1926; Ph.D., ibid., 1933. m. Harlie Denhart of St. Joseph, Ill., Sept. 23, 1925. d. Mr. and Mrs. Chris Denhart. Exp.: Asst. in Soil Fertility, Univ. of Ill.; Asst. in Soil Biol., ibid.; Asst. in Bacteriol., ibid. Mem.: Soc. Amer. Bacteriol.; Amer. Chem. Soc.; Inst. of Food Technol.; Sigma Xi; Alpha Chi Sigma; Champaign County Garden Club; Hi 12. Contrb. to: Jour. of Bacteriol.; Archives of Biochem. Ph.D. Dissertation: Hydrogen Sulphide Production by Thermophilic Bacteria. Hobby: Flowers. Special Int.: Vitamin and Amino Acid Assays.

CLARK, Frank Rinker, retired, 1524 S. Owasso, Tulsa, Okla. **PETROLEUM GEOLOGY.**

CLARK, George Lindenberg, Prof. of Chem., Univ. of Ill., Urbana, Ill. **RESEARCH FIELD X-RAYS, ELECTRON DIFFRACTION AND MICROSCOPY.** b. Anderson, Ind., Sept. 6, 1892. s. Ralph B. and Olive (Burnett) L. Edn.: A.B., DePauw Univ., 1914; M.S., Univ. of Chicago, 1914; Ph.D., ibid., 1918. Hon. Deg.: D.Sc., DePauw Univ., 1937. m. Mary Johnson, June 19, 1919. c.: Mary Ann; Ralph; George; Jean; Carolyn. Exp.: Instr. of Chem., DePauw Univ., 1914-16; Lt., Chem. Warfare

Service, 1918; Assoc. Prof. of Chem., Vanderbilt Univ., 1919-21; Natl. Rsch. Fellow, Harvard Univ., 1922-24; Asst. Prof., Applied Chem. Rsch., M. I. T., 1924-27; Prof. of Chem., Univ. of Ill., Urbana, Ill., 1927—. Hon. Pos.: Chmn., Div. Physical and Inorganic Chem. and of Div. of Cellulose Chem., Amer. Chem. Soc. Mem.: Amer. Chem. Soc.; A.A.-A.S.; Amer. Crystallographic Assn.; Faraday Soc.; Electrochem. Soc.; Electron. Microscope Soc. of Amer. (Founder); Phi Beta Kappa; Sigma Xi; Beta Theta Pi; Torch Club. Author: Applied X-Rays (4 editions), 1936, 32, 40, 53; Quantitative Analysis, 1950. War Record: Lt., C. W. S., 1918. Special Int.: X-Ray Rsch.; Analytical Chem.; Photochem.; Electron Microscopy and Diffraction; Instrumental Techniques.

CLARK, Hans Thacher, 630 W. 168th St., N. Y. 32, N. Y.

CLARK, Harold Eugene, Dept. of Plant Physiol., N. J. Agri. Expt. Station, New Brunswick, N. J. PLANT PHYSIOLOGY.

CLARK, Harold Florian, Prof. of Edn., Tchrs. Coll., Columbia Univ., N. Y., N. Y. SOCIAL SCIENCE.

CLARK, Janet Howell, Dean Emeritus, Coll. of Women and Prof. in Division of Biological Sci., Univ. of Rochester, Rochester, N. Y. BIOPHYSICS, ESPECIALLY THE BIOLOGICAL EFFECTS OF RADIATION. b. Baltimore, Md., Jan. 1, 1889. d. William Henry and Anne (Tucker) Howell. Edn.: A.B., Bryn Mawr Coll., 1910; M.A., Johns Hopkins Univ., 1912; Ph.D., ibid., 1913. m. Dr. Admont H. Clark of Oberlin, Ohio, June 9, 1917. c.: Anne Janet. Dean of Coll. for Women and Prof. in Div. Biol. Sci., Univ. of Rochester, 1938-52. Mem.: Amer. Phys. Soc.; Amer. Optical Soc.; Amer. Physiol. Soc.; A.A.A.S. Author: Lighting in Relation to Public Health. Ph.D. Dissertation: The Law of the Grating. Hobby: Sailing. Special Int.: Biophys.; Biol. Effects of Radiation.

CLARK, Jefferson Hamer, Chf. Labs. and Blood Bank, Philadelphia General Hosp., Philadelphia, Pa. PATHOLOGY.

CLARK, Junius Clyde, Entomologist. P-3, Bureau of Entomol. and Plant Quarantine, U. S. D. A., P. O. Box 232, Kerrville, Tex. ENTOMOLOGY.

CLARK, LeRoy Vincent, Plant Manager, New Castle Plant of the Amer. Cyanamid Co., P. O. Box 270, New Castle, Pa. (But.). b. Harlansburg, Penn., July 2, 1902. s. M. Luther and Augusta (Vincent) C. Edn.: B.S., Chemical Engr., Grove City Coll. m. Winsome N., 1933. c.: Barbara Ann and Sara Winsome. Exp.: Asst. in Physical Chem., W. Virginia Univ., 1925-26; Demonstrator in Colloidal and Physical Chem., McGill Univ., 1926-27; Bacteriol.; Borden Farm Products Co., Ltd., Montreal, P. Q., 1927; Chemist, Grasselli Powder Co., New Castle, Pa., 1927-28;



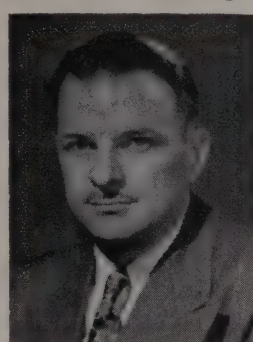
Rsch. Chemist, E. I. du Pont de Nemours and Co., Gibbstown, N. J., 1929; Sr. Investigator—Western Cartridge Co., East Alton, Ill., 1930; Asst. Physical Chemist, U. S. Bureau of Mines, Pittsburgh, Pa., 1930-34; Industrial Fellowship Mellon Institute, Univ. of Pittsburgh, 1934-36; Rsch. Explosives Engr. Dept. of Explosives, Amer. Cyanamid and Chemical Corp., Latrobe, Pa., 1936-41; Asst. Dir. of Rsch., Amer. Cyanamid and Chem. Corp., New Castle, Pa., 1941-47; Plant Manager, ibid., 1947—. Mem.: Amer. Chemical Soc.; Amer. Assn. for Adv. of Sci.; Amer. Inst. of Chemists; Amer. Inst. of Chem. Engrs.; N. Y. Acad. of Sci.; Pa. Soc. of Professional Engineers, Registered Professional Engr.—Pa.; Exec. Council Lawrence Co. Boy Scouts; President, Western Pa. Personnel Assn. Contrb. to Ind. Eng. Chem. Gen. Int.: Fifteen U. S. Patents. Special Int.: High Explosives,

Propellant Powders, Liquid Oxygen explosives, Primers, Deonators, Detonants, Nitrocellulose.

CLARK, Lois, Rsch. Assoc., Univ. of Wash., Seattle, Wash. BOTANY.

CLARK, Paul Franklin, Prof. and Chmn., Dept. of Bacteriol., Univ. of Wis., Madison, Wis. BACTERIOLOGY.

CLARK, Ralph Leigh, Consultant to Govt. Agencies, 1502 N. Utah St., Arlington 7, Va. ELECTRONICS;



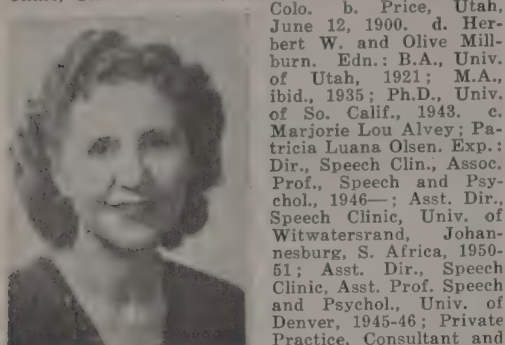
TELECOMMUNICATIONS AND RESEARCH AND DEVELOPMENT ADMINISTRATION THEREOF. b. East Jordan, Mich., June 2, 1908. s. Earl H. and Ethel (Nowland) C. Edn.: B.S., Mich. State Coll., 1930. m. Dorothy Webster, Dec. 24, 1930. c.: Roy E.; Richard L.; Ruth E.; David W. Exp.: Radio Inspector, Radio Div., U. S. Dept. of Commerce, Federal Radio Commn. and Federal Communications Comm., Detroit, Mich., 1930-35; Radio Engr., Federal Communication Comm., Washington, D. C., 1935-41; Partner, Ring and Clark Consulting Radio Engrs., 1941-47; Dir., Programs Div., Rsch. and Development Bd., Dept. of Defense, Washington, D. C., 1946-49; Consultant to Govt. Agencies, 1949—. Mem.: Inst. of Radio Engrs.; Lambda Chi Alpha; Tau Beta Pi; Phi Lambda Tau. War Record: Lt. to Comdr., U.S.N.R., 1942-46. Special Int.: Telecommunications and Electronic Weapons; Admin. of Rsch.

CLARK, Richard Elijah, Emeritus Prof. of Sociol., John B. Stetson Univ., 418 W. Minnesota Ave., DeLand, Fla. JUVENILE DELINQUENCY; SOCIOLOGY; CRIMINOLOGY AND SOCIAL PATHOLOGY. b. Feb. 22, 1882, Pittsboro, N. C. s. Nathan S. and Bettie S. (Wortham) C. Edn.: A.B. (cum laude), Wake Forest Coll., 1910; B.D., Crozer Theol. Sem., 1913; A.M., Univ. of Pa., 1913; Grad. Study, Univ. of Chicago, 1913-14; Ph.D., Univ. of Pa., 1915; Postgrad. Work, Univ. of North Carolina, Summers, 1930, 1931. m. Mattie Vivian Griffin of Pittsboro, North Carolina, 1915. d. Mr. and Mrs. W. E. Griffin. c.: Edward; Jefferson; Julian; Lucille; Benjamin. Exp.: Supervising Prin., Rural Retreat (Va.) H. S., 1918-19; Prof. of Hist. and Social Sci., Juniata Coll., 1920; Hd., Dept. of Econ. and Bus. Admin., Olivet Coll., 1920-21; Hd., Dept. of Econ. and Bus. Admin., Centre Coll., 1921-23; Dean, Chowan Coll., 1923-24; Prof. of Hist. and Bible, ibid., 1924-25; Hd., Dept. of Polit. Sci., Coker Coll., 1925-26; Pastor, First Bapt. Ch., Cheraw, S. C., 1926-30; Hd., Dept. of Sociol., John B. Stetson Univ., 1930-52. Hon. Pos.: Mem. of Sou. Sociological Soc. Membership Com. for State of Fla. Mem.: Alpha Delta Journalistic Frat.; Sigma Tau Delta Eng. Fraternity; Florida Academy of Sci.; Pi Gamma Mu; Athenian Club; Natl. Geographic Soc.; Amer. Assn. of Univ. Profs.; Amer. Acad. of Polit. and Social Sci.; Masonic Order; N.E.A. Ph.D. Dissertation: The Effect of Social Forces upon Religious Rites and Ceremonies. Achievements: Working on Several Rsch. Projects in the Field of Sociology. Recreations and Hobbies: Hunting; Horticulture. Listed in: Wake Forest Coll., Univ. of Pa., and Crozer Theol. Sem. Directories; Who's Who in Amer.; Who Knows—and What.

CLARK, Robert Arthur, Asst. Prof., Case Inst. of Tech., Cleveland, Ohio. MATHEMATICS. b. Melrose, Mass., May 3, 1923. s. Arthur Henry and Persis (Kiddier) C. Edn.: A.B., Duke Univ., 1944; M.S., Mass. Inst. of Tech., 1946; Ph.D., ibid., 1949. Exp.: Instr., M. I. T., Cambridge, Mass., 1946-49; Rsch. Assoc., ibid., 1949-50; Instr., Case Inst. of Tech., Cleveland, Ohio, 1950-51; Asst. Prof., ibid., 1951—. Mem.: Amer. Math. Soc.; Math. Assn. of Amer.; Amer. Assn. of Univ. Prof.; Sigma Chi; Sigma Xi; Phi Beta Kappa. Contrb. to Jour.

Math. and Physics; Jour. of Applied Mechanics; Quarterly of Applied Math. Special Int.: Elasticity, Shells of Revolution, Differential Equations.

CLARK, Ruth Millburn, Dir., Children's Speech Clinic, Univ. of Denver, 2020 S. York St., Denver 10, Colo. b. Price, Utah, June 12, 1900. d. Herbert W. and Olive Millburn. Edn.: B.A., Univ. of Utah, 1921; M.A., *ibid.*, 1935; Ph.D., Univ. of So. Calif., 1943. c.



Marjorie Lou Alvey; Patricia Luana Olsen. Exp.: Dir., Speech Clin., Assoc. Prof., Speech and Psychol., 1946—; Asst. Dir., Speech Clinic, Univ. of Witwatersrand, Johannesburg, S. Africa, 1950-51; Asst. Dir., Speech Clinic, Asst. Prof. Speech and Psychol., Univ. of Denver, 1945-46; Private Practice, Consultant and Tchr., Salt Lake City, 1937-45; Supvr. and Instr., Univ. of Wyo., Summer, 1945; Supvr., Speech Correction Clinic, Univ. of Southern Calif., Summer, 1944; Speech Correctionist, Pub. Schl., Salt Lake City, 1937-42 and 1943-45. Mem.: Theta Alpha Phi; Delta Kappa Gamma; Psi Chi; Sigma Alpha Eta; Zeta Phi Eta; Amer. Psychol. Assn.; Speech Assn. Amer.; Amer. Speech and Hrng. Assn. Contbr. to: Jour. of Speech and Hrng. Disorders; Western Speech; Quar. Jour. of Speech; Jour. of Genetic Psychology. Ph.D. Dissertation: A Method of Administering and Evaluating the Thematic Apperception Test in Group Situations. Travel: China; Mexico; Hawaii; Africa; Europe. Hobbies: Public Speaking; Drama. Listed in: Who's Who in the West.

CLARK, Sam Lillard, Prof. of Anatomy, Vanderbilt Univ. Schl. of Med., Nashville, Tenn.

CLARK, Thomas Henry, Logan Prof. of Paleontology and Curator, Peter Redpath Museum, McGill Univ., Montreal, Que., Can. STRATIGRAPHY, PALEONTOLOGY.

CLARK, Walter Brant, Asst. Prof. of Psychol., San Jose State Coll., San Jose, Calif. PSYCHOLOGY.

CLARK, Walter E., Pres. Emer., Univ. of Nev., 524 Cheney St., Reno, Nev. ECONOMICS.

CLARK, William Mansfield, DeLamar Prof. Emeritus of Physiol. Chem. and Rsch., Prof. of Chem., Johns Hopkins Univ., Baltimore 18, Md. BIO-CHEMISTRY, ACID-BASE EQUILIBRIA AND OXIDATION-REDUCTION EQUILIBRIA. b. Tivoli, N. Y., Aug. 17, 1884. s. James Starr and Caroline (Hopson) C. Edn.: Hotchkiss Schl.; B.A., Williams Coll., 1907; M.A., *ibid.*, 1908; Ph.D., Johns Hopkins Univ., 1910. Hon. Deg.: Sc.D., Williams Coll., 1935; Sc.D., Univ. of Pa., 1940. m. Rose Goddard, Sept. 14, 1910. c.: Harriet Allen; Miriam Goddard, Exp.: Chemist, Dairy Div., U. S. Dept. of Agri., Washington, D. C., 1910-20; Prof. of Chem. and Chf. Div. of Chem., Hygienic Lab., U. S. Public Health Service, 1920-27; DeLamar Prof. of Physiol. Chem., Schl. of Med., Johns Hopkins Univ., Baltimore, Md., 1927-52; Chmn. Div. of Chem. and Chem. Tech., Natl. Rsch. Coun., 1941-46; Consultant to O.S.R.D., 1941-45; Rsch. Prof. of Chem., Dept. of Chem., Johns Hopkins Univ., Baltimore, Md., 1952—. Hon. Pos.: Hotchkiss Schl. Alumni Award; Ed. Bd., Jour. Biol. Chem., 1933-51; William H. Nichols Medal N. Y. Section, Amer. Chem. Soc., 1936; Borden Award, Amer. Chem. Soc.; Rensen Memorial Lectr., Md. Sect., Amer. Chem. Soc., 1952; Johns Hopkins Chem. Alumni Book-plate, 1952. Mem.: Natl. Acad. of Sci.; Amer. Phil. Soc.; Amer. Chem. Soc.; A.A.A.S.; Soc. Amer. Bacteriol., Pres., 1933; Amer. Soc. of Biol. Chemists, Pres., 1933, '34; Gargoyle; Elkridge Club. Author: The Determination of Hydrogen Ions, 1920-28; Studies on Oxidation-Reduction, 1928; Topics in Phys. Chem., 1948-52. Contbr. to: Jour. Amer. Chem. Soc.; Jour. Bacteriol.; Jour. Biol. Chem.; Jour. of Dairy Sci.;

Public Health Reports. Special Int.: Acid Base and Oxidation-Reduction Equilibria.

CLARK, William Noble, Assoc. Dir., Agri. Expt. Station, Univ. of Wis., Madison, Wis. LAND ECONOMICS.

CLARKE, Alfred Ernest, (Dec. Nov. 12, 1952), Assoc. Cytologist U. S. Dept. of Agri. Utah Agri. Expt. Station, Logan, Utah. GENETICS. b.



May 18, 1903, Victoria, B. C., Can. s. George Wm. and Mary Maude (Elliott) C. Edn.: B.A., Univ. of Alberta, 1924; M.Sc., *ibid.*, 1927; Ph.D., Univ. of Wis., 1931. Exp.: Grad. Asst. in Genetics, and Plant Breeding, Univ. of Alberta, 1925-27; Rsch. Asst., N. R. C. of Can., 1927-28; Sessional Lectr., Dept. of Field Crops, Univ. of Alberta, 1928-29; Grad. Asst. in Genetics, Univ. of Wis., 1929-31; Natl. Rsch. Fellow, Biol. Sci., Univ. of Calif. and Calif. Institute of Technology, 1931-33; Assoc. in Genetics, Univ. of Calif., 1933-36; Cytol., U. S. D. A., 1936—. Mem.: Fellow, A.A.A.S.; Bot. Soc. of Amer.; A.S.H.S.; Amer. Genetic Assn.; Genetic Soc. of Amer.; Sigma Xi; Phi Sigma; Utah State Agri. C. Faculty Club; Mason. Ph.D. Dissertation: Genetic and Cytol. Studies in Genus *Melilotus*. Gen. Int.: Awarded Natl. Rsch. Fellowship in Biol. Sci., 1931-33; Won Vaughan Rsch. Award in Hort., 1943. Listed in: A.M.S.; Who Knows and What.

CLARKE, Beverly L., Dir. of Chem. Control, Merck and Co., Inc., Rahway, N. J. CHEMISTRY.

CLARKE, Clarence Leon, retired, Box 324, Rt. 2, Kirkland, Wash. EDUCATION, PSYCHOLOGY.

CLARKE, Donald A., Rsch. Fellow, Med. Coll., Cornell Univ., 1300 York Ave., N. Y., N. Y. PHARMACOLOGY.

CLARKE, Elbert H., Hirma, Ohio. MATHEMATICS.

CLARKE, Walter, retired, Amer. Social Hygiene Assoc., 1790 Broadway, New York, N. Y., SOCIAL HYGIENE.

CLARKE, Walter Fieldhouse, Physical Chemist, Natl. Bureau of Standards, Conn. Ave. and Upton St., N. W., Washington, D. C. CHEMISTRY.

CLARKE, William Sloan, Jr., Instr. in Pomology, Pa. State Coll., State College, Pa. HORTICULTURE.

CLAUDE, Albert, Assoc., Rockefeller Inst. Med. Rsch., 66th St. and York Ave., N. Y., N. Y. CYTOLOGY.

CLAUSEN, Jens Christian, Staff Mem., Div. Plant Biol., Carnegie Institution of Wash., Stanford Univ., Calif. BIOSYSTEMATICS.

CLAUSEN, Robert Theodore, Assoc. Prof. of Botany, Cornell Univ., Ithaca, N. Y. BOTANY.

CLAUSEN, Roy Elwood, Univ. of Calif., Berkeley 4, Calif.

CLAUSEN, Samuel Wolcott, Prof. of Pediatrics, Schl. of Med. and Dentistry, Univ. of Rochester, Rochester, N. Y. PEDIATRICS.

CLAWSON, John Wentworth, Prof. of Math., Ursinus Coll., Collegeville, Pa. MATHEMATICS.

CLAWSON, M. Don, Pres., Meharry Med. Coll. and Dir., Dental Edn., Nashville, Tenn. DENTAL EDUCATION.

CLAYCOMB, George Blacklane, Head Department of Biology, Southwestern La., Institute, Box 212,

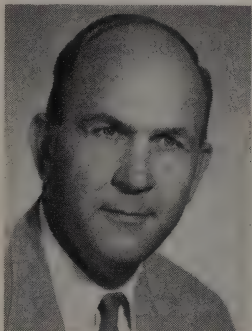
Lafayette, La. **ANIMAL ECOLOGY.** b. December 25, 1886, LaHarpe, Ill. s. Harry E. and Cereda Belle (Hartzell) C. Edn.: Ph.B., Adrian Coll., 1909; M.S., Univ. of Chicago, 1914; Grad. Study, Univ. of Ill., Mich. State, Univ. of Mont., Univ. of Wash., Cornell Univ. m. Nina Carter Claycomb (deceased) of Morenci, Mich., 1910. d. Theodore and Gertrude Carter. Exp.: Geneseo, Ill. Twp. H. S., 1910-16; Missoula, Mont., Co. H. S., 1916-18; Univ. of Ill., Grad. Asst., 1918-19; Dak. Wesleyan Univ., Hd. Biol. Dept., 1919-22; Southwestern La. Inst., Hd. Dept. Biol., 1922—. Mem.: La. Acad. of Sci., Chmn. Biol. Sect.; Sigma Xi; La. Edn. Assn.; A.A.A.S.; Sigma Alpha Epsilon. Author: Sci. Articles. Hobbies: Breeding of Hybrid Amaryllis. Listed in: A.M.S.; W.W. in the South. Special Int.: General Biological Problems.

CLAYTON, Edward Eastman, S. Pathologist, U. S. Plant Industry Station, U. S. D. A., Beltsville, Md. PLANT PATHOLOGY, PLANT BREEDING.

CLAYTON, Mary M., Nutritionist, Maine Agri. Expt. Station, Univ. of Maine, Orono, Maine. NUTRITION.

CLEAVER, Oscar Payne, Chf., Mech. and Electric Engrng. Dept., Engr. Rsch. and Development Labs., Fort Belvoir, Va. ELECTRICAL AND ILLUMINATING ENGINEERING. b. Rowletts, Ky. s. S. Albert and Dora (Shirley) C. Edn.: B.S., Ga. Inst. of Tech., 1928; M.S., Yale Univ., 1930. Exp.: Instr., Yale Univ., 1928-30; Div. Engr., Westinghouse Lamp Div., Chicago, 1930-37; Hd., Illumination Section, Commercial Engrng. Dept., ibid., Bloomfield, N. J., 1937-42; U. S. Corps. of Engrs., Lt. Col., 1942-46; Chf., Mech. and Elec. Engrng. Dept., Engrng. Rsch. and Dev. Labs., Ft. Belvoir, Va., 1946—. Hon. Pos.: Pres., Ft. Belvoir Post. Soc. Amer. Military Engrs., 1951-52; Regional Vice-Pres., Illuminating Engrng. Soc., N. Y., 1940-41; General Secy., ibid., 1941-42. Mem.: Amer. Inst. Elec. Engrs.; Fellow, Illuminating Engrng. Soc.; Soc. Amer. Military Engrs.; Tau Beta Pi; Sigma Xi; Phi Kappa Phi. Author: Artificial Light and Its Application, 1940; Lighting Handbook, 1942. Contrb. to: Illuminating Engrng.; Elec. Engrng.; The Military Engr.; Construction Methods; Amer. City. Gen. Int.: Lectr. on Scientific and Popular Aspects of Illuminating Engrng. Special Int.: Illuminating Engrng.; Infrared; Light Sources; Small Power Generation.

CLEAVES, Arthur Bailey, Prof. of Geol., Dept. of Geol. and Geol. Engrng., Washington Univ., St. Louis 5, Mo. GEOLOGICAL ENGINEERING. b. N. Scituate, Mass., Dec. 6, 1905. s. Arthur Wordsworth and Mary Elden (Nudd) C. Edn.: Ph.B., Brown Univ., 1927; A.M., ibid., 1929; M.A., Univ. of Toronto, 1930; A.M., Harvard, 1932; Ph.D., ibid., 1933. m. Kathryn Taylor, June 3, 1935. c.: Arthur W., II; Emery Taylor. Exp.: Instr. of Paleontol. and Geomorphol., Lafayette Coll., Easton, Pa., 1933-36; Geol., Topographic and Geologic Survey, Dept. of Internal Affairs, Harrisburg, Pa., 1936-38; Chf. Geol., Pa. Turnpike Commn., ibid., 1938-40; Chf. Geologist, Caribbean Architect-Engr., Port-of-Spain, Trinidad, B.W.I., 1940-42; Geologist to Consulting Engrs., Venezuelan Govt., 1942; Special Engrng. Geologist, Cananea Consol. Copper Co., Cananea, Sonora, Mex., 1942-43; Staff Asst., Radiation Lab., Mass. Inst. of Tech., Cambridge, Mass., 1943; Field Service Consultant, Office of Scientific Rsch. and Development, Washington, D. C., 1944-45; Consultant, Bd. of Consulting Engrs. to Philadelphia Water Commn., Resident in Chg., Surface and Subsurface Surveys, Del. River Damsite and Warrington Regulating Reservoir, Philadelphia, Pa., 1946; Prof. and Assoc. Prof., Washington Univ., St. Louis, Mo., 1946—; Geol. Consultant, Tenn. Valley Authority, 1953-54. Mem.: A.I.M.E.; Fellow, Geol. Soc. of Amer.; Mem.



Amer. Soc. of Civil Engrs.; Paleontol. Soc.; Natl. Soc. for Prof. Engrs.; Sigma Xi; Tau Beta Pi; Natl. Rsch. Coun.; Com. Landslides; Mo. Soc. for Prof. Engrs.; Chmn., Div. Engrng.-Geol., Geol. Soc. of Amer.; Presidential Cert. Merit, 1948; Delta Upsilon. Contrb. to: Mining Engrng.; Bull. Geol. Soc. of Amer.; Amer. Jour. Sci.; Bull., Top. and Geol. Survey; Jour. of Paleontol.; Hwy. Rsch. Bd. Special Int.: Subsurface Investigations Hwys, Underground Structure, etc. in Heavy Construction; Engrng. Geol.

CLELAND, James Edwin, Vice-Pres. and Tech. Dir., c/o Union Starch and Refining Co., Granite City, Ill. CHEMISTRY. b. Regina, Sask., Can., Feb. 9, 1911. s. Ben Johnstone and Muriel A. (Kierstead) C. Edn.: B.Sc., Dalhousie Univ., 1931; Tech. Diploma and M.S., London, 1937. m. Clare Garten, Jan. 2, 1931. c.: James Edwin, Jr. Exp.: Asst. Chf. Chem., Acadia Sugar Refining Co., Halifax, Can., 1933-37; Rsch. Chemist, Union Starch and Refining Co., Granite City, Ill., 1938-43; Chf. Chemist, ibid., 1943-47; Plant Supt., ibid., 1947-49; Tech. Dir., ibid., 1947-52; Vice-Pres., ibid., 1952—. Mem.: Amer. Chem. Soc.; I.F.T.; T.A.P.P. I.; Amer. Leather Chem. Contrb. to: Indus. and Engrng. Chem. Gen. Int.: Patents on Caramel Color Processes and New Varieties; Sugar Polymerization, Enzyme Applications to Carbohydrates; Awarded Medal City and Guilds of London Inst., 1937; Dev. of High Tinctorial Power Caramel Colors; Inositol and Phytate Mfg. Special Int.: Carbohydrate Chem.; Statistical Quality Control.

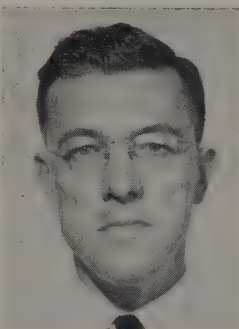


CLELAND, Ralph Erskine, Ind. Univ., Bloomington, Ind.

CLELAND, William Ershine, Prof. of Math., Geneva Coll., Beaver Falls, Pa. MATHEMATICS.

CLEMEN, Rudolf Alexander, Dir., History Div., Amer. Natl. Red Cross and Exec. Vice-Pres., Soc. of Amer. Historians, Edgerstoune Rd., Princeton, N. J. HISTORY.

CLEMENCE, Gerald M., Dir. Nautical Almanac, U. S. Naval Obs., Washington 25, D. C. CELESTIAL MECHANICS. b. Greenville, R. I., Aug. 16, 1908. s. Richard R. and Lora E. (Oatley) C. Edn.: Ph.B., Brown Univ., 1929. m. Edith M. Vail, Aug. 17, 1929. c.: Gerald V.; Theodore G. Exp.: Jr. Astronomer, U. S. Obs., Washington, D. C., 1930-38; Asst. Astronomer, ibid., 1938-40; Astronomer, ibid., 1940-45; Hd. Astronomer and Dir. Nautical Almanac, ibid., 1945—. Mem.: Natl. Acad. of Sci.; Assoc. Royal Astron. Soc.; Amer. Astronomical Soc. Author:



The Motion of Mercury, 1941; First-Order Theory of Mars, 1951. Contrb. to: Astronomical Jour.; Rev. of Modern Physics; Trans. Amer. Phil. Soc.; Monthly Notices Royal Astron. Soc.; Bull. Astronomique. Special Int.: Celestial Mechanics; Celestial Navigation; Refraction; Relativity Effects; Precise Timekeeping; Astron. Constants.

CLEMENS, Wilbert Amie, Head of Dept. of Zool., Univ. of British Columbia, Vancouver, B. C., Can. ZOOLOGY.

CLEMENTS, Harry F., Prof. of Botany, Plant Physiol., Univ. of Hawaii, Honolulu, Hawaii. PLANT PHYSIOLOGY. b. St. Joseph's, Wis., Oct.

24, 1901. s. Frank and Frances (Mashek) C. Edn.: B.S., Univ. of Wis., 1924; M.S. *ibid.*, 1925; Ph.D., Univ. of Chicago, 1929. m. Louise May Schmidt, June 12, 1926. c. Thomas Paine; George Francis. Exp.: Instr. in Plant Physiol., Mich. State Coll., East Lansing, Mich., 1925-28; Asst. Prof. of Botany, Wash. State Coll., Pullman, Wash., 1929-32; Assoc. Prof. of Botany, *ibid.*, 1932-37; Assoc. Prof., Univ. of Hawaii, Honolulu, Hawaii, 1937-38; Prof. of Botany and Plant Physiol., *ibid.*, 1938—; Consulting Plant Physiol., *ibid.*, 1943—. Mem.: Botanical Soc. of Amer.; Soc. of Amer. Plant Physiol.; Hawaiian Acad. of Sci.; Hawaiian Botanical Soc.; Alpha Zeta; Sigma Xi; Phi Sigma; Phi Kappa Phi; Seminarium Botanicus. Author: Mineral Nutrition of Plants, 1951. Contbr. to: Plant Physiol.; Bot. Gaz.; Northwest Sci.; Rsch. Studies, etc. Special Int.: Crop-Logging.

CLEMENTS, Frank Orville, III N. West St., Westerville, Ohio. ENGINEERING.

CLEMINSHAW, Clarence Higbee, Assoc. Dir., Griffith Observatory and Planetarium and Asst. Prof. of Astron., Univ. of Southern Calif., Los Angeles, Calif. ASTRONOMY.

CLENCH, William James, Curator of Mollusks, Museum of Comparative Zoology, Cambridge 38, Mass. MOLLUSKS. b. Brooklyn, New York, October, 24, 1897. s. Joseph and Harriette May (Donaldson) C. Edn.: B.S., Michigan State Coll., 1921; M.S., Harvard Univ., 1923. m. Julia V. Helmick of Unionville, Mich., September 17, 1924. c.: Harry K.; Carleton W. Exp.: Asst. Mus. of Zool., Univ. of Mich., 1925; Custodian of Collections, Kent Scientific Inst., Grand Rapids, Mich., 1925-26; Curator of Mollusks, Mus. of Comparative Zool., Harvard Univ., 1926—; Lectr. on Zool., Harvard Univ., 1930-35; Rsch. Assoc. in Malacology, Bishop Mus., Honolulu, 1942—. Spec. Ed., Webster's Int. Dict., 1930-32; Spec. Ed., Quarrie Corp., Chicago, 1944-45; Rsch. Assoc. Amer. Mus. Nat. Hist., New York, 1947—. Hon. Pos.: Pres. Amer. Malacological Union, 1934-35; Yale-Bishop, Mus. Fellow, 1941-42; Pres., Mus. Council of Boston and Cambridge, 1943-44; Pres., Boston Malacological Club, 1943-44; Fellow, Soc. Cubana Historia Natural. Consultant: Pacific War Memorial, 1946—. Mem.: Mich. Acad. of Sci.; Amer. Malacological Union; Conchological Soc., Great Britain and Ireland; Boston Malacological Club; Sociedad Malacologica, Havana, Cuba; Boston Soc. of Natural Hist.; Phi Sigma; Sigma Xi; Gamma Alpha; Edt.: Johnsonia, 1941—; Occasional Papers on Mollusks, 1945—. Contbr. to: Johnsonia; Occasional Papers on Mollusks; Bull. Bishop Museum; Revista Soc. Malacologica; Nautilus; Jour. of Conchology. War Record: Pvt., U. S. Army, 1918; Lt. Mass. State Guard 1943-46. Travel: West Indies; So. U. S.; Hawaii. Hobbies: Biol. Survey of So. Rivers; Books on Mollusks. Listed in: A.M.S.; Who's Who in Mass. Special Int.: Southern U. S.; West Indies; Islands of the Western Pacific.

CLENDENIN, Thomas Pipes, Chf. Geologist, Mexican Mining Dept., Amer. Smelting and Refining Co., 1112 Mills Bldg., El Paso, Tex. MINING GEOLOGY.

CLEPPER, Henry Edward, Exec. Secy., Soc. Amer. Foresters, 1206 N. Buchanan St., Arlington, Va. FORESTRY.

CLEVELAND, Alfred A., Dean Emer., State Coll. of Wash., 1909 Monroe St., Pullman, Wash. EDUCATIONAL PSYCHOLOGY.

CLEVELAND, Lemuel Roscoe, Assoc. Prof. of Zool., Harvard Univ., Cambridge, Mass. PROTO-ZOOLOGY.

CLEVELAND, Theodore Keirstead, Vice-Pres., Rsch. and Development Dept., Philadelphia Quartz Co., Calif., Ltd., Sixth and Grayson Sts., Berkeley, Calif. CHEMISTRY.

CLEVENGER, Clinton B., Chemist, U. S. Bureau of Mines, 305 Calvin Rd., Raleigh, N. C. CHEMISTRY.

CLEVENGER, Galen H., Consulting Metallurgist, 67 Sheffield Rd., Newtonville, Mass. METALLURGY.

CLIFFORD, Alfred H., Assoc. Prof. of Math., Johns Hopkins Univ., Baltimore, Md. MATHEMATICS.

CLIFT, Cecil W., Asst. Prof. and Hd., Dept. of Agron., Tuskegee Inst., Ala. AGRONOMY SOIL SCIENCE.

CLINE, Isaac Monroe, retired, 633 St. Peter St., New Orleans, La. METEOROLOGY, OCEANOGRAPHY.

CLINE, Joseph Leander, Author and Retired Meteorologist, U. S. D. A., 231 W. 12th St., Dallas, Tex.

CLINE, L. M., Dept. of Geol., Tex. Technological Coll., Lubbock, Tex. ECHINODERMA.

CLOGSTON, Charles Curtis, Assoc. Chem. Engr., Underwriters' Labs., Inc., 2708 N. Whipple St., Chicago 47, Ill. TESTING MATERIALS AND DEVICES AS TO THEIR HAZARDOUS PROPERTIES, OR AS TO THEIR EFFECTIVENESS IN REDUCING HAZARDS. b. Bloomfield, Ind., Oct. 21, 1898. s. William Wesley and Josephine (Bottorff) C. Edn.: B.S.Ch.E., Purdue Univ., 1922. m. Leah Frances Greene, Dec. 25, 1923. c.: William Curtis. Exp.: Tchr., Algebra and Phys., Jackson H. S., Jackson, Ohio, 1922; Asst. Chemist, Asst., Phys. Chemist, Phys. Chemist, Assoc. Chem. Engr., Underwriters' Labs., Inc., 1923—. Mem., Amer. Chem. Soc.; Phi Lambda Upsilon. Gen. Int.: Investigations of Static Electrical Hazards and Means of Protection Against Them; Investigation and Study of Toxic Properties of Gaseous Mixtures Formed During Combustion.

CLOKE, John Benjamin, Prof. of Organic Chem., Rensselaer Poly. Inst., 5 Seymour Ct., Troy, N. Y. ORGANIC CHEMISTRY.

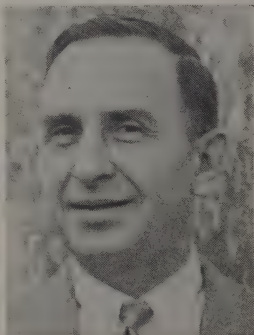
CLOOS, Ernst, Johns Hopkins Univ., Baltimore 18, Md.

CLOSS, John O'Neill, Dr., Tilden Co., New Lebanon, N. Y. CHEMISTRY.

CLOUGH, Ray William, Chemist and Asst. Dir., Northwest Br. Natl. Cannery Assn., 8057 14th Ave., N. E., Seattle, Wash. CHEMISTRY.

CLOWES, George H. A., Rsch. Dir. Emer., Lilly Rsch. Labs., Eli Lilly and Co., 3477 Spring Hollow Rd., Indianapolis, Ind. CHEMISTRY.

CLUBINE, I. Ward, Tchr., Math. and Guidance, 1152 W. Walnut St., Stockton, Calif. MATHEMATICS AND PHYSICS.



Stockton, Calif., 1946—. Special Int.: Educational Administration.

CLULO, Genevieve, Asst. Prof. of Plant Pathol., Asst. Plant Pathologist, W. Va. Univ., Morgantown, W. Va. PLANT PATHOLOGY.

CLUM, Harold Haydn, Assoc. Prof., Chmn. Dept. of Biol. Sciences, Hunter Coll., N. Y., N. Y. PLANT PHYSIOLOGY.

CLUTE, Willard Nelson, retired, 5257 Hinesley Ave., Indianapolis, Ind. BOTANY.

CO, Tui, Dir. of Biol. Rsch., Creedmoor Inst. for Psychobiol. Studies, Queens Village 27, N. Y. PROTEIN NUTRITION. b. Amoy, China, 1897. s.

Le and May (Uy) C. Edn.: A.B., Univ. of Philippines, 1917; M.D., *ibid.*, 1922. m. T. Praxedes, Nov., 1922. Exp.: Intern. Michael Reese Hosp., Chicago, Ill., 1923-24; Asst. to Dr. A. A. Strauss, Chicago, Ill., 1924-29; Instr. in Pharmacol., N. Y. Univ., N. Y. C., 1929-31; Asst. Prof., *ibid.*, 1931; Asst. Prof. of Exptl. Surgery, *ibid.*, 1931-32; Assoc. Prof., *ibid.*, 1932-49; Dir. of Biol. Rsch., Creedmoor Inst. for Psychobiol. Studies, Queens Village, N. Y., 1949—. Mem.: N. Y. Acad. of Med.; N. Y. Acad. of Sci.; Internatl. Anesth. Rsch. Soc.; Soc. for Exptl. Biol. and Med.; Amer. Pharmacol. Soc.; Sigma Xi; A.A.A.S.; Rho Psi. Contrb. to: Surgery, Gynecol. and Obstetrics; N. Y. State Jour.; Annals of Surgery; Jour. of Pharmacol. and Exptl. Therapeutics; Jour. Philippine Med. Assn.; Arch. Surgery; Jour. of A.M.A.; Proc. Soc. Exptl. Biol. and Med.; The Psychiatric Quarterly; Acta Psychiatrica et Neurologica, etc. Special Int.: Spinal Anesthesia; Local Anesthetics; Pyrogen; Protein Nutrition.

COATNEY, G. Robert, Chf., Section of Chemotherapy, Lab. of Tropical Diseases, Natl. Inst. of Health, Bethesda 14, Md. **CHEMOTHERAPY AND PARASITOLOGY WITH SPECIAL EMPHASIS ON MALARIA AND RELATED TROPICAL DISEASES.** b. Falls City, Nebr., May 3, 1902. s. Edward Ernest and Ida Virginia (Banner) C. Edn.: A.B., Grand Island Coll., 1925; M.A., Univ. of Nebr., 1926; Ph.D., Iowa State Univ., 1932. m. Eva Mae Rice, May 2, 1929. c.: Cathryn Ann; John Edward. Exp.: Prof. of Biol., Grand Island Coll., 1926-30; Asst. Prof. of Biol., Nebr. Wesleyan Univ., 1931-33; Assoc. Prof. of Biol., Nebr. State Tchrs. Coll., 1933-36; Prof. of Biol., *ibid.*, 1936-38; Asst. Protozool., Natl. Insts. of Health, Bethesda, Md., 1938-39; Assoc. Protozool., *ibid.*, 1939-41; Protozool., *ibid.*, 1941-42; Sr. Protozool., *ibid.*, 1942-45; Commissioned Scientist (Major) Regular Corps U. S. Public Health Service, 1945; Lt. Col., 1947; Col., 1950; In Chg. of Chemotherapy of Malaria, *ibid.*, 1942-47; Asst. Chf., Subdiv. of Malaria, *ibid.*, 1944-48; Chf., Chemotherapy, *ibid.*, 1949—. Mem.: Fellow, A.A.A.S.; Amer. Soc. of Parasitol.; Natl. Malaria Soc.; Amer. Soc. of Trop. Med. and Hygiene; Amer. Jour. of Trop. Med.; Amer. Acad. of Trop. Med.; Committee on Medicine, OSRD, 1943-46; Mem. Expert Comm. on Malaria, World Health Organization, 1949, 1950; Expert Panel on Malaria World Health Organization, 1950—; Phi Kappa Phi; Acacia. Author: Survey Antimalarial Agents: Plasmodium gallinaceum Infections: Toxicity: Correlation of Structure and Action. Contrb. to: Parasitol.; Jour. of Parasitol.; Sci.; Jour. of the Natl. Malaria Soc.; Amer. Jour. of Hygiene; Amer. Jour. of Tropical Med. and Hygiene; Jour. of Amer. Med. Assn. Gen. Int.: First in the Americas to Grow Malaria Parasite in a Bird Larger than a Canary; Described more than a Score of New Blood Parasites of Birds; Set up First Project in the Americas for Testing New Antimalarial Drugs in Human Volunteers; First to Develop a Truly Prophylactic Drug for Malaria; Been in the Forefront of all Major Developments since 1942 on New Drugs for the Treatment of Human Malaria. Special Int.: Main Areas of Productive Rsch., Blood Parasites of Birds, Life Cycle of Bird and Human Malarials, Chemotherapy of Malaria.

COBB, Margaret Cameron, Geologist, Amerada Petroleum Corp., Rm. 2704, 120 Broadway, N. Y., N. Y. **PETROLEUM GEOLOGY.**

COBB, Stanley, Psychiatrist-in-Chf., Mass. General Hosp., Boston, Mass. **NEUROLOGY, PSYCHIATRY.**

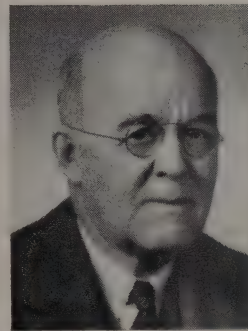
COBB, William Montague, Prof. of Anatomy, Schl. of Med., Howard Univ., 520 W St., N. W., Washington, D. C. **ANATOMY.**

COBLE, Arthur Byron, Haverford Coll., Haverford, Pa.

COBLENTZ, William Weber, 2737 Macomb St., Washington 8, D. C.

COCHEL, Wilber A., Agri. Adviser, Kansas City Star, 612 E. 47th Terrace, Kansas City, Mo. **FARMING.**

COCA, Arthur F., Retired, 425 Grant Ave., Orell, N. J. **IMMUNOLOGY AND ALLERGIC DISEASES.** b. Philadel-



phia, Pa., Mar. 20, 1875. s. Jose Lina and Augustine (Ware) C. Edn.: A.B., Haverford Coll., 1896; A.M., *ibid.*, 1899; M.D., Univ. of Pa., 1900. m. Ella F. L. Grove, Aug. 28, 1930. c.: Paul; Augustine. Exp.: Demonstrator of Pathol., Univ. of Pa., Philadelphia, Pa., 1903-05; Chem. Asst., Univ. of Heidelberg, Germany, 1907-09; Instr., Pathol. and Bacteriol., Cornell Med. Coll., Ithaca, N. Y., 1910-19; Asst. Prof. of Immunol., *ibid.*, 1919-24; Prof. of Immunol., *ibid.*, 1924-32; Clin. Prof. of Med., Columbia Univ., N. Y. C., 1931-35; Med. Dir. of Lederle Labs., 1931-49; Retired, 1949—. Mem.: Alpha Omega Alpha; Amer. Coll. of Allergists; Internatl. Assn. of Allergists; Hon. Pres., Amer. Assn. of Immunologists. Author: Asthma and Hay Fever, with M. Walzer and A. A. Thomsen, 1931; Familial Nonreaginic Food-Allergy, 1943. Contrb. to: Virchow's Arch.; Zeitschr. f. Immunitaetsforschung; Jour. of Immunol., (Founder, 1916); Annals of Allergy; Jour. of Lab. and Clin. Med.; Jour. of Heredity. Special Int.: Immunol.; Allergic Diseases.

COCHEU, Lindsley Fiske, Dir. and Prof., Dept. of Public Health and Med., N. Y. Med. Coll., Flower and Fifth Ave. Hosps., N. Y., N. Y. **PUBLIC HEALTH, INDUSTRIAL MEDICINE.**

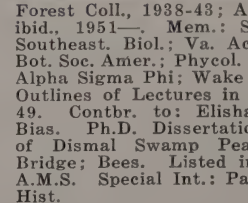
COCHRAN, W. G., Johns Hopkins Univ., Biostatistics Dept., Baltimore, Md. **BIOMETRICS.**

COCHRANE, E. L., No. 2 Larchwood Dr., Cambridge 38, Mass.

COCKADAY, Laurence Marsham, Dir. of Electronics, U. S. Naval Acad., Annapolis, Md. **ELECTRICAL ENGINEERING.**

COCKAYNE, Charles Alexander, 208 Riverside Dr., Tiffin, Ohio. **EDUCATION.**

COCKE, Elton C (romwell), Prof. of Biol., Wake Forest Coll., Box 53, Wake Forest, N. C. **BIOLOGY, BOTANY AND GENETICS.** b. January 31, 1901, Rockville, Va. s. Merton Ashley and Robertine (Toler) C. Edn.: B.S. Edn., Univ. of Va., 1927; M.S., *ibid.*, 1928; Ph.D., *ibid.*, 1931. m. Virginia Webb of Lynchburg, Va., 1926. d. Mr. and Mrs. E. S. Webb. c.: Mrs. Gilmer Cocke Van Poole; Virginia Knight. Exp.: Va. H. S., 1922-26; Instr., Univ. of Va., 1927-28; Prof. of Biol., S. T. C., E. Radford, Va., 1928-30; Instr., Univ. of Va., 1930-38; Asst. Prof. Biol., Wake



Forest Coll., 1938-43; Assoc. Prof., 1943-51; Prof., *ibid.*, 1951—. Mem.: Sigma Xi; A.A.A.S.; Assn. Southeast Biol.; Va. Acad. Sci.; N. C. Acad. Sci.; Bot. Soc. Amer.; Phycol. Soc. Amer.; Beta Beta Beta; Alpha Sigma Phi; Wake Forest Civic Club. Author: Outlines of Lectures in Gen. Biol., Five Ed., 1940-49. Contrb. to: Elisha Mitchell Sci. Soc.; Sci. Bias, Ph.D. Dissertation: Fossil Pollen Analysis of Dismal Swamp Peat. Hobbies: Ping Pong; Bridge; Bees. Listed in: Who Knows and What: A.M.S. Special Int.: Paleobotany; Pollen; Phycol.; Hist.

COCKERELL, Theodore Dru, Prof. Emer. of Zool., Univ. of Colo., 430 Nutmeg St., San Diego, Calif. **ENTOMOLOGY.**

COCKRELL, Robert Alexander, Assoc. Prof. of Forestry, Univ. of Calif., Berkeley, Calif. **WOOD TECHNOLOGY.**

COE, Herbert E., **SPEECH AND HEARING.**

COE, James Clarence, Electronics Engr., Rt. 1, Box 402, Camarillo, Calif. **ELECTRONIC INSTRUMENTATION.** b. June 30, 1900, Niobrara, Nebr. s. G. A. and Josephine (Wenzlaff) C. Edn.: B.S. in E.E., Univ. of Nebr., 1923; S.M., E.E., Mass. Inst. of Tech., 1929; Sc.D., Yankton Coll., 1947. m. Jessie Borgelt of St. Louis, Mo., 1934. d. Mr. and Mrs. A. H. Borgelt. Exp.: Asst. Prof. Elect. Engr., Okla. A. and M. Coll., 1923-27; Instr. Elect. Engr., Mass. Inst. of Tech., 1927-29; Radio Engr., Signal Corps, U. S. Army, 1929-38; Development of Electronic



Eqpt. Electronics Engr., U. S. Navy; Dept. Elec. Eqpt., 1938-50; Instr. Radio Engr.; Instrument Soc. of Amer.; Amer. Rocket Soc. Contrb. to: Electronics; Jour. of the Inst. of Radio Engr. War Record: Cadet, 1918. Travel: Hawaii. Listed in: A.M.S.

COE, Mayne Reid, Chemist, Eastern Reg. Rsch. Lab., Wyndmoor, Pa. **OIL AND FAT CHEMISTRY.**

COE, Wesley Roswell, Prof. Emer. Biol., Yale Univ., New Haven, Conn. **ZOOLOGY.**

COETER, H. S. M., Univ. of Toronto, Toronto, Ont., Canada. **GEOMETRY.**

COFER, Charles Norval, Asst. Prof. of Psychol., George Washington Univ., Washington, D. C. **PSYCHOLOGY.**

COFFEY, Hubert Stanley, Assoc. Clin. Prof. of Psychol., Univ. of Calif., 2715 Shasta Rd., Berkeley 8, Calif. **CLINICAL PSYCHOLOGY, GROUP DYNAMICS AND GROUP PSYCHOTHERAPY.** b. Wellman, Iowa, June 7, 1910. s. Elmer Ivan and Lola (Oldaker) C. Edn.: A.B., State Univ. of Iowa, 1934; A.M., ibid., 1936; Ph.D., ibid., 1938. m. Fanchon Yeager, Dec. 24, 1940. c.: Francis Yeager; Anna Mariamne; Nicholas Wellman. Exp.: Rsch. Asst. in Social Psychol., Iowa Child Welfare Rsch. Sta., 1934-38; Asst. Prof. of Child Development, Central Wash. Coll., Ellensburg, Wash., 1938-42; Lt. Comdr., U. S. Naval Reserve, Aviation Psychol. Section, Bureau Med. and Surgery, 1942-45; Dir. of Trng., Fed. Security Agency, Washington, D. C., 1945-46; Mem., Psychol. Dept., Univ. of Calif., Berkeley, Calif., 1946—. Mem.: Amer. Psychol. Assn., Fellow; Sigma Xi; Pacific Unitarian Coun. Contrb. to: Jour. of Soc. Issues; Ednl. Leadership; Jour. of Personality.

COFFEY, Wilford Lorne, retired, Rt. 2, Lake City Mich. **SCHOOL ADMINISTRATION.**

COFFMAN, Franklin Arthur, Sr. Agronomist, Oat Investigations, Bureau Plant Indus., Soils and Agri. Engrng., U. S. D. A., 1421 N. Highland St., Arlington, Va. **AGRONOMY.**

COGGESHALL, Arthur Sterry, Dir., Santa Barbara Museum of Natural History, Santa Barbara, Calif. **PALEONTOLOGY.**

COGGESHALL, Lowell Thelwell, Frederick H. Rawson Prof. of Med. and Dean, Div. of Biol. Sci., Univ. of Chicago, 950 E. 59th St., Chicago 37, Ill. **INTERNAL MEDICINE.** b. Saratoga, Ind., May 7, 1901. s. William Evart and Flossie Ann (Warren) C. Edn.: A.B., Ind. Univ., 1922; A.M., ibid., 1923; M.D., ibid., 1928. Hon. Deg.: LL.D., Ind. Univ., 1948. m. Louise Holland, May 15, 1930. c.: Richard Edwin; Diane; Carol. Exp.: Instr. in Zool., Ind. Univ., 1922-23; Instr. in Anatomy, ibid.,

1924; Instr. in Anatomy and on Biol. Staff, Extension Div., ibid., 1925; Special Staff Mem., Rockefeller Foundation Intl. Health Bd., 1924-26; Malariologist, Ga. State Bd. of Health, 1928; Intern., Univ. of Chicago Hosp., 1928-29; Instr. in Med., Univ. of Chicago, 1930-32; Asst. Prof. of Med., ibid., 1942-46; Sr. Med. Officer for Pan-Amer. Intl. Health Div., 1935-41; Prof. of Epidemiol. and Camn., Dept. Tropical Diseases, Schl. of Public Health, Univ. of Mich., 1941-42; Leave of absence, ibid., 1942-46; Sr. Med. Officer for Pan-Amer. Africa Airlines later Trans-Africa Ferry Route, 1942-44; Capt., USNR, Klamath Falls, Ore., 1944-46; Prof. and Chmn., Dept. of Med., Univ. of Chicago, 1946-49; Prof. and Chmn., Dept. of Med., and Dean, Div. Biol. Sci., ibid., 1947-49; Frederick H. Rawson Prof. of Med. and Dean, Div. of Biol. Sci., ibid., 1949—. Mem.: Chicago Med. Soc.; Chicago Soc. Internal Med.; Inst. Med. of Chicago; Billings Med. Club; Ill. State Med. Soc.; A.M.A.; Amer. Pub. Health Assn.; Amer. Coll. Physicians; Assn. Amer. Physicians; Assn. Amer. Med. Colls.; Central Soc. for Clinical Rsch.; Central Interurban Clinical Club; Amer. Soc. for Clinical Investigation; Soc. for Exptl. Biol. and Med.; A.A.A.S.; Natl. Acad. Sci.; Harvey Soc.; Amer. Epidemiol. Soc.; Amer. Acad. Tropical Med.; Amer. Foundation for Tropical Med.; Amer. Soc. for Tropical Med.; Natl. Malaria Soc.; World Med. Assn.; Phi Beta Kappa; Alpha Omega Alpha; Sigma Xi; Delta Omega. Contrb. to: Med.; Proc. Soc. for Exptl. Biol. and Med.; Jour. Med. Edn. Special Int.: Tropical Diseases.

COGHILL, Robert DeWolf, Dir. of Rsch., Abbott Labs., North Chicago, Ill. **BIOCHEMISTRY; ANTI-BIOTICS; PHARMACEUTICALS.** b. Providence, R. I., Oct. 5, 1901. s. George Ellett and Muriel (Anderson) C. Edn.: A.B., Univ. of Kans., 1921; M.S., ibid., 1922; Ph.D., Yale Univ., 1924. Hon. Deg.: D.Sc., Bradley, 1952. m. Marjorie Moburg, Nov. 27, 1947. c.: William Sheridan; Mary Anne; Jane Criswold; George Ellett. Exp.: Natl. Tuberculosis Assn. Rsch. Fellow, Yale Univ., 1924-26; Instr. in Chem., ibid., 1926-28; Asst. Prof. of Chem., ibid., 1928-39; Chief, Fermentation Division,



Northern Regional Rsch. Lab., U. S. Dept. of Agri., Peoria, Ill., 1939-45; Assoc. Dir. of Rsch., Abbott Labs., 1945-46; Dir. of Rsch., ibid., 1946—; Bd. of Dirs., ibid., 1952—. Mem.: Amer. Chem. Soc.; Amer. Soc. Biol. Chemists; Soc. Amer. Bacteriologists; N. Y. Acad. Sci.; A.A.A.S.; Alpha Chi Sigma; Gamma Alpha; Sigma Xi. Contrb. to: Jour. Amer. Chem. Soc.; Jour. Biol. Chem.; Amer. Rev. Tuberculosis; Jour. Immunology; Chem. and Engrng. News; Jour. Bacteriol. Special Int.: Antibiotic Rsch.

COHEN, Alonzo Clifford, Jr., Prof. of Math., Univ. of Ga., 456 Milledge Hgts., Athens, Ga. **MATHEMATICAL STATISTICS.**



b. Stone County, Miss., Sept. 4, 1911. s. A. C. Sr. and Bessie (Davis) C. Edn.: B.S., Ala. Poly. Inst., 1932; M.S., ibid., 1933; M.A., Univ. of Mich., 1940; Ph.D., ibid., 1941. m. Dorothy Armour, June 16, 1934. c.: Judith W.; Susan D.; Deborah M. Exp.: Instr. of Math., Ala. Poly. Inst., 1934-40; Instr. of Math., Mich. State Coll., 1940-47; Asst. Prof. of Math., ibid., 1947; Assoc. Prof. of Math., Univ. of Ga., 1947-52; Prof. of Math., ibid., 1952—; Operations Analysis Consultant, U. S. Air Force, 1950—. Mem.:

Inst. Math. Statistics; Amer. Statistical Assn.; Amer. Math. Assn.; Econometric Soc.; A.A.U.P.; Sigma Xi; Fellow, Amer. Soc. for Quality Control. Contrb. to: Annals of Math. Statistics; Jour. Amer. Statistical Assn.; Indus. Quality Control. Special Int.: Truncated Frequency Distributions; Statistical Quality Control; Operations Analysis.

COGGINS, Calvin Lester, Asst. Prof. of Physics, R. I. State Coll., Kingston, R. I. PHYSICS, ELECTRONICS.

COHEN, Emanuel, Asst. Clinical Prof. of Med., Radioactivity Center, Univ. of Calif. Med Center, San Francisco, Calif. INTERNAL MEDICINE; RESEARCH IN GASTROINTESTINAL PHYSIOLOGY. b. N. Y., N. Y., July 30, 1919. s. Solomon and Anna May (Solomon) C. Edn.: A.B., Columbia Univ., 1939; M.D., Coll. of Physicians and Surgeons, Columbia Univ., 1943. m. Judith M. Uslander, Aug. 29, 1942. c.: Susan; Frederick. Exp.: Intern and Sr. Intern, Mt. Sinai Hosp., N. Y., N. Y., 1943-44; Resident in Internal Med., Jewish Hosp., Brooklyn, N. Y., 1944-45; Capt., Med. Corps, U. S. Army, 1945-47; Chf. of Lab. Service, A. S. F. Regional Hosp., Fort Ord, Calif., 1946-47; Fellow in Pathol., Mt. Sinai Hosp., N. Y., N. Y., 1947-48; Fellow in Gastroenterology, Univ. of Calif. Hosp., San Francisco, Calif., 1948-49; Rsch. Fellow in Med., Univ. of Calif. Med. Schl., San Francisco, Calif., 1948-49; Clinical Instr., *ibid.*, 1949-52; Asst. Clinical Prof. of Med., *ibid.*, 1952—; Asst. Visiting Physician, Univ. of Calif. Hosp., 1949—; Private Practice of Internal Med., Redwood City, Calif., 1949—; Diplomate, Amer. Bd. of Internal Med., 1951. Mem.: A.A.A.S.; N. Y. Acad. Sci.; Calif. Acad. Sci.; Calif. Soc. Internal Med.; Phi Beta Kappa; Alpha Omega Alpha; Beta Sigma Rho; Phi Delta Epsilon. Contrb. to: Gastroenterol.; Jour. Mt. Sinai Hosp.; Amer. Jour. Roentgenology and Radiation Therapy; Amer. Jour. Physiol. War Record: Med. Corps, U. S. Army, 1945-47. Special Int.: Hepatic Excretory Function; Intestinal Absorption.

COHEN, Herman, Rsch. Assoc., Princeton Labs., Box 534, Princeton, N. J. ENDOCRINOLOGY AND BIOCHEMISTRY. b. N. Y. City, Mar. 1, 1915. s. Morris and Tillie (Rosenberg) C. Edn.: B.S., N. Y. Univ., 1938; M. S., *ibid.*, 1942; Ph.D., *ibid.*, 1951. m. Bernice Luber, Mar. 21, 1942. c.: Robert; Lawrence. Exp.: Rsch. Assoc., E. R. Squibb and Sons, Princeton, N. J., 1946-52; Rsch. Assoc., Princeton Labs., Princeton, N. J., 1952—. Mem.: Amer. Chem. Soc.; Soc. for Exp. Biol. and Med.; Endocrine Soc.; N. Y. Acad. of Sci.; Sigma Xi. Contrb. to: Endocrinol.; Jour. Amer. Chem. Soc.; Jour. Amer. Pharm. Assn.; Lancet; Amer. Naturalist Special Int.: Pituitary Hormones; Steroids; Endocrine Physiol.

COHEN, I. Bernard, Asst. Prof. of Hist. of Sci. and Gen. Edn., Harvard Univ., Cambridge 39, Mass. HISTORY OF PHYSICS, SOCIAL ASPECTS OF SCIENCE AND SCIENCE EDUCATION. b. Far Rockaway, L. I., N. Y., Mar. 1, 1914. s. Isador and Blanche (Bernstein) C. Edn.: S.B., Harvard, 1937; Ph.D., *ibid.*, 1947. m. Frances Davis. c.: Frances Bernard. Exp.: Fellow, Carnegie Inst. of Wash., Washington, D. C., 1939-42; Tchng. Fellow in Physics, Harvard, Cambridge, Mass., 1942; Instr. in Physics, *ibid.*, 1942-46; Instr. in the Hist. of Sci. and Gen. Edn., Harvard, Cambridge, Mass., 1946-48; Asst. Prof. of Hist. of Sci. and Gen. Edn., *ibid.*, 1948—. Mem.: A.A.A.S., Fellow; Hist. of Sci. Soc.; Colonial Soc. of Mass.; Amer. Antiquarian Soc.; Internatl. Acad. of Hist. of Sci.; Amer. Assn. of Hist. of Med.; Sigma Xi. Author: Roemer and the First Determination of the Velocity of Light, 1942; Benjamin Franklin's Experiments, 1941; Sci.: Servant of Man, 1948; Some Early Tools of Amer. Sci., 1950; Gen. Edn. in Sci., 1952. Contrb. to: Isis; Jour. of Franklin Inst.; Jour. of Amer. Acoustical Soc.; New England Quarterly; Amer. Jour. of Physics; Annals of Sci.; Nature; Proc. Amer. Phil. Soc.; Proc. of Amer. Antiquarian Soc. Special Int.: Sci in Amer.; Development of Phys. Thought; Sci. Soc.; Sci Edn. for Non-Scientists.

COHEN, Isadore, Prof. of Clinical Surgery, La. State Univ. Med. Schl., 1522 Aline St., New Orleans, La. SURGERY.

COHEN, Lester, 416 Ocean Ave., Brooklyn, N. Y. PHYSICIAN.

COHEN, Morris, Mass. Inst. of Tech., Cambridge, Mass. METALLURGY.

COHEN, Theodore, Practicing Optometrist and Lectr. on Optometric Subjects, 77 Park Ave., N. Y. 16, N. Y. VISUAL SCIENCE WITH PARTICULAR REFERENCE TO THE VARIOUS METHODS OF IMPROVING VISION WITHOUT THE USE OF LENSES. b. Elizabeth, N. J., July 5, 1894. s. Barnett and Lillian (Gerson) C. Edn.: Grad. Columbia Univ. Schl. of Optometry, 1914; Dr. of Optometry, Philadelphia Coll. of Optics, 1917. c.: Mildred A. Knapp, Aug. 25, 1941. Exp.: Lectr. in Optometry, Columbia Univ., N. Y., N. Y., 1942-51; Lectr. and Mem. of Faculty of Optometric Foundation of N. Y., 1951—. Hon. Pos.: Pres., N. Y. Acad. Optometry, 1939; Winner, N. Y. Acad. Award for Original Work in Myopia, 1940. Mem.: Fellow, A.A.A.S.; Fellow, N. Y. Acad. Optometry; Fellow, Coll. Syntonic Optometry; Andiron Club of N. Y., Inc.; Pi Lambda Phi; Omega Epsilon Phi. Contrb. to: Amer. Jour. Optometry. War Record: World War I. Special Int.: Visual Trng. Methods for Control of Myopia, for Correction of Cross Eyes and for Greater Visual Achievement Generally.


COHEN, Teresa, Prof. of Math., Pa. State Coll., State College, Pa. MATHEMATICS.

COHN, Alfred, Chf. Venereal Disease Rsch. Div., N. Y. Dept. of Health, 157 W. 57th St., N. Y., N. Y.

COHN, Edwin Joseph, Harvard Med. Schl., Boston 15, Mass.

COHN, Essie White, Prof. of Chem., Univ. of Denver, Denver, Colo. CHEMISTRY.

COHN, Isidore, Emer. Prof. of Clin. Surg., Schl. of Med., L. S. U., 1522 Aline St., New Orleans 15, La.

 SURGERY. b. Brusly Landing, La., Apr. 9, 1885. s. Sophie and Henry Cohn. Edn.: B.S., L. S. U., 1903; M.D., Tulane Univ. Schl. of Med., 1907; F.A.C.S., Fellow of Amer. Coll. of Surgs., 1914. m. Elsie Waldhorn of New Orleans, La., April 5, 1910. d. Moise and Albertine Waldhorn. c.: Babette; Elise; Isidore, Jr. Exp.: Occupied Various Pos. in the Schl. of Med. at Tulane Univ., 1909-37; Prof. of Surg., Grad. Schl. of Med., Tulane Univ., 1932-37; Grad. Schl. of Med., L. S. U., 1937-41; Emer. Prof. of Clin. Surg., L. S. U. Schl. of Med., at present time. Mem.: Amer. Coll. of Surgs.; Sou. Med. Assn.; A.M.A.; Endocrinol. Soc.; Amer. Assn. for the Surgery of Trauma; Amer. Diabetic Assn.; Fellow, Internatl. Soc. of Surg. (Brussels); Exp. Biol. and Med.; A.A.A.S.; Surgical Assn. of La.; La. State Med. Soc.; Phi Kappa Phi; Alpha Omega Alpha; Phi Delta Epsilon; Round Table; Consultant Surg., Touro Infirmary and Charity Hosp., New Orleans, La.; Sr. Fellow, Sou. Surg. Assn.; Hon. Fellow of Peruvian Acad. of Surgery. Author: Normal Bones and Joints. Contrb. to: Annals of Surg.; Amer. Jour. of Surg.; Surg.; Gyn. and Obs.; Amer. Jour. of Roentgenol.; Archives of Surg. Hobbies: Amer. Hist.; the Hist. of Med. Special Int.: In Field of Bone Regeneration and Repair.

COHOE, Wallace P., Consultant, 120 E. 41st St., N. Y., N. Y. CHEMISTRY.

COIT, John Eliot, Chf., Coit Agril. Service, P. O. Box 698, Fallbrook, Calif. HORTICULTURE.

COKER, Robert Ervin, Kenan Prof. and Hd. Dept. of Zool., Univ. of N. C., Chapel Hill, N. C. ZOOLOGICAL SCIENCES.

COKER, William Chambers, Kenan Prof. Emer. and Dir., Coker Arboretum, Univ. of N. C., Chapel Hill, N. C. **BOTANY**.

COLBERT, Edwin Harris, Prof. of Vertebrate Paleontology, Columbia Univ., N. Y., N. Y. **VERTEBRATE PALEONTOLOGY**.

COLBURN, Allan P., Provost, Univ. of Del., Newark, Del. **CHEMICAL ENGINEERING**.

COLBY, Arthur Samuel, Prof. of Pomology and Small Fruit Culture Rsch., Univ. of Ill., Urbana, Ill. **TAXONOMY, GENETICS**.

COLBY, Malcolm Y., Dept. of Physics, Univ. of Tex., Austin, Tex. **PHYSICS**.

COLBY, Martha Guernsey, Assoc. Prof. of Psychol., Univ. of Mich., Ann Arbor, Mich. **PSYCHOLOGY**.

COLCORD, Mabel, retired, 2520 14th St., N. W., Washington, D. C. **BIBLIOGRAPHY ECONOMIC ENTOMOLOGY**.

COLDWATER, Kenneth Bryson, Instr. in Biol., St. Louis Univ. and Resident Surgeon, St. Mary's Group Hosps., 7 Hancock Ave., Jefferson Barracks, Mo. **BIOLOGY**.

COLE, Elbert Charles, Samuel Fessenden Clarke Prof. of Biol., Williams Coll., Williamstown, Mass. **NEUROLOGY, STAINING TECHNIQUES**.

COLE, Fay-Cooper, Prof., Emer. of Anthropology, Univ. of Chicago, Chicago, Ill. **ETHNOLOGY OF SOUTHEAST ASIA; ARCHAEOLOGY OF MISSISSIPPI VALLEY**. b. August 8, 1881, Plainwell, Michigan. s. George Lamont and Ida Josephine (Upright) C. Edn.: B.S., Northwestern, 1903; Honorary Sc.D., *ibid.*, 1928; Ph.D., *Columbia*, 1914; LL.D., *Beloit*, 1944; Studied at Univ. of Berlin, 1906. m. Mabel Cook of Plano, Ill., 1906. d. Mr. and Mrs. A. B. Cook. c.: LaMont Cook. Exp.: Ethnologist, Field Museum Nat. Hist., 1906-12; Asst. Curator, Malayan Ethnology and Phys. Anthropol., 1912-23; Professorial Lectr. in Anthropol., Univ. of Chicago, 1924; Assoc. Prof., *ibid.*, 1925-27; Prof. and Chmn., Dept., *ibid.*, 1927-47; Prof. Emer., 1948—; Chmn., Div. of Anthropol. and Psychol., Natl. Rsch. Coun., 1929-30; Chmn., Div. of Social Sci., Century of Progress Exposition, 1933; Chmn., Ill. State Bd. of Museum Advisers. Mem.: Sigma Xi; Phi Beta Kappa; Amer. Anthropol. Assn.; A.A.A.S.; Soc. Amer. Archaeol.; Ill. State Acad. of Sci.; Amer. Philos. Soc.; Delta Upsilon; Univ. Club (Chicago); Quadrangle; Adventures; Explorers. Author: Chinese Pottery in Philippines, 1912; Traditions of the Tinguian, 1915; The Tinguian, 1922; Wild Tribes of Davao, 1913; The Long Road, 1933; Peoples of Malaysia, 1945. Coauthor: The Nature of the World and of Man, 1926; The World and Man, 1937; The Making of Mankind, 1929; The Story of Man, 1937; Rediscovering Ill., 1937. Title of Ph.D. Dissertation: A Contribution to Philippine Folklore; Civil Officers Trng. Service (for Officers of Asiatic Occupation Forces). Travel: North and Middle Amer.; China; Japan; Philippines; Dutch Indies; British Malaya; Europe; Round World Travels. Achievements: Conducted Three Expeditions to Philippines; Borneo; Java; Sumatra; Malay Pen. Awarded Gold Medal, Chicago Geographic Soc. for Malayan Rsch. Special Int.: Ethnology of Southeast Asia; Archaeology of Miss. Valley.

COLE, Harold Harrison, Prof. of Animal Husbandry, Univ. of Calif., Davis, Calif. **PHYSIOLOGY**.

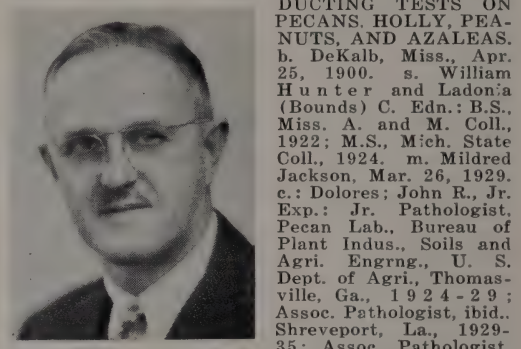
COLE, Harold Newton, Clinical Prof. of Dermatology and Syphilology, Western Reserve Univ. Med. Coll., Cleveland, Ohio. **DERMATOLOGY, SYPHILOLOGY**.

COLE, Howard Irving, 612 19th St., N. W., Washington, D. C. **CHEMISTRY**.

COLE, James Webb, Jr., Assoc. Prof. of Chemistry, Cobb Chemical Laboratory, Univ. of Va., Charlottesville, Va. **PHYSICAL CHEMISTRY; SCIENTIFIC ADMINISTRATION**. b. July 22, 1910, Norfolk, Va. s. James Webb and Mabel (Stephenson) C. Edn.: B.S., Chemistry, 1932;

M.S., 1934; Ph.D. Chem., 1936, All from Univ. of Va. m. Katherine P. Smith of Charlottesville, Va., Aug. 23, 1936. d. Dr. and Mrs. J. W. R. Smith. c.: James Webb, III; Wm. Marshall. Exp.: Techn. Fellow in Chem., 1932-34; P. F. duPont Rsch. Fellow, Univ. of Va., 1935-36; Rsch. Chem., duPont Exp. Sta., Wilmington, Del., 1936-38; Asst. Prof. Chem., Univ. of Va., 1938; Assoc. Prof., 1945; Instr., E.S.M.W.T., 1941-42; Part-time Investigator, N.D.R.C., 1941-45; Consultant, O.S.R.D., 1943-45, Abstractor for Chem. Abstracts. Mem.: Chmn., Va. Sect., A.C.S., 1942-43; Chmn., Chem. Sect., Va. Acad. Sci., 1947-48; Sigma Xi; Delta Sigma Phi; Alpha Chi Sigma; Alpha Phi Omega; Phi Beta Pi (Hon.); Fellow, A.I.C.; A.A.A.S.; A.A. U.P.; Sou. Assn. of Sci. and Indust.; Colonnade Club; Farmington Country Club. Author: Lab. Course in Gen. Chem. (with G. L. Carter), 2 Ed., 1939, 1948; Introduction to Chem. (with G. L. Carter), 1940. Contrb. to: A.C.S. Publications. Ph.D. Dissertation: Studies in Heterogeneous Catalysis. War Record: Rsch., U. S. Govt., Lt., Va. State Guard. Travel: N. Amer. Hobbies: Music; Home Repair. Listed in: A.M.S.; Who's Who Supplement; Who Knows—and What. Special Int.: Oxidation Mechanisms, Metal Catalysis, Complex Compounds, Analytical Methods.

COLE, John Rufus, Plant Pathologist, P. O. Box 610, Albany, Ga. **PLANT PATHOLOGIST CONDUCTING TESTS ON**



PECANS, HOLLY, PEANUTS, AND AZALEAS. b. DeKalb, Miss., Apr. 25, 1900. s. William Hunter and Ladonia (Bounds) C. Edn.: B.S., Miss. A. and M. Coll., 1922; M.S., Mich. State Coll., 1924. m. Mildred Jackson, Mar. 26, 1929. c.: Dolores; John R., Jr. Exp.: Jr. Pathologist, Pecan Lab., Bureau of Plant Indus., Soils and Agri. Engrng., U. S. Dept. of Agri., Thomasville, Ga., 1924-29; Assoc. Pathologist, *ibid.*, Shreveport, La., 1929-35; Assoc. Pathologist, *ibid.*, Albany, 1935-44; Pathologist, *ibid.*, 1944—.

Mem.: Phytopathol. Soc.; Phi Sigma. Gen. Int.: Assisted in the Discovery of Zinc Sulfate in Order to Prevent and Overcome the Rosette Disease of Pecans. Author and co-author of 54 publications on the above crops.

COLE, Leonard Jay, Biologist, U. S. Naval Radiological Defense Lab., San Francisco 24, Calif. **BIOCHEMISTRY AND RADIOBIOLOGY**. b. New York, N. Y., July 31, 1916. s. Joseph and Sarah (Liebson) C. Edn.: B.S., Coll. of the City of N. Y., 1939; M.S., N. Y. Univ., 1941. m. Joyce Antonette Carlson, Aug. 20, 1946. c.: Mark David. Exp.: Assoc. Chemist, U. S. Naval Shipyard, Mare Island, Calif., 1942-48; Asst. Specialist in Experiment Sta., Univ. of Calif., Berkeley, 1948-50; Biochemist, U. S. Veterans Hospital, Oakland, Calif., 1950-51; Biologist, U. S. Naval Radiological Defense Lab., San Francisco, Calif., 1951—. Mem.: Amer. Chem. Soc.; Soc. of Amer. Bacteriologists; Amer. Assn. for Adv. of Sci.; Radiation Rsch. Soc.; Sigma Xi. Contrb. to: Proceedings of the Soc. Exper. Biol. Med.; Jour. of Bacteriol.; Jour. of Immunol.; Sci.; Amer. Jour. of Physiol.; Amer. Jour. Veterinary Rsch. Special Int.: Chem. Factors in Bacterial Variation; Biochemical Effects of Ionizing Radiations; Modification of Radiosensitivity of Animals by Chemical Means.

COLE, Luella, Author, 2521 Benvenue Ave., Berkeley 4, Calif. **EDUCATIONAL PSYCHOLOGY**. b. Haverhill, Mass., Apr. 1, 1893. d. Harry F. and Bessie (Garland) C. Edn.: A.B., Vassar Coll., 1916; A.M., Ind. Univ., 1920; Ph.D., *ibid.*, 1921. m. Sidney L. Pressey, Jan. 1, 1918, dec. 1933; m. Robert H. Lowie, Aug. 23, 1933. Exp.: Instr. to Assoc. Prof., Ohio State Univ., Columbus, Ohio,

1921-32; Private Work, 1932—. Mem.: Phi Beta Kappa; Sigma Xi; Pi Lambda Theta. Author: Psychol. of the Elem. Schl. Subj., 1937; Psychol. of Adolescence, 1934; Tchng. in the Elem. Schl., 1939; Background of Coll. Tchng., 1940; Attaining Maturity, 1943; Hist. of Edn., 1950; Improvement of Reading, 1938. War Record: Made Model Airplanes for the Navy. Special Int.: Handwriting; Swimming; Motor Learning.

COLE, Randall Knight, Asst. Prof. of Poultry Husbandry and Animal Genetics, Cornell Univ., Ithaca, N. Y. **GENETICS, DISEASE RESISTANCE.**

COLE, Rufus, Mt. Kisco, N. Y.

COLE, Sandford S., Titanium Alloy Div., Natl. Lead Co., Box 58, South Amboy, N. J. **CERAMICS.**

COLE, Steward C., Dir., Pacific Coast Council Intercultural Edn., 1250 Wilshire Blvd., Los Angeles, Calif. **INTERCULTURAL EDUCATION.**

COLE, W. Storrs, Prof. of Geol., Cornell Univ., Ithaca, N. Y. **MICROPALEONTOLOGY.**

COLE, Warren H., Prof. of Surgery, Univ. of Ill. Coll. of Med., 1853 W. Polk, Chicago, Ill. **SURGERY.**

COLE, Wilbur V., Assoc. Prof., Anat., Kans. City Coll. of Osteopathy and Surgery, Kans. City, Mo. **HISTOLOGY AND NEUROANATOMY.** b. Waterville, Maine, Jan. 19, 1913. s. Wilbur V. and Elsie (Lakin) C. Edn.: B.A., Univ. of N. H., 1935; D.O., Kirksville Coll. of Osteopathy, 1943. m. Julia Whitaker of Prospect Harbor, Me., 1936. d. I. S. and Iva Whitaker. c.: Wilbur V. Cole, III.; Dorothy E.; James Whitaker. Exp.: Instr., Embryology and Histology, K.C.O.S., 1943-45; Asst. Prof., Anat., K.C.O.S., 1945-47; Rsch. Dept., K.C.O.S., 1943-47; Burns Osteopathic Rsch. Lab., Coll. of Osteopathic Phys. and Surg., L. A., Calif., 1949-51; Assoc. Prof., Anat., Kans. City Coll. of Osteopathy and Surgery, 1951—. Hon. Pos.: Chairman Scientific Exhibits, Amer. Osteopathic Association. Mem.: A.A.A.S.; A.A.U.P.; Amer. Osteopathic Assn.; Assoc. Mem., Mo. Radiological Assn.; Sigma Sigma Phi; Acad. of Applied Osteopathy; Masonic Order; Amer. Microscopical Soc.; Biological Photographic Assn.; Soc. of Photographic Engrs.; Scientific Rsch. Soc. Amer. Contrb. to: Jour. of Amer. Osteo. Assn.; Anatomical Record; Jour. of Osteopathy; Stain Technology; Turtex News; Jour. Biological Photographic Assn.; Trans. Amer. Micro. Assn. Special Int.: Histological Demonstration Motor Endings.

COLE, William Raymond, Prof. of Physics, Lincoln Univ., Lincoln Univ., Pa. **PHYSICS.**

COLEMAN, George Hopkins, Dean, Inst. Textile Tech., Charlottesville, Va. **ORGANIC CHEMISTRY.**

COLEMAN, George William, Metallurgist, Boston Rd., Southborough, Mass. **FERROUS METALLURGY.** b. Watertown, Mass., July 4, 1900. s. William P. and Julia (Lucey) C. Edn.: B.S., Tufts Coll., 1923; M.S., Mass. Inst. of Tech., 1937; Sc.D., Temple Bar Coll., 1939. m. Sophia Stankiewicz, July 15, 1944. c.: Emily. Exp.: Waltham Watch Co., 1923-33; Metallurgist, Mass. Inst. of Tech., Cambridge, Mass., 1938-39; Parker Mfg. Co., Worcester, Mass., Metallurgist, 1939—. Mem.: Amer. Chem. Soc.; Fellow, A.I.C.; Fellow, A.A.A.S.; A.I.M.E.; N. Y. Acad. of Sci. Contrb. to: Jour. Amer. Chem. Soc. Special Int.: Fabrication and Finishing of Ferrous Materials.

COLEMAN, Harry Shipp, Asst. Dir., Mellon Inst., 4400 Fifth Ave., Pittsburgh, Pa. **MECHANICAL ENGINEERING.**

COLEMAN, Robert Hemphill, Chmn., Dept. of Math., Coll. of Charleston, Charleston, S. C. **MAMMOLOGY.**

COLEMAN, Warren, Prof. of Clinical Med., Univ. of Ga. Schl. of Med., Augusta, Ga. **INTERNAL MEDICINE.**

COLES, Harold William, Chf., Chem. Lab. Branch, Quartermaster Rsch. and Development, Pioneering



Quartermaster Depot, 2800 S. 20th St., Philadelphia 45, Pa. **CHEMISTRY AND BACTERIOLOGY.** b. E. Liverpool, Ohio, July 25, 1898. s. William G. and Gertrude (Agner) C. Edn.: B.S., Syracuse Univ., 1923; M.S., Iowa State Coll., 1926; Ph.D., ibid., 1927. m. Esther Ohrbeck, June 18, 1927. c.: Virginia Mary; Elinor Gertrude; Marjorie Ann. Exp.: Grad. Asst. in Chem., Iowa State Coll., Ames, Iowa, 1923-26; Instr. in Chem., ibid., 1926-27; Organic Rsch. Chemist, Lilly Rsch. Labs., Indianapolis, Ind., 1927-33; S. Fellow, Mellon Inst. of Indus. Rsch., Pittsburgh, Pa., 1933-42; Hd., Plastics and Organic Labs., Bausch and Lomb Optical Co., Rochester, N. Y., 1942-48; Chf., QM. R. and D. Chem. Labs., Philadelphia, Pa., 1948—. Mem.: A.A.A.S.; Amer. Inst. of Physics; Optical Soc. of Amer.; Amer. Pharm. Assn.; Amer. Chem. Soc.; N. Y. Chemists Club; Alpha Chi Sigma; Phi Lambda Upsilon; Gamma Sigma Delta. Contrb. to: Jour. of Amer. Pharm. Assn.; Jour. Amer. Chem. Soc.; TAPPI; Iowa Acad. of Sci.; Sci.; Amer. Jour. of Pub. Health; Jour. of Lab. and Clin. Med.; Med. Arts and Indianapolis Med.; Current Rsch. in Anesthesia and Analgesia; Plant Physiol.; Iowa State Coll. Jour. of Sci.; Chem. News of London; Modern Plastics; Bibl. of Scientific and Indus. Reports; Textile Rsch. Jour. Special Int.: Carbohydrate Chem.; Fermentation By-Products; Local Anesthetics; Levulinic Acid Chem.; Organic Medicinals; Optical Plastics; Adhesives and Optical Cements; Black Pepper Substitutes; Plasticizers; Lens Coatings.

COLGAN, Edward Joseph, Prof. and Hd., Dept. of Edn. and Psychol., Colby Coll., Waterville, Maine. **PSYCHOLOGY, EDUCATION.**

COLIEN, Francis E., Lab., Municipal Bldg., 166 S. High St., Akron, Ohio. **BACTERIOLOGY.**

COLIN, Edward Cecil, Tchrr., Chicago Tehrs. Coll., 6800 Stewart Ave., Chicago, Ill. **GENETICS.**

COLLENS, William S. Assoc. Visiting Physician, Israel Zion Hosp., 123 Eighth Ave., Brooklyn, N. Y. **INTERNAL MEDICINE.**

COLLETT, Mary E. Assoc. Prof. of Biol., Mather Coll., Western Reserve Univ., Cleveland, Ohio. **PHYSIOLOGY.**

COLLEY, Mary Witherspoon, Mem. Staff, Child Study Assn. of Amer., 221 West 58th St., N. Y. N. Y. **CHILD PSYCHOLOGY, PARENT EDUCATION.**

COLLIE, George Lucius, Prof. Emer. Beloit Coll., 1969 Riverside Dr., Beloit, Wis. **GEOLOGY.**

COLLIER, Myrtie, Prof. and Chmn., Dept. of Math., Immaculate Heart Coll., Los Angeles, Calif. **MATHEMATICS.**

COLLINGS, Gilbert Hooper, Prof. of Agron., Clemson Coll., Clemson, S. C. **AGRONOMY.**

COLLINGWOOD, Douglas Moore, Petroleum Engr. and Geologist, Sun Oil Co., Box 2880, Dallas, Tex. **PETROLEUM ENGINEERING.**

COLLINS, C. G., Oak Ridge Natl. Lab., Oak Ridge, Tenn. **TRACER CHEMISTRY.**

COLLINS, Dean A., Prof. of Physiol., Temple Univ. Schl. of Med., Philadelphia, Pa. **PHYSIOLOGY.**

COLLINS, Donald Clark, Asst. Prof. of Surgery, Coll. Med. Evangelists, Los Angeles, Calif. GEN-



ERAL SURGERY, GYN-
ECOLOGY, GASTRO-
ENTEROLOGY. b. Phil-
adelphia, Pa., Jan. 7,
1902. s. Foster Kyle
and Pearl (Clark) C.
Edn.: B.A., Univ. of
Calif., 1923; M.D., Univ.
of Calif. Med. Schl., 19-
27; M.S., Univ. of Minn.
Post-Grad. Schl., 1932;
M.S., ibid., 1934. Hon.
Deg.: D.Sc., Calif., 19-
47. m. Marion Brandt,
Dec. 29, 1928. c.: Ruth
Evamay. Exp.: Resi-
dent in Surgery, Univ.
of Calif. Service, 1927-
28; Resident-Physician,
in Chg. of Entire Hosp.,
San Francisco City and

County Hosp., San Francisco, Calif., 1928-29; Fel-
low in Pathol. and Surgery, The Mayo Foundation,
The Mayo Clinic, Rochester, Minn., 1929-35; Resi-
dent-Surgeon, Colonial Hosp., Rochester, Minn.,
1933-34; Private Practice as a Consulting Surgeon,
Los Angeles, Calif., 1935-40; Entered on Extended
Active Duty with the U. S. Army and U. S. Army
Air Forces, 1940-45; Private Practice of Surgery,
Los Angeles, Calif., 1945—; Asst. Prof. of Surgery,
Coll. of Med. Evangelists, Los Angeles, Calif. Hon.
Pos.: Pres., Hollywood Exchange Club, 1948; Past
Post Commander, Hollywood Post No. 2515,
The Amer. Legion, Hollywood, Calif., 1949; Past
Post of Post Commander, Hollywood Post No. 2515,
V. F. W., 1952-53; Post Commander, Motion Pic-
ture Chapter No. 1898, Military Order of Purple
Heart, Hollywood, Calif., 1953—; The Surgeon,
Dept. of Calif., V. F. W., 1953—; The Surgeon,
5th District, V. F. W., Dept. of Calif., 1952—;
The Sr. Vice-Commander, Dept. of Calif., Military
Order Purple Heart, 1953—. Mem.: Fellow, Amer.
Coll. of Surgeons; Fellow, Internatl. Coll. of Sur-
geons; Fellow, Internatl. Acad. Proctology; Fellow,
Amer. Coll. of Cardiology; Fellow, A.A.A.S.; Fel-
low, Natl. Gastroenterol. Assn.; Sigma Xi; Phi
Sigma; Sigma Delta Chi; Phi Beta Kappa; Diplo-
mate, Internatl. Bd. of Surgery; Sigma Pi; Phi
Beta Pi; Beta Beta; Blue "C" of U.C.L.A.; etc.
Author: Prelude to Peace, 1948. Contrb. to: Ann.
Surgery; Canadian Med. Assn. Jour.; British Med.
Jour.; etc. Special Int. Diseases of the Vermiform
Appendix; Peptic Ulcers; The Incan Civilization;
Renal Agnesia; Pseudocysts of the Pancreas.

COLLINS, Donald Louis, Entomologist, N. Y. State
Sci. Service, N. Y. State Museum, 20 Circle Lane,
Albany, N. Y. ENTOMOLOGY.

COLLINS, George William, Chemist, Amer. Med.
Assn., 535 N. Dearborn St., Chicago, Ill. MEDI-
CAL SCIENCES.

COLLINS, Henry B., Jr., Sr. Ethnologist, Bureau
Amer. Ethnology, Smithsonian Inst., 2557 36th St.,
N. W., Washington, D. C. ANTHROPOLOGY.

COLLINS, Marcus Whitford, Prof. of Sociol., Univ.
of Ga., Atlanta, Div., Human Relations Specialist
and Lectr., Collins, Ga.
b. Marion, S. C., Mar.
17, 1904. s. Murphy
Calhoun and Sally La-
vicia (Capps) C. Edn.:
A.B., Univ. of Ala.,
1929; M.A., Geo. Wash.
Univ., 1937; Post-Grad.
Work, Johns Hopkins
Univ., 1939; A.M., Har-
vard Univ., 1943; Ph.D.,
Harvard Univ., 1943.
Exp.: Metropolitan Dir.
of the Natl. Conf. of
Christians and Jews;
Sociol. Consultant for
Mayor's Com. on Unity
in N. Y.; Community
Serv. Spec. for the Fed.
Coun. of the Churches
of Christ in Amer.;

Chmn. and Full Prof., Dept. of Sociol., Pa. Coll. for

Women; Full Prof. and Lectr. in Grad. Schl., St.
Louis Univ.; Assoc. Prof. of Sociol., Fla. State
Univ.; Chmn., Dept. of Sociol., Dakota Wesleyan,
Prof. of Sociol., John B. Stetson Univ., DeLand,
Fla.; Acting Chmn., Dept. of Sociol., Univ. of New
Mexico, Albuquerque, New Mexico; Ednl. Spec., U.
S. Dept. of State, Service in Europe; Lectr., Heidel-
berg Univ., Germany; Visiting Prof., Johns Hopkins
Univ., Baltimore, Md.; Prof. of Sociol., Univ. of
Ga., Atlanta, Ga. Hon. Pos.: Hon. Mem., Natl. of
Pi Gamma Mu, Geo. Wash. Univ.; Hon. Mem.,
Omicron Delta Kappa, Rollins Coll. Mem.: Amer.
Sociol. Soc.; Sigma Delta Pi; Alpha Psi Omega;
Alpha Phi Omega; Fellow, A.A.A.S.; Kappa Delta
Phi; Kiwanis; Elks; Alpha Phi Gamma, Hon.
Journalistic Fraternity; Amer. Acad. of Political
and Soc. Sci.; Mason; Amer. Assn. Univ. Prof.; Chi
Phi; Phi Alpha Delta; Kappa Phi Kappa; Pi Kappa
Delta; Sigma Tau Delta; Tau Kappa Alpha; Phi
Phi Inter-Frat.; Pi Gamma Mu; Alpha Delta;
Blue Key; Delta Sigma Rho; Phi Alpha
Theta; Eta Sigma Phi. Author: Footsteps in
Democracy; Facing Toward the Future in Race Re-
lations; Life, Labor and Sorrow—A Study of the
Caste System in the Santee-Cooper Project Area of
S. C.; Race, Caste, and Mobility—A Study of the
Negro in Santee-Cooper Area of S. C.; Evidences
of Influences Which Have Served as Retarding
Forces in the Process of Disintegration in a Cumu-
lative Community. Ph.D. Dissertation: The Com-
munity Structure of the Santee-Cooper Area: An
Inquiry into the Social Organization of a Southern
Community. Travel: N. Amer.; Mexico; Canada;
Iceland; British Isles; Luxembourg; Holland; Bel-
gium; Germany; Austria. Gen. Interest: Winner,
Bowdoin Prize at Harvard; Winner, Fla. Acad. of
Sci. Award, 1948. Listed in: Who's Who in Amer.;
Who's Who in the South and Southwest; Directory
of Amer. Scholars; Who Knows—and What.

COLLINS, John Robinett, 146 Pinewood Ave.,
Toronto, Ont., Can. ASTRONOMY.

COLLINS, Oliver Charles, Asst. Prof. of Astron.,
Univ. of Nebr., Lincoln, Nebr. CELESTIAL NAVI-
GATION.

COLLINS, Robert Frank, Assoc. Prof. of Geol.,
Smith Coll., Northampton, Mass. AREAL GEOL-
OGY.

COLLINS, William Dennis, retired, U. S. Geol.
Survey, 1924 Belmont Rd., N. W., Washington, D.
C. WATER CHEMISTRY.

COLLINS, William Leighton, Prof. of Theoretical
and Applied Mechanics, Univ. of Ill., Urbana, Ill.



PROPERTIES OF MA-
TERIALS, THEIR BE-
HAVIOR UNDER
LOAD. b. Highland,
Ill., Jan. 8, 1906. s.
William Alvin and Clara
Lucy (Lauener) C.
Edn.: B.S., Univ. of Ill.,
1928; M.S. ibid., 1931.
m. Anita Blanche Wood,
Feb. 3, 1938. c.: Kath-
ryn Janet; William
Wood. Exp.: Structural
Draftsman, Holabird and
Root, Architects, Chi-
cago, Ill., 1928-29;
Asst. Instr., Asst. Prof.,
Assoc. Prof. and Prof.,
Dept. of Theoretical and
Applied Mech., Univ. of
Ill., 1929—. Hon. Pos.:

Pres., Bd. of Dir., Champaign Co. Community
Chest; Pres., Bd. of Dir., Council of Social Agencies,
Champaign Co.; Natl. Pres., Gamma Alpha Grad.
Scientific Fraternity; etc. Mem.: Sigma Xi; Alpha
Sigma Phi; Gamma Alpha; Chi Epsilon; Scabbard
and Blade; Rotary Internatl. Author: Resistance of
Materials Lab. Manual, with J. O. Draffin, 1948;
Statics and Strength of Materials, with J. O.
Draffin, 1950. Contrb. to: Proc. Amer. Soc. for
Testing Materials; Mech. Engrng.; Foundry. War
Record: U. S. Army, 1942-45. Special Int.: Me-
chanical Properties of Constructional Materials and
the Behavior of Load Resisting Members under
Various Conditions of Loading, Time, Temperature,
State of Stress and Surrounding Medium.

COLLIP, James Bertram, Dir., Rsch. Inst. Endocrinol., McGill Univ., Montreal, Que., Can. **ENDOCRINOLOGY.**

COLVERT, William White, Assoc. Prof. of Physics, Ill. Inst. of Tech., 330 Federal St., Chicago, Ill. **PHYSICS.**

COLWELL, Charlotte Anne, Chf. Bacteriologist, Rsch. Service, Veterans Admin., Asst. Prof., Dept. of Biochem., Northwestern Univ. Med. Schl., Chicago, Ill. **BACTERIOLOGY.** b. Chicago, Ill., June 9, 1901. d. Lewis W. and Grace (Stryker) C. Edn.: A.B., DePauw Univ., 1923; M.S., Northwestern Univ. Med. Schl., 1933; Ph.D., *ibid.*, 1936. Exp.: Asst. in Rsch. Bacteriol., Northwestern Univ. Med. Schl., Chicago, Ill., 1933-36; Instr., Dept. of Rsch. Bacteriol., *ibid.*, 1936-42; Instr., Dept. of Bacteriol., *ibid.*, 1942-43; Rsch. Bacteriologist, Velsicol Corp., Chicago, Ill., 1943-48; Chf. Bacteriologist, Rsch. Div., V. A. Hosp., Hines, Ill., 1948—; Asst. Prof., Dept. Biochem., Northwestern Univ. Med. Schl., Chicago, Ill., 1948—. Mem.: Sigma Xi; Phi Beta Kappa; Soc. Amer. Bacteriologists; Soc. Ill. Bacteriologists; A.A.A.S.; Alpha Chi Omega. Contr. to: Jour. Lab. and Clinical Med.; Jour. A.M.A.; Proc. Soc. Exptl. Biol. and Med.; etc. Special Int.: Immunity; Tuberculosis; Bacterial Growth Requirements.

COLWELL, Robert Cameron, Hd., Dept. of Physics, W. Va. Univ., Morgantown, W. Va. **PHYSICS.**

COMAR, Cyril Lewis, Lab. Dir. and Rsch. Coordinator, Univ. of Tenn., Atomic Energy Comm., Agri. Rsch. Program, P. O. Box 142, Oak Ridge, Tenn. **BIOPHYSICS AND BIOCHEMISTRY.** b. England, March 28, 1914. Edn.: B.S., Univ. of Calif., 1936; Ph.D., Purdue Univ., 1938-40. m. Mildred Cahsin, August 7, 1939. c.: Anne Patricia; Thomas. Exp.: Grad. Asst. in Dept. of Food Tech., Univ. of Calif., Berkeley, 1937-38; Purdue Rsch. Foundation Fellow in Agri. Biochem., Purdue Univ., 1938-40; Ph.D. in Biochem., Purdue Univ., 1941; Rsch. Asst., Mich. State Coll., 1941-43; Biochem., Univ. of Fla. Agri. Exp. Sta., 1943-48; Lab. Dir. and Rsch. Coordinator, U.T.-A.E.C. Agri. Rsch. Program, Oak Ridge, 1948—; Consultant to Special Trng. Div. and Med. Div. of the Oak Ridge Inst. of Nuclear Studies, 1948—. Mem.: Soc. of Exp. Biol. and Med.; Amer. Chem. Soc.; A.A.A.S.; Phi Lambda Upsilon; Sigma Xi; Sigma Epsilon. Contr. to: Sci.; Nucleonics; Jour. of Biol. Chem. Ph.D. Dissertation: The Absorption Spectrophotometry of the Chlorophyll Components; The Chloroplast Substance of Spinach Leaves. Special Int.: Spectrophotometry of the Plant Pigments; Use of Radioisotopes in Minor Element Nutrition; Skeletal Metabolism Studies; Application of the Recent Physiochem. Tech. to Problems of Agril. Importance.

COMBS, Willes Barnes, Prof. of Dairy Husbandry, Univ. of Minn., 1501 Chelmsford St., St. Paul, Minn. **DAIRY TECHNOLOGY.**

COMER, Joseph John, Rsch. Assoc., Mineral Constitution Lab., Mineral Sci. Bldg., Pa. State Coll., State College, Pa. **CHEMICAL MICROSCOPY AND ELECTRON MICROSCOPY.** b. Brooklyn, N. Y., Dec. 8, 1920. s. Patrick A. and Margaret (Gillie) C. Edn.: B.S., Pa. State Coll., 1944; M.S., *ibid.*, 1946. m. Ann Pfahler, Aug. 1, 1947. Exp.: Rsch. Chemist, Crystal Section, Naval Rsch. Lab., Wash., D. C., 1944-45; Microscopist, Central Rsch. Lab., General Aniline and Film Corp., Easton, Pa., 1946-52; Rsch. Assoc., Schl. of Mineral Industries, Pa. State Coll., State Coll., Pa., 1952—. Mem.: Amer. Chem. Soc.; A.A.A.S.; Electron Microscope Soc. Amer. Contr. to: Jour. Amer. Chem. Soc.; Analytical Chem. Special Int.: Electron Microscopy—Study of Pigments, Photographic Emulsions—Application to Studies of Minerals and Metals.

COMFORT, Edwin Gustavus Hunter, Instr. in Math., Ill. Inst. of Tech., Chicago, Ill. **MATHEMATICS.**

COMFORT, Mandred Whitset, Assoc. in Med., The Mayo Foundation, Prof. of Med., Mayo Foundation Grad. Schl., 102-110 Second Ave., S. W., Rochester, Minn. **MEDICINE—INTERNIST, GASTRO-EN-**

TEROLOGIST. b. Hillsboro, Tex., June 10, 1895. s. Edgar Whitset and Eulah (Stroud) C. Edn.: A.B., Austin Coll., 1916; M.D., Univ. of Tex., 1921; M.S., Univ. of Minn., 1926. m. Aurelia Jones, Mar. 14, 1931. Exp.: Adjunct Prof. of Anatomy, Univ. of Tex., 1921-23; Entered Mayo Foundation as a Fellow in Neurol., 1923; Appointed Assoc. in Med., Mayo Clinic, 1928; Instr. in Med., Mayo Foundation, 1928; Asst. Prof. of Med., *ibid.*, 1934; Assoc. Prof. of Med., *ibid.*, 1941; Prof. of Med., *ibid.*, 1946—; Assoc. in Med., Mayo Clinic, 1928—; Consulting Physician, St. Mary's Hosp., 1928—. Mem.: A.M.A.; Amer. Coll. of Physicians; Minn. State Med. Assn.; Central Soc. for Clinical Rsch.; Alpha Kappa Kappa; Alpha Omega Alpha; Sigma Xi.

COMISH, Newel Howland, Prof. of Business Admin., Univ. of Ore., Eugene, Ore. **BUSINESS AND ECONOMICS.**

COMMINS, William Dollard, Assoc. Prof. of Psychol., Catholic Univ. of Amer., 1928 Varnum St., N. E., Washington, D. C. **PSYCHOLOGY.**

COMMONER, Barry, Washington Univ., St. Louis, Mo. **PLANT PHYSIOLOGY—VIRUS RESEARCH.**

COMMONS, Charles H., Jr., c/o Illinois Electrical Porcelain Co., Macomb, Ill. **CERAMICS.**

COMPERE, Edgar Lattimore, Sr. Chemist, Chem. Div., Oak Ridge Natl. Lab., Oak Ridge, Tenn.



PHYSICAL CHEMISTRY. b. Hamburg, Ark., Jan. 23, 1917. s. Ebenezer Lattimore and Emma Lucille (Hawkins) C. Edn.: B.A., Ouachita Coll., 1938; M.S., La. State Univ., 1940; Ph.D., *ibid.*, 1943. m. Maria Luz Perez, Aug. 16, 1945. c.: Alicia Lucille; Margaret Sue. Exp.: Chem., Esso Standard Oil Co., La. Div., Baton Rouge, La., 1942-46; Asst. Prof. of Chem., Rouge, La., 1946-51; Assoc. Prof. of Chem., *ibid.*, 1951; Sr. Chemist, Oak Ridge Natl. Lab., Oak Ridge, Tenn., 19—.

51—. Mem.: Sigma Xi; Phi Kappa Phi; Phi Lambda Upsilon; Amer. Chem. Soc.; Amer. Assn. Adv. Sci.; Alpha Chi Sigma. Contr. to: Jour. Amer. Chem. Soc.; Industrial and Engng. Chem. Special Int.: Gas and Solution Reaction Kinetics; Solvent Extraction; Distillation; High Vacuum; High Pressure; Corrosion.

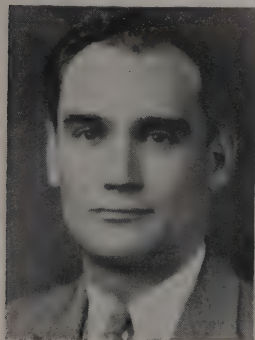
COMPTON, Arthur Holly, Chancellor, Wash. Univ., St. Louis, Mo. **PHYSICS.** b. Sept. 10, 1892, Wooster, Ohio.

s. Elias and Otelia Catherine (Augspurger) C. Edn.: B.Sc., Coll. of Wooster, 1913; M.A., Princeton Univ., 1914; Ph.D., *ibid.*, 1916. Hon. Degrees: Sc.D., Wooster, 1927, Ohio State, 1929, Yale, 1929. Princeton, 1934, Brown, 1935, Harvard, 1936; Punjab Univ., 1949; Capital Univ., 1949; Aligarh Univ., 1950; LL.D., Baylor, 1951; Lehigh Univ., 1946; Wash. Univ., 1928; Univ. of Calif., 1930; Texas Christian Univ., 1949; Univ. of St. Augustine, 1941; Westminster Coll., 1952; L.H.D., Univ. of Tampa, 1941; Litt.D., Jewish Theological Soc. of America, 1942; Doctorate, Univ. of San Marcos, Lima, 1941; M.A., Oxford, 1934. m. Betty Charity McCloskey, Palestine, Ohio, June 28, 1916. c.: Arthur Alan; John Joseph. Exp.: Asst. in Phys., Princeton Univ., 1914-15; Porter Ogden Jacobus Fellow, *ibid.*, 1915-16; Instr., Univ. of Minn., 1916-17; Rsch. Physicist, Westinghouse Lamp Co., 1917-19; Natl. Rsch. Coun. Fellow, Cambridge Univ., 1919-20; Wayman Crow

Prof. of Phys. and Hd. Dept. of Physics, Wash. Univ., St. Louis, 1920-23; Prof. of Physics, Univ. of Chicago, 1923-29; Charles H. Swift Distinguished Service Prof., 1929-45; Chmn., Department of Physics, Dean of Physical Science, *ibid.*, 1940-45; Chancellor, Washington Univ., St. Louis, 1945-; Hon. Position: Regent, Smithsonian Institute, 1938-; Chmn., Bd. of Trustees, Coll. of Wooster, 1940; Educational Policies Comm. of Natl. Edn. Assn., 1951-; Adv. Bd., John Simon Guggenheim, 1945-; Bd. of Governors, Argonne Natl. Lab., 1945; Advisory Comm. to Manhattan Proj., 1945-46; Pres., Comm. on Higher Edn., 1946-48; Naval Rsch. Adv. Comm., 1946-; Chmn., 1952; Civilian Aide to Sec. of Army, 1952; Comm. on Econ. Development, 1946-; U. S. Natl. Comm. for UNESCO, 1946-50, Vice-Chmn., 1946-47; U. S. Delegate to UNESCO (Paris), 1946, (Mexico), 1947; Chicago Tumor Institute, 1937-49, Vice-Pres., 1937-45; Natl. Conf. Christians and Jews, Protestant Co-Chmn., 1938-47; Board of Directors, 1947-50; Attended Internatl. Sci. Congresses, Como, 1927, Brussels, 1927, Rome, 1931, London, 1934, Venice, 1934, Rio de Janeiro, 1941; Organized Chicago Internatl. Congresses on Cosmic Rays, 1938, 1939; Presby. Bd. of Christian Edn., 1947-50; Comm. on Relationship of Higher Edn. to the Fed. Govt., 1946-47; Bd. of Trustees, Intl. International Edn., 1948; Chmn., Amer. Del., India-Amer. Relations Conf., New Delhi, 1949; Gen. Chmn., World Brotherhood, 1950. Mem.: Natl. Acad. Sci.; Amer. Philosophical Soc., Amer. Physical Soc.; A.A.A.S.; Alpha Phi Omega; Phi Beta Kappa; Sigma Xi; Pi Kappa Pi; Kappa Delta Pi; Gamma Alpha; A.T.O.; Univ. Club; Noon-day Club; St. Louis Country Club; Round Table; Rotary St. Louis; Quadrangle; Univ. Tav., Comrc. Chicago; Cosmos, Wash., D. C. Author: X-ray and Electrons, 1926, 2nd Ed., 1928; Secondary Radiations Produced by X-rays, 1922; X-rays in Theory and Experiment (with S. K. Allison), 1935; Freedom of Man, 1935, 3rd Ed., 1939; On Going to Coll. (Co-author), 1940; Human Meaning of Sci., 1940; The Relig. of a Scientist, 1935; 5th Printing, 1946. War Record: Civilian Assoc., U. S. Sig. Corps, 1917-18; Dir., U. S. Govt. Plutonium Rsch. Project, 1942-45. Gen. Int.: Nobel Prize by Swedish Acad. of Sci., 1927; Rumford Gold Medal of A.A.A.S., 1927; U. S. Medal for Merit, 1946; Gold Medal, Radiological Soc. N. Amer., 1928; Matteucci Gold Medal, Italian Acad. of Arts and Scis., 1933; Hughes Medal of Royal Soc. of London, 1940; Franklin Gold Medal of Franklin Inst., 1940; Annual Award, Jewish Edn. Com., 1943; Wash. Award, Western Soc. of Engrs., 1946; Franklin Medal of Amer. Philosophical Soc., 1946; St. Louis Award, 1946; Officer of the Legion of Honor of French Republic, 1947; Grande Medaille Assn. des Ingenieurs Docteurs de France, 1947; Officier de l'Instr. Publique with palms, 1948. Hobbies: Tennis; Photography; Mus. Listed in: Who's Who in Amer.; A.M.S.; Internatl. Who's Who.

COMPTON, Charles Chalmer, Entomologist, Velsicol Corp., 120 E. Pearson St., Chicago, Ill. ENTOMOLOGY.

COMPTON, Jack, Tech. Dir., Inst. of Textile Tech., Charlottesville, Va. CHEMISTRY; TEXTILES.



B. F. Goodrich, Jr., Akron, Ohio, 1940-44; Group Leader, Rsch. Div., Celanese Cor. of Amer., Rome Ga., 1944-49; Tech. Dir. and Hd., Chem. Div., Inst.

of Textile Tech., Charlottesville, Va., 1949-. Mem.: Amer. Chem. Soc.; Amer. Inst. of Chemists; A.A.A.S.; Sigma Xi; Va. Acad. Sci.; Kiwanis. Contbr. to: Jour. Biol. Chem.; Jour. Amer. Chem. Soc.; Canadian Jour. Rsch.; etc. Special Int.: Carbohydrates; Lignin; Cellulose; Adhesives; Synthetic Rubber and Fibers; Detergency and Soil Preventives for Textiles; Textile Testing and Tech.

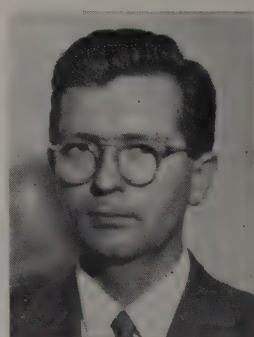
COMPTON, Eli Dee, Dir. of Rsch., Eagle-Ottawa Leather Co., Grand Haven, Mich. LEATHER CHEMISTRY, CHEMICAL ENGINEERING, STATISTICS. b. Wilmington, Ohio, Mar. 16, 1916. s. R. L. and Evalena (Bliss) C. Edn.: Ch.E., Univ. of Cincinnati, 1939; M.S., *ibid.*, 1940; Ph.D., *ibid.*, 1942. m. Rowena Gregory, Mar. 4, 1944. c.: Olivia Bliss. Exp.: Rsch. Assoc., Tanners' Council Lab., Univ. of Cincinnati, 1943; Rsch. Chemist, Monsanto Chem. Co., 1943-46; Group Leader, *ibid.*, 1946-52; Rsch. Dir., Eagle-Ottawa Leather Co., Grand Haven, Mich., 1952-. Mem.: A.A.A.S.; Amer. Chem. Soc.; Amer. Leather Chemists Assn.; Soc. Leather Trades Chemists; Sigma Xi; Phi Lambda Upsilon; Alpha Chi Sigma. Contbr. to: Jour. Amer. Leather Chemists Assn.; TAPPI. Special Int.: Leather; Process Development; Statistics.

COMPTON, Karl Taylor, Chmn. of the Corp., Mass. Inst. of Tech., Cambridge, Mass. PHYSICS. b. Wooster, Ohio, Sept. 14, 1887. s. Elias (dec.), and Otelia (Augsburger) C. (dec). Edn.: Ph.B., Wooster Coll., 1908; Sc.M., *ibid.*, 1909; Ph.D., Princeton, 1912. m. Margaret Hutchinson of Minneapolis, Minn., July 7, 1921. c.: Mary Evelyn; Jean Corrin; Charles Arthur. Exp.: Instr., Wooster, 1909-10; Instr., Reed Coll., 1913-15; Asst. Prof., Princeton, 1915-19; Prof., 1919-30; Rsch. Prof. and Chmn. of Dept., 1929-30; Pres., Mass. Inst. of Tech., 1930-48; Chmn. of Corp., 1948-. Mem.: A.A.A.S.; Amer. Chem. Soc.; Amer. Inst. of N. Y.; Amer. Acad. Arts and Sci.; Amer. Inst. of Elec. Engrs.; Amer. Phil Soc.; Amer. Physical Soc.; Natl. Acad. Sci.; Tau Beta Pi; Sigma Xi; Alpha Tau Omega; Phi Beta Kappa. Ph.D. Dissertation: Influence of the Contact Difference of Potential Between the Plates Emitting and Receiving Electrons Liberated by Ultraviolet Light in Measurement of the Velocities of These Electrons. War Record: Aeronautical Engr. Signal Corps, 1917-19; Mem. Natl. Defense Rsch. Com. of the Office of Scientific Rsch. and Dev., 1940-47; Chf., Office of Field Service, O.S.R.D., 1943-45; Dir., Pacific Br., O.S.R.D. and Mem. of Scientific Intelligence Mission to Japan 1945. Gen. Int.: Rumford Medal; Washington Award; Marcellus Hartley Medal; CBE; Commander of the Royal Norwegian Order of St. Olav; Lamme Medal; Hoover Medal; French Legion of Honor. Listed in: Who's Who in Amer.; Who's Who in New England; Who's Who in Mass.; A.M.S.

COMPTON, Wilson Martindale, Pres., State Coll. of Wash., Pullman, Wash.

COMROE, Julius A., Jr., Prof. of Physiol. and Pharmacol., Grad. Schl. Med., Univ. of Pa., Philadelphia, Pa. PHYSIOLOGY.

CONAN, Neal Joseph, Jr., Chf. of Internal Med., Amer. Univ. of Beirut, Beirut, Lebanon. INTERNAL MEDICINE.



b. Aug. 7, 1918, Syracuse, N. Y. s. Neal J. (M.D.) and Ellen Arline (Mooney) C. Edn.: A.B., magna cum laude, Holy Cross, 1940; M.D., Columbia Univ., Coll. of Phys. and Surg., 1943; Med. Sc.D., *ibid.*, 1949; D.N.B., 1944; Certified by Amer. Bd. of Internal Med., Apr., 1951. m. Theodora Blake of Jersey City, N. J., 1942. d. Frank and Evelyn Blake. c.: Arline; Thomas; Lucy; Neal III. Exp.: Intern and Asst. Res. in Med., Presby. Hosp., N. Y. C., 1944, 1945-47; Research Fellow, Office of Scientific Re-

search and Development, Malaria Research, N. Y. Univ., 1944-45; Instr., Medicine, N. Y. Univ. Coll. of Med., 1947-49; Chmn. Dept. Internal Med., Amer. Univ. of Beirut, Lebanon, 1949—. Mem.: Alpha Sigma Nu; Alpha Omega Alpha; Sigma Xi; Harvey Soc.; N. Y. Acad. of Sci.; Internatl. Soc. Internal Med.; Royal Soc. of Trop. Med.; Amer. Soc. Trop. Med.; A.A.A.S.; St. George Club, Beirut. Contrb. to: Med. Jour. Med. Sc.D. Dissertation: Hepatic Dysfunction During Various Febrile Conditions. War Record: 1st Lt., M.C., A.U.S. Assigned to O.S.R.D. as indicated above—now retired. Travel: N. Amer.; Europe; Arabia; Italy; Greece; Turkey; Syria; Iraq; Lebanon; Jordan; Egypt; Kuwait; England; France; Belgium; Holland; Germany. Hobbies: Swimming; Golf. Listed in: A.M.S.; W. W. in Egypt and Middle East. Special Int.: Physiol. of the Liver and Kidney; Chemotherapy of Malaria and Amebiasis; Biochem. Studies in Neoplastic and Related Diseases; Endemic Diseases of the Middle East.

COMSTOCK, R. E., Inst. of Statistics, N. C. State Coll., Raleigh, N. C. STATISTICS.

CONANT, George Herbert, Proj. Triarch Botanical Products, 11 Quincy St., Cambridge, Mass. CHEMISTRY.

CONANT, James Bryant, Pres. Emer., Harvard Univ., Cambridge, Mass. CHEMISTRY. b. Dorchester, Mass.,



Mar. 26, 1893. s. James Scott and Jennett O. (Bryant) C. m. Grace Thayer Richards in 1921. c.: James R. Theodore R. Edn.: A.B., Harvard, 1913; Ph.D., 1916. Hon. Deg.: LL.D., Univ. of Chicago, 1933; N. Y. Univ., 1934; Princeton Univ., 1934; Yale, 1934; Amherst, 1935; Coll. of Charles, 1935; Coll. of William and Mary, 1936; Williams, 1938; Dartmouth, 1938; Tulane, 1939; Univ. of Calif., 1940; Univ. of Pa., 1940; Bristol Univ. (England), Queens Univ., 1941;

Univ. of N. C., 1945; Univ. of Toronto, 1945; Northeastern Univ., 1948; Univ. of Mass., 1948; Univ. of Mich., 1949; Yeshiva Univ., 1949; Wesleyan Univ., 1949; Swarthmore Coll., 1950; Jewish Theological Sem., 1951; Dr. of Univ. of Algiers, 1944; L.H.D., Boston Univ., 1934; Sc.D., Columbia Univ., 1934; Stevens Inst., 1934; Tufts Coll., 1934; Univ. of Wis., 1935; Cambridge Univ. (England) 1941; Sc.D., McGill Univ., 1945; D.C.L., Oxford Univ. (Eng.), 1946; Colgate, 1952. LL.D. Baylor Univ., 1947; Univ. of Ill., 1947; Univ. of State of N.Y., 1947; Litt.D., Hamilton Coll., 1947; D.Sc., Univ. of London, 1946; Univ. of Lyons (France), 1947; Canterbury Univ. Coll. (New Zealand), 1951; Univ. of Melbourne (Australia) 1951. Exp.: Instr., Chem., Harvard, 1916-17; Asst. Prof., 1919-25; Assoc. Prof., 1925-27; Prof., 1927-29; Sheldon Emery Prof. of Organic Chemistry, 1929-33; Pres. 1933-53; Chmn., Chemistry Dept., 1931-33. Mem.: Natl. Acad. Scis.; Amer. Acad. Arts and Scis.; Amer. Chem. Soc.; Phi Beta Kappa; Sigma Xi; Alpha Chi Sigma; Honorary Fellow, Emmanuel Coll., Cambridge (England), Elected, 1933; Royal Soc., England, 1941; Royal Soc. of Edinburgh, 1941; Massachusetts Historical Society; A.A.A.S.; N.A.S.; Amer. Philos. Soc.; Chmn., Natl. Defense Rsch. Comm., 1940-45; Educational Policies Comm.; National Science Foundation Board; Comm. on the Present Danger. Author: Our Fighting Faith; Organic Chem., Practical Chem. (with N. H. Black); The Chem. of Organic Compounds (with Blatt), 1947; On Understanding Sci., 1947; Edn. in a Divided World, 1948; Sci. and Common Sense, 1951; Modern Sci. and Modern Man, 1952; Edn. and Liberty, 1953. Ed.-in-Chief: "Organic Syntheses," Vols. II and IX.

CONANT, N. F. Duke Univ., Durham, N. C. MYCOLOGY.

CONARD, Henry Shoemaker, Prof. Emer. of Botany, Grinnell Coll., 1310 Elm St., Grinnell, Iowa. BOTANY.

CONBACH, Lee J., Univ. of Ill., Urbana, Ill. PSYCHOLOGY.

CONDIT, Ira Judson, Assoc. Prof. of Subtropical Horticulture, Univ. of Calif. Citrus Expt. Station, Riverside, Calif. HORTICULTURE.

CONDON, Francis Edward, Asst. Prof., City Coll. of N. Y., 471 Larch Ave., Bogota, N. J. ORGANIC CHEMISTRY. b. Abington, Mass., Oct. 12, 1919. s. Morris F. and Eva I. (Cole) C. Edn.: A.B., Harvard Coll., 1941; A.M., Harvard Univ., 1943; Ph.D., ibid., 1944. m. Mary Anna Medvetz, Jan. 9, 1943. c.: Francis; Mary; John; Arthur. Exp.: Tchng. Fellow in Chem., Harvard Coll., 1942-44; Rsch. Chemist, Phillips Petroleum Co., 1944-52; Asst. Prof., C. C. N. Y., N. Y. C., 1952—. Mem.: Amer. Chem. Soc.; A.A.A.S. Contrb. to: Jour. Amer. Chem. Soc. Special Int.: Hydrocarbons; Reaction Mechanisms.

CONDON, Edward Uhler, Dir. of Rsch. and Development, Corning Glass Works, Corning, N. Y. PHYSICS. b. Alamogordo, N. Mex., Mar. 2, 1902. s. William Edward and Caroline Barr (Uhler) C. Edn.: Ph.D., Univ. of Calif., 1926. Hon. Deg.: D.Sc., Univ. of Delhi, India, 1950; D.Sc., N. Mex. Schl. of Mines, 1950; D.Sc., Alfred Univ., 1952; D.Sc., American Univ., 1952. m. Emilie Honzik, Nov. 9, 1922. c.: Caroline Marie; Paul Edward; Joseph Henry. Exp.: Asst. Prof. of Phys., Princeton Univ., 1928-29; Prof. of Theoretical Phys., Univ. of Minn., 1929-30; Assoc. Prof. of Phys., Princeton Univ., 1930-37; Assoc. Dir. of Rsch., Westinghouse Electric Corp., E. Pittsburgh, Pa., 1937-45; Dir., Natl. Bureau of Standards, U. S. Dept. Commerce, Washington, D. C., 1945-51; Dir. of Rsch. and Development, Corning Glass Works, Corning, N. Y., 1951—. Hon. Pos.: Pres., Amer. Phys. Soc., 1946; Pres., A.A.A.S., 1953; Scientific Adviser, Special Senate Com. on Atomic Energy, 79th Congress, 1946. Mem.: Amer. Phys. Soc.; Amer. Acad. Arts and Sci.; Amer. Philos. Soc.; Natl. Acad. of Sci.; Amer. Ceramic Soc.; Inst. of Radio Engrs.; Royal Soc. of Arts (London); Royal Swedish Acad. Engrng. Sci.; Societe Francaise de Physique; A.A.P.T.; Phi Beta Kappa; Sigma Xi; Sigma Pi Sigma; Cosmos Club. Co-author: Quantum Mechanics, 1929; The Theory of Atomic Spectra, 1935. Contrb. to: Phys. Rev. Special Int.: Industrial Phys.; Quantum Mechanics of Atoms, Molecules and Nuclei.

CONDR, G. E., Univ. of Nebr., Lincoln, Nebr. GEOLOGY, GEOGRAPHY.

CONGER, Paul S., Chf. Section Diatoms and Assoc. Curator, U. S. Natl. Museum, Smithsonian Institution, Washington, D. C. DIATOMS.

CONKLIN, Edwin G., Princeton Univ., Princeton, N. J. CYTOLOGY.

CONKLIN, Ruth E., Prof. of Physiol., Vassar Coll., Poughkeepsie, N. Y. PHYSIOLOGY.

CONNOLLY, Joel Irving, Pub. Health Engr., Special Technical and Economic Mission to the Philippines,



U. S. Govt., Foreign Operations Admin., A.P.O. 928, Postmaster, San Francisco, Calif. Permanent Address: 5863 N. Kilbourn Ave., Chicago 30, Ill. PUBLIC HEALTH. b. Boston, Mass., Feb. 14, 1896. s. Fred William and Ellen Louise (Meade) C. Edn.: B.S., Mass. Inst. of Tech., 1916; M.S., ibid., 1917; M.S., Harvard Univ., 1917. m. Virginia Gordon, Jan. 16, 1919. c.: Ruth Virginia; Joel Irving, Jr. Exp.: Asst. Engr., Mass. State Health Dept., 1917; Asst. Sanitary Engr., and Assoc., U. S. Public Health Service, Washington, D. C., 1918, 1920-25; Chief Sanitary Engr., Near East Relief, 1919; Chf., Bur. of Public Health Engrng., Chicago Health Dept., Chicago,

Ill., 1925-36; Asst. to the Pres., *ibid.*, 1937-52; Public Health Engr., Foreign Operations Admin. Special Technical and Economic Mission to the Philippines, 1952—. Mem.: Amer. Public Health Assn.; Amer. Water Works Assn.; Conf. of Govtl. Indus. Hygienists; Middle States Public Health Assn.; Ill. Public Health Assn. Contrb. to: Water Works Engrng.; Amer. Jour. of Public Health; Tech. Rev.; Armour Engr. and Alumnus; Municipal Sanitation; U. S. Public Health Service Reports. Special Int.: Public Health Admin.; Water Supplies; Housing; Indus. Sanitation; Food and Dairy Sanitation; Ventilation; Lighting; Smoke Control; Insect Control; Rodent Control; Vital Statistics; Epidemiol. and Mountaineering Techniques.

CONN, Harold Joel, Soil Bacteriologist, N. Y. Agri. Expt. Station, P. O. Box 269, Geneva, N. Y. BIOLOGICAL STAINS.

CONNER, Herbert Wesley, Chf. Chemist, Rsch. Dept., Wm. Wrigley, Jr. Co., 410 N. Michigan Ave., Chicago, Ill. BIOCHEMISTRY.

CONNOR, R., 5000 Richmond St., Philadelphia, Pa. CHEMISTRY.

CONNORS, Charles Henry, Prof. of Ornamental Horticulture, Rutgers Univ., 115 N. Sixth Ave., Highland Park, N. J. ORNAMENTAL HORTICULTURE.

CONOVER, Courtney, retired, 729 Dartmouth Ave., Silver Spring, Md. CHEMISTRY.

CONRAD, Albert G., Dunham Lab., Yale Univ., New Haven, Conn. ELECTRICAL ENGINEERING.

CONRAD, Carl Marcus, Chemist, Chg. Colloidal Properties Section, Cotton Fiber Rsch. Div., Southern Regional Rsch. Lab., U. S. D. A., 2100 Robert E. Lee Blvd., New Orleans, La. CHEMISTRY.

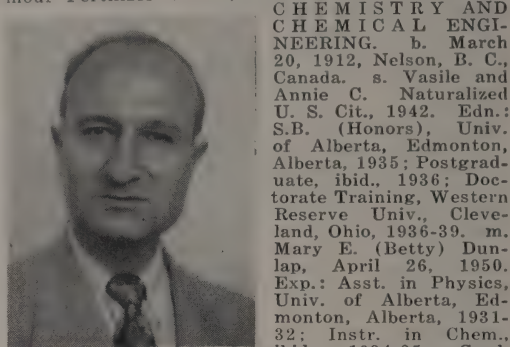
CONRAD, John Peter, Prof. of Agry. and Agron. in the Expt. Sta., 109 Hunt Hall, Univ. of Calif., Davis, Calif. SOIL AND PLANT INTERRELATIONS. b. Rialto, Calif., October 29, 1893. s. Francis and Sarah (Adams) C. Edn.: B.S., Univ. of Calif., 1917; Ph.D., *ibid.*, 1933. m. Marion Louise Andrews of Norwalk, Ohio, June 22, 1921. d. Americus and Edna Andrews. c.: John P., Jr. Exp.: Tehr. of Agri., Marysville H. S. Calif., 1920-21; Asst. and Assoc. in Agry., Univ. of Calif., 1921-27; Asst. Agron. in the Expt. Sta., 1927-31; Assoc. *ibid.*, 1931-43; Lectr. in Agry., 1935-39; Assoc. Prof. of Agry., 1939-43; Prof. of Agry. and Agron. in the Expt. Sta., Univ. of Calif., 1943. Hon. Pos.: Hon. Fellow, Ohio State Univ. and Univ. of Minn., 1934. Mem.: Amer. Soc. of Agry.; Soil Sci. Soc. of Amer.; Western Soc. of Soil Sci.; Amer. Soc. of Plant Physiol.; Amer. Chem. Soc.; Alpha Gamma Rho; Alpha Zeta; Sigma Xi; Phi Beta Kappa. Contrb. to: Soil Sci.; Plant Physiol.; Jour. of Agri. Rsch.; Jour. of Amer. Soc. of Agry.; Soil Sci. Soc. of Amer. Proc. Ph.D. Dissertation: The Relation of Colloid Dispersion in Soils to Chem. Changes Induced by Biological Transformations of Organic Materials. Travel: Can. Gen. Int.: Elected Faculty Rsch. Lec. at Davis for 1948. The lecture was given Mar. 16, 1948 entitled "Crop Residues and Humus in Relation to The Supply of Plant Nutrients." Listed in: A.M.S.; Who Knows What; W. W. on the Pacific Coast. Special Int.: Enzymes in Soil and Plant Interrelations; Effect of Crops and Crop Residues Upon the Soil and Upon Following Crops.

CONROY, Charles Clifford, Prof. of History, Loyola Univ. of Los Angeles, Los Angeles, Calif. HISTORY.

CONROY, Peter Joseph, Prof. of Pharmaceutical Chem., Fordham Univ., N. Y., N. Y. CHEMISTRY.

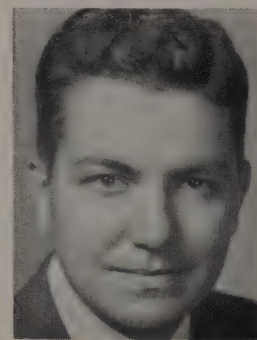
CONSTANT, Frank Woodbridge, Prof. and Hd., Dept. of Physics, Trinity Coll., Hartford, Conn. PHYSICS.

CONSTANT, Clinton, Tech. Asst. Mfg. Dept., Armour Fertilizer Works, Bartow, Fla. FLUORIDE



CHEMISTRY AND CHEMICAL ENGINEERING. b. March 20, 1912, Nelson, B. C., Canada. s. Vasile and Annie C. Naturalized U. S. Cit., 1942. Edn.: S.B. (Honors), Univ. of Alberta, Edmonton, Alberta, 1935; Postgraduate *ibid.*, 1936; Doctorate Training, Western Reserve Univ., Cleveland, Ohio, 1936-39. m. Mary E. (Betty) Dunlap, April 26, 1950. Exp.: Asst. in Physics, Univ. of Alberta, Edmonton, Alberta, 1931-32; Instr. in Chem., *ibid.*, 1934-35; Grad. Instr. Chem., *ibid.*, 1935-36; Devlpmt. Engr., Harshaw Chemical Co., Cleveland, Ohio, 1936-38; Acid Plant, Foreman and Engr., *ibid.*, 1938-43; Acid Plant Supt. and Engr., Nyotex Chemicals Inc., Houston, Texas, 1943-47; Chf. Devlpmt. Engr., *ibid.*, 1947-48; Sr. Chem. Engr., Semi-Works Dept., Harshaw Chemical Co., Cleveland, Ohio, 1948-50; Mgr. of Engrng., Ferro Chemical Corp., Bedford, Ohio, 1950-52; Tech. Asst. Mfg. Dept., Armour Fertilizer Works, Bartow, Florida, 1952—. Mem.: Amer. Inst. Chem. Engrs.; Amer. Chem. Soc.; Amer. Rocket Soc.; Amer. Assn. Adv. of Sci.; Amer. Astron. Soc.; Astronom. Soc. of the Pacific; Royal Astronom. Soc. of Canada. Contrb. to: Canadian Jour. Rsch.; Private Communications. Sci. Fiction Writer: Author, War of the Universe; The Martian Menace; etc. Achievement: Designed and Engineered Fully Automatic Continuous "Push Button" Napalm Manufacturing Plant of Ferro Corp. at Bedford, Ohio, in 1951. Specialty: Anhydrous HF, Its Chemistry, Research and Production, Including Fluorine Comps. Special Int.: Engrng. Design and Automatic Control; Astronomy (Surface Conditions of the Planets).

CONWAY, H. McKinley, Jr., Dir., Southern Assn. of Sci. and Indus., 5009 Peachtree Rd., Atlanta, Ga. ENGINEERING. b. Hackleburg, Ala., Nov. 1, 1920. s. H. M. and Eva (Kelly) C. Edn.: B.S., Ga. Inst. of Tech., 1940; B.A.E., *ibid.*, 1941. m. Rebecca Kellam, Sept. 17, 1942. c.: Linda; Laura. Exp.: Asst. to Dir., Rsch. Positions in Labs., Natl. Adv. Comm. for Aero., Va., Ohio and Calif., 1941-47; Officer in Chg. of Wind Tunnel Tests of Power Plants, Jets, NAS, U. S. Navy, Moffett Field, Calif., 1944-46; Dir., Southeastern Rsch. Inst., 1947-49; Dir., Southern Assn. of



Sci. and Indus., Atlanta, Ga., 1949—. Hon. Pos.: Secy., N.A.C.A. Comm. on Aircraft Materials; Lubrication; Heat Exchangers, 1942-44. Mem.: Inst. of Aero. Sci.; A.A.A.S., Fellow; Ala. Acad. of Sci.; Ga. Acad. of Sci.; N. C. Acad. of Sci.; Va. Acad. of Sci.; Sigma Phi Epsilon; Various Undergraduate Honoraries. Author: Principles of High Speed Flight, 1947; Southern Indus. Dir., 1952. Contrb. to: Editor, Jour. of Southern Rsch., 1949—. Special Int.: Scientific and Indus. Activity in the Southern States; Aircraft Propulsion.

CONWELL, George MacFeely, Chmn., Dept. of Math., St. Paul's Schl., Concord, N. H. MATHEMATICS.

CONWELL, Hermon Henry, Dean, Coll. and Prof. of Math., Beloit Coll., P. O. Box 500, Beloit, Wis. MATHEMATICS.

CONWELL, Esther Marly, Instr., Phys. Dept., Brooklyn Coll., Brooklyn, N. Y. **PHYSICS.**



May 23, 1922, New York City. d. Charles and Ida (Korn) C. Edn.: B.A., Brooklyn Coll., 1942; M.S., Univ. of Rochester, 1945; Ph.D., Univ. of Chicago, 1948. m. Abraham Rothberg of Brooklyn, N. Y., 1945. s. Louis and Lottie Rothberg. Exp.: Teaching Asst. Univ. of Rochester 1942-43; Teaching Asst. Univ. of Chicago, 1943-45; Instr., Brooklyn Coll., 1946—. (On leave Bell Lab., 1951-52; Sylvania Elec. Co., Bayside, L. I., N. Y., 1952—). Mem.: Amer.

Assn. Univ. Prof.; A.A.A.S.; Pi Mu Epsilon; Amer. Civil Liberties Union; Amer. Physical Soc. Contr. to: Phys. Review. Ph.D. Dissertation: The Quantum Theory of Negative Ions. Travel: U. S. Hobbies: Ballet; Mod. Dance. Listed in: A.M.S. Special Int.: Atomic and Solid State Physics.

COOK, Charles Atkinson, Rsch. Dir. of Labs., E. L. Patch Co., 38 Montvale Ave., Boston, Mass. **MEDICAL BIOCHEMISTRY.**

COOK, Donald Hunter, Prof. of Chem., Univ. of Miami, Coral Gables, Fla. **CHEMISTRY.**

COOK, Edgar Marion, Dean of Men and Prof. of Psychol. and Edn., Carson-Newman Coll., Jefferson City, Tenn. **PSYCHOLOGY.**

COOK, Ellsworth B(arrett), Lt. Commander, Med. Ser. Corps, U. S. Navy, Div. of Sci. Allied to Med.



3 Pook's Hill Rd., Bethesda, Md. **MEDICAL SCIENCE AND EXPERIMENTAL PSYCHOLOGY.** b. Jan. 29, 1916, Springfield, Mass. s. Clifford E. and Alethen (Barrett) C. Edn.: B.S., Springfield Coll., 1938; Duke Univ., 1938-39; Clark Univ., 1939-41; Harvard Med. Schl., Summer, 1940; Columbia Univ., summer, 1946; Ph.D. in Medical Sci., Tufts Med. Schl., Boston, 1951. m. Nan Leightizer of Charlottetown, P. E. I.

Can., Sept. 27, 1941. d. Mr. and Mrs. James Leightizer. Exp.: Duke Univ. Graduate Asst. in Zoology, 1938-39; Graduate Asst. in Physiology, Research on Anticonvulsant Drugs, Clark Univ., 1939-41; Research Assoc., Fatigue Lab., Harvard Univ., 1941-45; Pilot Selection Studies for CAA, Rsch., 1941-42; Psycho-Physical Aspect of Stereoscopic Vision, Design of Optical Fire Control Instruments, 1942-45; Med. Rsch. Lab., Submarine Base, New London, Conn., 1945-49; Hd. Visual Screening and Statistics Facility; Tufts Med. Schl., Dept. Pharmacol., 1949-51; Spec. 6 Mo. Assignment to Far East as Member of the Armed Forces Cold Injury Team, 1951-52; Naval Med. Rsch. Inst., Bethesda, Md., 1952—; Consulting Biometrician, Army Med. Assn. Lab., Ft. Knox, Ky., 1952—. Mem.: A.I.P.; SubCmt on Visual Standards of the Armed Forces-NRC Vision Cmt; SubCmt on Visual Acuity, Amer. Standards Assn.; Amer. Assn. for Adv. Sci.; Amer. Statistical Assn.; Biometrics Soc.; Psychometric Soc.; Amer. Psychol. Assn.; Conn. Valley Assn. Psychol.; Inst. of Math. Statistics; Phi Sigma; Pi Gamma Mu. Contr. to: J. of Applied Psychol.; Human Biol.; Rsch. Quart. War Record; Mem., H-VS Corps, USNR, 1941-46; Rsch. Projects of Interest to Navy; Transferred to Reg. Navy, 1946. Hobbies: Swimming; Golf. Listed in: A.M.S.; Amer. Psychol. Assn. Dir.; Biometrics Soc. Dir.; Who Knows—and What. Special Int.: Methods of Bioassay; Selection of Milit.

Personnel; Standardization of Visual Test Targets and Testing Procedures.

COOK, Harold James, Consulting Geologist, Cook Museum of Natural History, Agate, Nebr. **PETROLEUM GEOLOGY.**

COOK, Herman L., 1555 Beardsley Ave., Muskegon, Mich. **CERAMICS.**

COOK, Melvin Alonzo, Prof. of Metallurgy, and Director of Explosives Research, Univ. of Utah,



Salt Lake City, Utah. b. Oct. 10, 1911, Garden City, Utah. **PHYSICAL CHEMISTRY.** s. Alonzo Laker and Alice Maud (Osmond) C. Edn.: B.A., Utah Univ., 1933; M.A., ibid., 1934; Ph.D., Yale Univ., 1937. m. Wanda Garfield of Tremonton, Utah, June 19, 1935. d. John Owen and Sarah Kay Garfield. c.: Barbara Jean; Melvin Garfield; Virginia; Merrill Alonzo; Krehl Osmond. Exp.: Rsch. Chem., DuPont Co., 1937-47; Prof. of Metallurgy, Univ. of Utah, 1947—; Con-

sult., DuPont Co., 1947—; Consult. and Expert Witness, Tex. City Comm. and Monsanto Co., 1948-49; Consult. and Expert Witness, Amer. Assn. of R. R. and Union Pacific Co., 1948—. Mem.: A.C.S., Chmn., City Comm. and Monsanto Co., 1948-49; Consultant Salt Lake Sect. (1951); A.I.M.M.E., Natl. Comm. on Edn.; A.A.A.S.; Sigma Xi. Contr. to: Chem. Jour. Ph.D. Dissertation: Thermodynamics of Aqueous Potassium Hydroxide Solutions from E.M.F. Measurements. War Record: Rsch. on Explosives and Devices under DuPont Contracts for Army, Navy, Engr. Corps, N.D.R.C., 1943-46 (as Civilian). Travel: N. Amer. Hobbies: Sports; Music. Listed in: Who's Who in Amer.; Who's Who in Chem.; A.M.S.; Who's Who in Commerce and Indust.; Who Knows—and What. Special Int.: Explosives; Surface Chem.

COOK, Melville Thurston, retired, 255 Barnard Rd., Larchmont, N. Y. **BOTANY, PLANT PATHOLOGY.**

COOK, Orator F., Bureau of Plant Indus., U. S. D. A., Washington, D. C. **BOTANY.**

COOK, Ralph L., 204 Ceramics Bldg., Univ. of Ill., Urbana, Ill. **CERAMICS.**

COOK, Robert C., Jour. of Heredity, Washington, D. C. **GENETICS.**

COOK, Roy Selden, Hd., Chem. Dept., Box 1384, Mary Washington Coll., Fredericksburg, Va. **CHEMISTRY.**

COOK, Sister Rose Margaret, Prof. and Dir., Dept. of Math., Loretto Heights Coll., Loretto, Colo. **MATHEMATICS.**

COOK, S. R., 1358 47th St., Sacramento, Calif. **PHYSICS.**

COOK, Sterling Smith, Fleet Med. Officer, Seventh Fleet, c/o Fleet Post Office, San Francisco, Calif. **MEDICAL SCIENCES.**

COOK, Thomas James, 4419 Univ. Dr., Coral Gables, Fla. **DENTISTRY.**

COOK, Walter A., Prof. of Chem., Univ. of Akron, Akron 4, Ohio. **CHEMISTRY.** b. Hamilton, Ohio, June 15, 1896. s. Edward and Emma Louise (Schulte) C. Edn.: B.A., Univ. of Cincinnati, 1921; M.A., ibid., 1922; Ph.D., ibid., 1924. m. Kathryn T. Hartkoff, July 16, 1929. Exp.: Inspector, Powder and Explosives, U. S. Ordnance Dept., 1918; Instr. in Chem., Univ. of Cincinnati, 1922-26; Instr. in Chem., Univ. of Akron, 1926-27; Asst. Prof., ibid., 1927-33; Prof. of Chem., ibid., 1933—. Mem.:

Fellow, A.A.A.S.; Fellow, Amer. Inst. of Chemists; A.A.U.P.; Amer. Chem. Soc.; Alpha Chi Sigma; Sigma Xi. Contrb. to: Analytical Chem.; Jour. Amer. Chem. Soc.; Jour. Organic Chem.; Jour. Amer. Pharm. Assn. War Record: Major, Chem. Warfare Service, Army Chem. Center, 1942-44. Special Int.: Organic and Analytical Chem.

COOK, William Boyd, Asst. Prof. of Chem., Univ. of Wyo., Laramie, Wyo., ORGANIC CHEMISTRY, NATURAL PRODUCTS. b. Dallas, Tex., July 20, 1918. s. James Monroe and Lucile (Holland) C. Edn.: B.A., Univ. of Tex., 1940; M.S., Univ. of Colo., 1942; Ph.D., Univ. of Wyo., 1950. m. Roberta F., Sept. 4, 1942. c.: Kem Holland. Exp.: Grad. Asst., Univ. of Colo., Boulder, Colo., 1940-42; Chemist Analyst, Monsanto Chem. Co., St. Louis, Mo., 1942-43; Rsch. Assoc., Central Rsch. Labs., ibid., 1943-47; Instr., Univ. of Wyo., Laramie, Wyo., 1947-50; Asst. Prof., ibid., 1950. Mem.: Amer. Chem. Soc.; A.A.A.S.; Sigma Xi; Gamma Sigma Epsilon; Fund for the Advancement of Edn. Fellow, 1952-53; Colo.-Wyo. Acad. Sci.; Alpha Phi Omega. Contrb. to: Jour. of the Amer. Chem. Soc.; Analytical Chem.; Jour. of the Colo. Wyo. Acad. of Sci. Special Int.: Liquid Phase Oxidation, Oil Additives, Nitrogen Heterocycles, Alkaloids.

COOK, William Carmichael, Entomologist, U. S. D. A., P. O. Box 616, Walla Walla, Wash. ENTOMOLOGY.

COOK, William Schle, Asst. Prof. of Botany, La. State Univ., University, La. BOTANY.

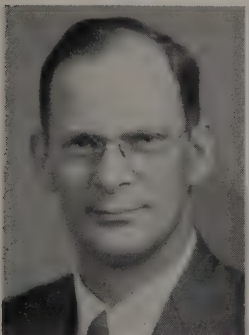
COOKE, Charles Wythe, Sr. Geologist, U. S. Geol. Survey, Washington, D. C. GEOLOGY.

COOKE, Herman Glenn, Asst. Prof. of Biol., Hampton Inst., Hampton, Va. b. Nov. 28, 1915, Petersburg, Va. ENTOMOLOGY AND PHYSIOLOGY. s. J. P. and Vina (Goode) C. Edn.: B.S., Va. State Coll., 1935; M.S., Univ. of Pa., 1939; Grad. Study, ibid. Exp.: Instr., Livingstone Coll., 1940-41; Histol., Children's Hosp. of Phila., Pa., 1941-43; Entomol., Study Malaria Control for S. Pacific, U. S. War Dept., Rsch. Center, Wash., D. C., 1945; Prof., Dept. Biol., Hampton Inst., 1946—. Mem.: Amer. Entomol. Soc.; Beta Kappa Chi; A.A.A.S.; Acad. of Nat. Sci.; Omega Psi Phi. News; etc. Gen. Int.: Has Successfully Produced Two Successive Litters with Bobbed Tailed Rats from Same Parents. Hobbies: Baseball; Football; Hunting; Sci. Rsch. Listed in: A.M.S.; Who's Who in Colored Amer.



Contrb. to Entomological News; etc. Gen. Int.: Has Successfully Produced Two Successive Litters with Bobbed Tailed Rats from Same Parents. Hobbies: Baseball; Football; Hunting; Sci. Rsch. Listed in: A.M.S.; Who's Who in Colored Amer.

COOKE, Strathmore Ridley Barnott, Prof. of Mineral Dressing and Metallurgy, Univ. of Minnesota, Minneapolis, Minn. METALLURGY. b. Jan. 4, 1907, Wanganui, New Zealand. s. Charles Ridley and Lilian Dawn Auckland (Barnott) C. Edn.: B.Sc. (Chem.), 1928; B.E. (Metallurgy), 1929, Univ. of New Zealand; A.O.S.M. (Metallurgy), 1929, Otago Schl. of Mines; M.S. (Metallurgy), 1933, Mo. Schl. of Mines; Ph.D., Univ. of Mo., 1933. m. Helen Ruth Cahill, Ben Avon Pittsburgh, Pa., Oct. 14, 1933. d. Leslie and Anna Cahill. c.: Strathmore Richard Bruce, St. Clair Cooke. Exp.: Rsch. Metallurgist, Mo. State Mining Exp. Sta., Rolla, Mo., 1933-36; Asst. Prof.,



Ore Dressing and Met. Engrng., Mo. Schl. of Mines and Metallurgy, 1936-39; Rsch. Prof., Mineral Dressing, Mont. Schl. of Mines, Butte, Mont., 1939-46; Prof., Mineral Dressing and Metallurgy, Minnesota Schl. of Mines, Univ. of Minn., 1946—. Mem.: Sigma Xi; Amer. Inst. of Mining and Metallurgical Engrs.; Fellow, Amer. Mineralogical Soc.; British Astronomical Assn.; Amer. Assn. of Variable Star Observers (A.A.V.S.O.); Amer. Chem. Soc.; Kappa Sigma; Theta Tau; Phi Kappa Phi. Contrb. to: Engrng. and Mining Jour.; Amer. Mineralogist; Mining Congress Jour.; A.I.M.E. Transactions; Jour. of the British Astronomical Assn. Ph.D. Dissertation: Lab. Concentration of Iron Ores of the U. S. Travel: New Zealand; Australia; Canada; Cuba; Mexico. Hobbies: Astronomy; Photography; Telescope Making. Listed in: A.M.S. Special Int.: Concentration of Iron Ores; Theory of Ore Flotation, Planetary and Selenographical Rsch.

COOKE, Morris Llewellyn, Consulting Engr., St. Georges Rd., Mt. Airy, Philadelphia, Pa. ENGINEERING.

COOKE, Robert Anderson, Dir., Dept. of Allergy, Roosevelt Hosp., 60 E. 58th St., N. Y., N. Y. ALLERGY.

COOKE, Thomas F., Killam's Pt., Branford, Conn. PHYSICS.

COOKSEY, Charlton Dows, Assoc. Prof. of Physics, Yale Univ., New Haven, Conn. PHYSICS.

COOKSEY, Donald, Assoc. Dir., Radiation Lab., Berkeley, Calif. PHYSICS.

COOLEY, Jean Paul, Assoc. Prof. of Physics, N. Y. Univ., Washington Sq., N. Y., N. Y. SPECTROSCOPY.

COOLEY, Jacquelin Smith, Sr. Pathologist, Plant Indus. Station, U. S. D. A., Beltsville, Md. PLANT PATHOLOGY.

COOLIDGE, Albert Sprague, Lectr. in Chem., Harvard Univ., 34 Coolidge Ave., Cambridge, Mass. CHEMICAL PHYSICS.

COOLIDGE, Edgar Davis, Prof. of Therapeutics, Loyola Univ. Schl. of Dentistry, 1747 W. Harrison St., Chicago, Ill. DENTISTRY.

COOLIDGE, William David, 1480 Lenox Rd., Schenectady, N. Y.

COON, Julius Mosher, Assoc. Prof. Pharmacology and Dir., U.S.A.F. Radiation Lab., Univ. of Chicago, Chicago 37, Ill. PHARMACOLOGY AND TOXICOLOGY. b. Liberty, Mo., Oct. 29, 1910. s. Raymond Huntington and Mayme (Bryan) (Mary Emma Bryan) C. Edn.: A.B., Indiana Univ., 1932; Ph.D., Pharmacol., Univ. of Chicago, 1938; M.D., Univ. of Ill., 1945. m. Mary Elizabeth Bond, July 26, 1947. c.: James Starner; Margaret Bryan. Exp.: Asst. in Pharm., Univ. of Chicago, 1936-38; Instr. in Pharmacology, Univ. of Chicago, 1938-45; Pharmacologist P-5, Food and Drug Administration, Wahs., D. C., 1945-46; Pharm., Asst. Prof., Univ. of Chicago, 1946-47; Assoc. Prof. Pharmacology, 1947—; Dir., Univ. of Chicago Toxicity Lab., 1948—. Mem.: Soc. for Pharm. and Exper. Therap.; Soc. for Exper. Biol. and Med.; Amer. Ind. Hyg. Assn.; Radiation Rsch. Soc.; Soc. of Sigma Xi; A.A.A.S.; Chaos Club; Sigma Alpha Epsilon; Alpha Chi Sigma. Contrb. to: Jour. of Pharm. and Experimental Therapeutics; Proceeding of the Soc. for Experimental Biol. and Med.; Archives of Industrial Hyg. and Occupation Med.; Archives Inter. de Pharmacodynamie et de Therapie; Current Rsch. in Anesthesia and Analgesia; Jour. of Anesthesiology; Jour. of Investigative Dermatology. War Record: Non Military Service, Chem. Warfare Toxicologic Rsch. at Univ. of Chicago Toxicity Lab. under Auspices of Office of Scientific Rsch. and Dev. Special Int.: Bioassay; Antonomic Pharmacology; Local Anesthetics; Toxicology of Chemical Warfare Agents; Cholinesterase Inhibitors; Prophylaxis and Treatment of Radiation Injury.

COONS, Callie Mae, Asst. Chf., Bureau of Human Nutrition and Home Econ., U. S. D. A., Box 164, Benjamin Franklin Station, Washington, D. C. NUTRITION.

COOPER, Charles Milton, Dir., Engrng. Rsch. Lab., E. I. du Pont de Nemours and Co., Wilmington, Del.



CHEMICAL ENGINEERING. b. Minneapolis, Minn., June 27, 1900. s. Charles Paine and Juliet (Brooks) C. Edn.: S.B., Mass. Inst. of Tech., 1925. m. Marian Grogan, June 21, 1930. c.: Ellen Vermont; Ruth-Mary. Exp.: Tool Room Boy to Asst. Supvr. of Machine Tool Plant, Rutland, Vt., 1918-21; Asst., High Pressure Rsch., Mass. Inst. of Tech., 1925-27; Field Station Dir., ibid., 1927-36; Engr., Process Development and Improvement, E. I. du Pont, Belle, W. Va.,

1936-40; Supvr., Chem. Engrng. Rsch., ibid., 1940-42; On Loan to Metallurgical Project, Univ. of Chicago in Chg. of Engrng. Rsch. and Development Leading to Atomic Reactors and Chem. Processing, 1942-45; Dir. of Engrng. Rsch. Lab., E. I. du Pont de Nemours and Co., Wilmington, Del., 1945—. Mem.: Amer. Chem. Soc.; Amer. Inst. Chem. Engrs.; Rheological Soc.; Franklin Inst.; Amer. Inst. of Physics; A.A.A.S.; Alpha Chi Sigma; Tau Beta Pi; Lions. Contrb. to: Chem. Engrng. Progress; Jour. Indus. and Engrng. Chem.; Chem. and Engrng. News; The Math. Tchr. War Record; Student Army Trng. Corps, 1918. Special Int.: Development of Engrng. Knowledge and of Specialized Equipment Involved in Manufacture of a Wide Range of Chem. Products.

COOPER, Clara Chassell, Hd., Dept. of Psychol. and Dean of Women, Lebanon Valley Coll., Annville, Pa. **PSYCHOLOGY.**

COOPER, Delmar Clair, Assoc. Prof. of Genetics. Univ. of Wis., Madison, Wis. **CYTOLOGY.**

COOPER, Franklin Seaney, Assoc. Rsch. Dir., Has-kins Labs., Inc., 305 E. 43rd St., N. Y., N. Y. **PHYSICS.**

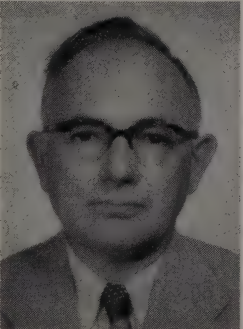
COOPER, Gustav Arthur, Curator, Invertebrate Paleontology and Paleobotany, U. S. Natl. Museum, 3425 Porter St., Washington, D. C. **PALEONTOLOGY.**

COOPER, Herbert Press, Dean and Dir., Schl. of Agri. and S. C. Expt. Station, Clemson Agri. Coll., Clemson, S. C. **AGRONOMY.**

COOPER, John Niessink, Asst. Prof. of Physics, Ohio State Univ., Columbus, Ohio. **X-RAY.**

COOPER, John Ralph, Hd., Dept. of Horticulture and Forestry, Univ. of Ark., Fayetteville, Ark. **PLANT NUTRITION.**

COOPER, John Roberts, Geologist, U. S. Geol. Survey, Washington, D. C. **ORE DEPOSITS.**

COOPER, Merlin L., M.D., Children's Hosp. Rsch. Foundation, Elland Ave., Cincinnati 29, Ohio. **PEDIATRICS AND BACTERIOLOGY.** b. Cam-


eron, Mo., Sept. 22, 1893. s. Loron and Anna May (Sutherland) C. Edn.: B.S., Baker Univ., 1917; M.S., Univ. of Chicago, 1918; M.D., Coll. of Med., Univ. of Cincinnati, 1928. m. Greta Snider of Cam-
 erton, Mo., 1919. d. Mr. and Mrs. Mal Snider. c.: Margaret Ann. Exp.: Asst. Prof. Pediatrics, Coll. of Med., Univ. of Cincinnati, 1929-51; Associate Prof. of Pediatrics, ibid., 1951—; As-
 soc. Prof. Bacteriology, Children's Hosp. Rsch.

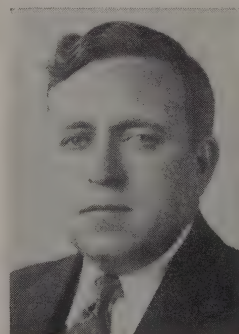
Foundation, Cincinnati, Ohio, 1929—; Bacteriologist, Children's Hosp., Cincinnati, Ohio, 1929—; At-
 tending Bacteriologist, Good Samaritan Hosp., Cin-
 cinnati, Ohio, 1929-39; Consulting Bacteriologist,
 ibid., 1939—; Attending Pediatrician, Children's
 Hosp., 1929—; Attending Pediatrician, Contagious
 Hosp., 1929—; Attending Pediatrician, Pediatric
 Service, Gen. Hosp., Cincinnati, 1929—. Mem.:
 A.M.A.; Soc. of Amer. Bacteriologist; Amer. Acad.
 of Pediatrics; Soc. for Pediatric Rsch.; Central Soc.
 for Clinical Rsch.; Amer. Assn. of Immunol. Au-
 thor: Numerous Scientific Publications. Contrb.
 to: Several Scientific Jours. Hobbies: Rosarian;
 Painting; Etching; Farming. Listed in: Who's Im-
 portant in Med.; A.M.S.; Who's Who in Ohio.
 Special Int.: Diarrheal Diseases, Dysentery; Ty-
 phoid; Salmonella Infections.

COOPER, Norman Conrad, Prof. of Biol. and Edn.,
 Pepperdine Coll., 629 W. 34th St., Los Angeles 7,
 Calif. **BOTANY.** b.



Kell, Ill., May 9, 1903. s. James Edmond and Nancy Jane (Branson) C. Edn.: A.B., Drake Univ., 1929; M.A., ibid., 1933; Ph.D., Univ. of Southern Calif., 1943. Exp.: Prin., H. S., De-
 loit, Iowa, 1926-28; Instr., Biol., Drake Univ., Des Moines, Iowa, 1928-30; Instr. Biol., Fort Dodge H. S. and Jr. Coll., 1930-36; Head-
 master, Brandes Schl. of Tucson, 1938-40; Instr. Education and Psychol., Chapman Coll., 1940-41; Rsch. Asst. Botany, Univ. of Southern Calif., 1941-43; Rsch. Assoc. Botany, ibid., 1943-50; Prof. Biol. and Edn., Pepperdine Coll., Los Angeles, Calif., 1950—. Mem.: John Dewey Edn. Study Club; Drake Univ. Sci. Club; Drake Univ. Natural History Club; Iowa State Tchrs. Assn.; Iowa Assn. of Sci. Tchrs.; Iowa Assn. of Biol. Tchrs.; Iowa Acad. Sci.; Conservation Club of Iowa State; Botany Club of Iowa State; Botany Club of Univ. of Southern Calif.; Ft. Dodge Tchrs. Assn.; Bus. Men and Womens Sunday Club, Ft. Dodge, Calif. Tchrs. Assn.; Southern Calif. Botany Club; Sci. Club of Amer.; Western Soc. of Naturalists; A.A.A.S.; Kappa Delta Pi; Kappa Phi Kappa; Phi Delta Kappa; Delta Sigma Kappa; Psi Chi; Nu Rho Psi; Phi Sigma; Sigma Xi; Calif. Acad. of Sci.; A.A.U.P. Author: Sci. in the Elem. Schl., 1951; Tehng. Sci. in the Elem. Schl., 1952. Contrb. to: Amer. Jour. Botany; Iowa Acad. Sci. Jour.; Iowa Sci. Tchr.; N.E.A. Yearbook, 1953 Dept. of Elem. Schl. Principals. Special Int.: Native Flora of the Desert Southwest.

COOPER, Stancil Samuel, Assoc. Prof. of Chem., St. Louis Univ., 6635 Pershing Ave., University City 5, Mo. **EDUCATOR.**



ANALYTICAL CHEMISTRY. b. Morristown, Tenn., Sept. 19, 1903. s. William and Katharine Ann (Owen) C. Edn.: B.S., Chem., Univ. of Tenn., 1926; M.S., Univ. of Pittsburgh, 1927; Ph.D., Washing-
 ton Univ., 1935. m. Colma Benedict, Dec. 22, 1931. c.: Katharine Ann; Mary Bene-
 dict; Stancil Samuel, Jr.; Margaret Hardesty. Exp.: Tchr., High Schl. Chem., Blairsville, Pa., 1927-28; Instr. of Chem., Washington Univ., St. Louis, Mo., 1928-43; Sr. Chemist, Shell Oil Co., 1941; Assis-
 tant Prof. and Associate Prof., St. Louis Univ., St. Louis, Mo., 1943—. Mem.: Amer. Chem. Soc.; St. Louis Soc. of Analysts; Alpha Chi Sigma; Phi Delta Kappa; Sigma Xi; Phi Kappa Phi; Phi Mu Epsilon. Contrb. to: Indus. and Engrng. Chem.; Jour. of Chem. Edn.; Indus. and Engrng.

Chem.; Jour. of Phys. Chem.; Modern Plastics; Analytical Chem.; Jour. of Amer. Chem. Soc. Special Int.: Filter Photometry; Filters in Filter Photometry; Dithizone Method for the Metals; Ind. for Special Purposes; High Frequency Method.

COOPER, Stewart Rochester, Assoc. Prof. of Chem., Howard Univ., Washington, D. C. CHEMISTRY.

COOPER, Thomas Poe, Dean and Dir., Coll. of Agri. and Home Econ., Univ. of Ky., Lexington, Ky. AGRICULTURE, SOCIAL AND ECONOMIC SCIENCE.

COOPER, Walter Charles, Instr. in Chem., Univ. of Wis., Madison 6, Wis. ANALYTICAL CHEMISTRY.



b. October 30, 1921, Victoria, B. C., Canada. s. Wm. and Kathleen R. (Poole) C. Edn.: B.A., Univ. of B. C., Can., 1943; M.A., ibid., 1945; Ph.D., Princeton Univ., 1949. m. Frances Victoria Law of Victoria, B. C., Can., Aug. 28, 1948. d. Mr. and Mrs. Henry Law. Exp.: Tchng. Asst., Princeton Univ., 1945-47; Instr. in Chem., Univ. of Wis., 1948-50. 52—. Mem.: Sigma Xi; Electroche. Soc. Contrb. to: Analyt. Chem.; J. of A.C.S. Ph.D. Dissertation: A Study of the

Polargraphic Behavior of Dropping Amalgam Electrodes. Travel: N. Amer. Gen. Int.: Lefevre Gold Medal, Univ. of B. C., 1943; LeRoy Wiley McCay Fellow, Princeton Univ., 1947-48. Hobbies: Photography; Golf. Llisted in: A.M.S. Special Int.: Analytical Chem.; Polarography of Dropping Amalgam Electrodes.

COOPER, William Charles, Consultant in Catalytic Oxidation, 524 Federal St., Pittsburgh 12, Pa. CATALYTIC OXIDATION OF HYDROCARBONS.



b. Pocatello, Idaho, Oct. 21, 1900. s. William C. Sr. and Isabelle (Miller) C. Edn.: A.B., Pomona Coll., 1921; A.M., Harvard Univ., 1922; Ph.D., ibid., 1929. m. Lillian Coleman, July 14, 1921. c.: Donald William; John Coleman. Exp.: Rsch. Chemist for Rockefeller Inst for Med. Rsch., 1924-27; Barrett Div., Allied Chem. and Dye Corp., 1927-29, 1936-44; Pittsburgh Coke and Chem. Co., Pittsburgh, Pa., 1944—. Hon. Pos.:

Chmn., Coal Section, Amer. Chem. Soc., Pittsburgh Section. Mem.: Amer. Chem. Soc.; Alpha Chi Sigma; Kappa Delta. Contrb. to: Jour. Amer. Chem. Soc.; Jour. Physical Chem.; Jour. Gen. Plant Physiol. War Record: Corporal, S.A.T.C., 1917. Special Int.: Manufacture of Phthalic and Maleic Anhydrides and Ethylene Oxide in Theory and Practice.

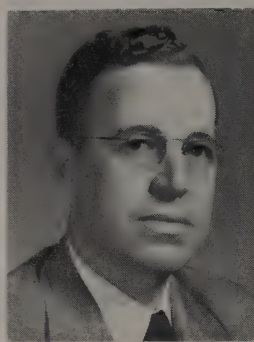
COOPER, William Skinner, Prof. of Botany, Univ. of Minn., Minneapolis, Minn. PLANT ECOLOGY, GLACIAL GEOLOGY.

COPE, Otis Merriam, Dir., Dept. of Physiol. and Biochem., N. Y. Med. Coll., 304 Park St., Upper Montclair, N. J. PHYSIOLOGY.

COPE, Ralph Pearce, Assoc. Prof. of Analytical and Agril. Chem., State Coll. of Wash., Pullman, Wash. CHEMISTRY.

COPE, Thomas Freeman, Assoc. Prof. of Math. and Chmn., Dept. of Math., Queens Coll., Flushing, N. Y. CALCULUS.

COPE, Arthur C., Prof. of Organic Chem. and Hd. of the Dept. of Chem., Mass. Inst. of Tech., Mass.



Inst. of Tech., Cambridge 39, Mass. SYNTHETIC ORGANIC CHEMISTRY. b. Dunreith, Ind., June 27, 1909. s. Everett and Jennie (Compton) C. Edn.: B.S., Butler Univ., 1929; Ph.D., Univ. of Wis., 1932. m. Bernice Abbott of Whiteland, Ind., Aug. 22, 1930. Exp.: 1932-34, Natl. Rscsh. Fellow, Harvard Univ.; 1934-41, Assoc. Prof. of Chem., Bryn Mawr Coll.; 1941-44, Assoc. Prof. of Chem., Columbia Univ.; 1942-45, Tech. Aide and Sect. Chf., Div. 9, O.S.R.D.,

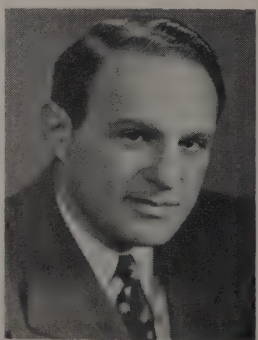
Wash., D. C.; 1945—, Prof. of Organic Chem. and Hd. of the Dept. of Chem., Mass. Inst. of Tech., Cambridge 39, Mass. Mem.: Natl. Acad. of Sci.; Amer. Acad. of Arts and Sci.; Sigma Nu; Sigma Xi; etc. Author: Organic Syntheses, 1950. Ph.D. Dissertation: The Synthesis of Local Anesthetics Containing Various Phenylalkyl Groups. Vinyloethyl Malonic Ester and the Cleavage of Certain Substituted Malonic Esters with Sodium Ethoxide. Listed in: A.M.S.; Who's Who in Amer. Special Int.: Synthetic Organic Chem.; Synthesis of unsaturated esters, Condensation reactions, molecular rearrangements, barbituric acids.

COPE, Thomas Darlington, Prof. of Physics, Univ. of Pa., Philadelphia, Pa. PHYSICS.

COPELAND, Herbert Faulkner, Instr. in Biol. Sciences, Sacramento Coll., Sacramento, Calif. PHYLOGENY, ERICALES.

COPPRIDGE, William Maurice, 111 Corcoran Street, Durham, N. C. UROLOGY. b. Danville, Va., July, 24, 1893. s. William David and Mary Ellen (Ferguson) C. Edn.: Univ. of N. C.; M.D., Jefferson Med. Coll., 1918. m. Ferrie P. Choate, July 2, 1919. c.: Alton James (adopted); James Wendell Ligon (adopted). Exp.: Clinical Prof. of Urology, Univ. of N. C., Chapel Hill, N. C., 1952—; Chief of Staff, Urology Watts Hosp., Durham, N. C., 1919—. Hon. Pos.: Pres. Med. Soc. of State of N. C., 1946; Pres., Southeastern Section of Amer. Urol. Assn., 1947; Mem. of N. C. Med. Care Comm., 1947—; Mem. Bd. of Med. Examiners, State of N. C. 1938-44; Pres., Durham-Orange Co. Med. Soc., 1926-27, 1946-47; Chmn., Med. Div. Civilian Defense 1943-45; Chmn., Com. of Procurement and Assignment of Med. Section, N. C., 1942-45. Mem.: N. C. State Med. Soc.; Southern Med. Assn.; A.M.A.; Amer. Urol. Assn.; Phi Chi. Co-author: The Good Doctor, 1953. Contrb. to: N. C. Med. Jour.; Southern Med. Assn. Jour.; Jour. A.M.A.; Jour. Urology; Va. State Med. Soc. Jour. War Record: Med. Reserves, 1918-19. Special Int.: Calculous Disease of Urinary Tract.

CORBIN, Milford Howard, Pres., Standard-Toch Chemicals, Inc., 6 W. 77th St., N. Y. 24, N. Y.



DECORATIVE AND PROTECTIVE COATINGS. b. Cincinnati, Ohio, Sept. 27, 1902. s. Henry and Nettie (May) C. Edn.: Ch.E., Lehigh Univ., 1925. m. Miriam Eshner (dec.), 1932. c.: Richard. Exp.: Dir. of Rsch., Electro Chem. Engraving Co., 1927-29; Dir. of Lacquer Lab., Ault and Wiborg Corp., (Interchemical Corp.), 1929-32; Dir. Rsch., Arco Co., 1932-37; Vice-Pres. and Dir. of Rsch., Standard-Toch Chemicals, Inc., 1937-49; Pres., ibid., 1949—. Hon. Pos.:

Pres., N. Y. Paint, Varnish and Lacquer Assn., 1951-52. Mem.: Fellow, Amer. Inst. Chemists;

Amer. Chem. Soc.; Amer. Soc. Testing Materials; Chemist Club; Sales Exec. Club; Industrial Finishes Steering Com. and Industrial Finishes Advisory Bd.; Amer. Inst. of Mgmt. Author: Electrodeposition of Non-Metallic Materials, 1929; Application of Finishing Materials on Zinc, 1933.

CORBETT, Laurence Jay, Independent Consulting Electrical Engr. and Writer, 1010 Shattuck Ave., Berkeley, Calif. ELECTRICAL TRANSMISSION.

CORBITT, Hugh Blake, Scientific Dir., Control Labs., Winthrop Chemical Co., Inc., 33 Riverside Ave., Rensselaer, N. Y. CHEMISTRY.

CORCORAN, Charles A., Chm., Dept. of Physics, Coll. of the City of N. Y., N. Y., N. Y. MECHANICS.

CORCORAN, William Harrison, Assoc. Prof. of Chem. Engrng., Calif. Inst. of Tech., Pasadena 4, Calif. CHEMICAL ENGINEERING AND APPLIED CHEMISTRY.



b. Los Angeles, Calif., Mar. 11, 1920. s. William H. and Enid Winchester (Heffelfinger) C. Edn.: B.S., Calif. Inst. of Tech., 1941; M.S. ibid., 1942; Ph.D., ibid., 1948. m. Martha Nell Rogers; Nov. 7, 1942. c.: Sally Kay; William Owen. Exp.: Chem. Engrng., Cutter Labs., Berkeley, Calif., summers, 1941-42; Rsch. Supvr. and Development Engr., 1942-46, O.S.-R.D.; Dir. of Development, Cutter Labs., Berkeley, Calif., 1948-52; Assoc. Prof. of Chem. Engrng., Calif. Inst. of Tech., Pasadena, Calif., 1952—.

Mem.: Amer. Chem. Soc.; Amer. Inst. of Chem. Engrs.; Amer. Soc. of Mech. Engrs.; Tau Beta Pi; Sigma Xi. Contrb. to: Indus. and Engrng. Chem.; Chem. Engrng. Progress. Special Int.: Heat Transfer; Chem. Engrng.; Ballistics of Rocket Motors; Process Development in Mfg. of Biol. and Pharmaceuticals.

COREY, Edward Lyman, Assoc. Prof. of Physiol., Univ. of Va. Med. Schl., Charlottesville, Va., PHYSIOLOGY.

COREY, Robert Brainard, Rsch. Assoc., Structural Chem., Calif. Inst. of Tech., Pasadena, Calif. STRUCTURE OF CRYSTALS.

CORI, Carl Ferdinand, Schl. of Med. Wash. Univ., Euclid Ave. and Kingshighway, St. Louis 10, Mo.

CORK, James M., Prof. of Physics, Univ. of Mich., Ann Arbor, Mich. NUCLEAR PHYSICS.

CORLEY, Ralph Conner, Prof. of Biochem., Purdue Univ., Lafayette, Ind. BIOCHEMISTRY.

CORNBLEET, Theodore, Prof. of Dermatology, Univ. of Ill., Coll. of Med., 30 No. Mich. Avenue, Chicago 2, Ill. DERMATOLOGY; PHYSIOLOGY. b. St. Louis, Mo., Mar. 10, 1899. s. Morris and Sarah (Mett) C. Edn.: B.S., St. Louis Univ., 1921; M.D., ibid., 1923; M.S., Univ. of Ill., 1931; Ph.D., ibid., 1937. m. Dea Tietelbaum of Milwaukee, Wis., 1935. d. Samuel and Fanny Tietelbaum. c.: Suzanne Beverly; David Henry. Exp.: 1925—, Dermatol. Asst., Wash. Univ., St. Louis; 1926, Instr. Dermatol., Univ. of Ill. Coll. of Med.; 1930, Assoc., ibid.; 1936, Asst. Prof., ibid.; 1941, Assoc., ibid.; 1948, Prof., ibid. Hon. Pos.: Sigma Xi; Inst. of Med.; A.A.A.S.; Chicago Art Mus. Author: Dental Sci., 1940; Med. Uses of Soap, 1945. Contrb. to: Jour. Amer. Med. Assn.; Archives of Dermatology. Ph.D. Dissertation: Excretion of Bromide Thru Sweat. War Record: Pvt., U.S.A., 1918. Travel: S. Amer.; Mex.; Central Amer.; Can.; Alaska. Hobbies: Musical Pursuits; Composition. Listed in: Amer. Young Men; A.M.S.; Dir. of Med. Specialists; W. W. in Chicago; W. W. in Amer. Jewry. Special Int.: Problems in the Physiol. and Biochem. of the Skin.

CORNELIUS, Donald Risdon, Range Conservationist, Calif. Forest and Range Experiment Sta., Berkeley 1, Calif. ECOLOGY, AGRONOMY. b. Onaga, Kans., Jan. 25, 1914. s. Risdon and Mary (Clark) C. Edn.: B.S. Kans., St. Coll., 1935; M.S., ibid., 1938; Ph.D., Univ. of Nebr., 1949. m. Marjorie E., Dec. 17, 1938. c.: Jane; Mary; Ann. Exp.: Jr. Agronomist, Soil Conservation Ser., U. S. Dept. Agri., Washington, D. C., 1935-39; Asst. Agronomist ibid., 1939-44; Assoc. Agronomist, ibid., 1944-46; Range Conser., Calif. Forest and Range Experiment Sta., U. S. Forest Ser., Berkeley 1, Calif., 1946-53. Hon. Pos.: Chm. Calif. Section, Am. Soc. Range Management. Mem.: Sigma Xi; Gamma Sigma Delta; Alpha Zeta; Alpha Kappa Lambda. Contrb. to: Jour. of the Amer. Soc. of Agronomy; Farmers Bull.; Ecology. Special Int.: Forage Crops; Ecology; Range Reseeding, Grass Seed Production.

CORNELL, Walter Rodney, Prof. of Mechanics Engrng., Cornell Univ., Ithaca, N. Y. ENGINEERING.

CORNER, George Washington, Carnegie Institution of Wash., Wolfe and Madison Sts. Baltimore 5, Md.

CORNMAN, Ivor, Asst. Rsch. Prof. in Anat., Geo. Wash. Univ. Cancer Clinic, 1339 H St., N. W., Washington 5, D. C.



BIOLOGY. b. May 22, 1914, Cleveland, Ohio. s. Robert Stevenson and Anna May (Evans) C. Edn.: A.B., Oberlin, 1936; M.S., N. Y. Univ., 1940; Ph.D., Univ. of Mich., 1949. m. Margaret E. Cornman of Wash., D. C. June 21, 1947. d. Paul Wm. and Virginia Millar Evans. Exp.: Rsch. Fellow, Sloan-Kettering Inst. for Cancer Rsch., N. Y. City, 1946-49; Rsch. Prof. in Anat., George Wash. Univ., Wash., D. C. Mem.: Sigma Xi; A.A.A.S.

Amer. Soc. Zoology; New York Acad. of Science; Tissue Culture Assn. Contrb. to: Science; Cancer Research; Amer. Naturalist; Anat. Record; Bot. Gazette; Amer. Jour. Physiol. Ph.D. Dissertation: Cytological Phenomena Observed During Selective and Nonselective Injury to Malignant Cells in Tissue Culture with Penicillium Extracts and with Nitrogen Mustards. War Record: U. S. Army, 1942-46. Travel: U. S.; Bermuda; Bahamas. Listed in: A.M.S. Special Int.: Cytology, Cancer, Cell Physiology.

CORNTHWAITE, William Robert, Mgr., Vinyl Products Div., Electrochemicals Dept., E. I. du Pont de Nemours and Co., Wilmington, Del. ORGANIC CHEMISTRY.

CORRELL, Donovan Stewart, Botanist, Bur. of Plant Indus., Soils and Agri. Engrng., U.S.D.A.,



Beltsville, Md. BOTANY. b. Wilson, N. C., Apr. 13, 1908. s. John and Lummie (Foster) C. Edn.: A.B., Duke Univ., 1934; M.A., ibid., 1936; Ph.D., ibid., 1939. m. Helen Butts, June 26, 1937. c.: Louise B.; Stewart F.; Selena C.; Charles D. Exp.: Rsch. Assoc., Botanical Museum, Harvard Univ., Cambridge, Mass., 1939-43; U.S.D.A., Bur. of Plant Indus., 1943-44; U. S. Navy, 1944-46; U.S.D.A., Bur. of Plant Indus., Beltsville, Md., 1946—. m. m.: New England Botanical Club;

Amer. Fern Soc.; Amer. Soc. of Plant Taxonomy; Sigma Xi; Amer. Hort. Soc.; Wash. Bot. Soc.

Author: Ferns and Fern Allies of La., with Clair Brown, 1942; Native Orchids of N. Amer., 1950; Orchids of Guatemala, with Oakes Ames, 1952; Section Tuberarium of the Genus Solanum of North Amer. and Cen. Amer., 1952. Contrb. to: Bot. Mus. Leaf.; Rhodora; Lloydia; Castanea; Elish. Mitch. Sci. Soc. Jour.; Amer. Midl. Nat.; Field and Lab.; Leaf. Western Botany. Special Int.: Systematic and Econ. Study on Orchids, Ferns, Tuber-bearing Solanums, Oil Palms, Drug Plants.

CORNWELL, Ralph T. K., Dir. of Rsch., Sylvania Div., Am. Viscose Corp., Marcus Hook, Pa. CHEMISTRY.

CORONA, Sister Maria, Academic Dean, Coll. of Mount St. Joseph, Mount St. Joseph, Ohio. MATHEMATICS, PHILOSOPHY.

CORPER, Harry John, Dir. of Rsch., Natl. Jewish Hosp., 3800 E. Colfax Ave., Denver, Colo. MEDICINE, RESEARCH.

CORRIGAN, Thomas Edward, Rsch. Engr., Mathieson Chem. Corp., Niagara Falls, N. Y. b. Mar. 1, 1918, Cleveland, Ohio.



s. Edward and Estelle (Bolek) C. Edn.: B.S., Fenn Coll., 1941; M.S., Univ. of Mich., 1942; Ph.D., Univ. Wis., 1949. m. Margery Dudley of Winchester, Ind., June 4, 1944. d. Carl and Wava Dudley. c.: Edward Carl; John Dudley. Exp.: Engr., Barrett Div., Chem. and Dye, Phila., Pa., 1942-43; Rsch. Engr., Wyandotte, Mich., 1943-45; Asst. Prof., Chem. Engrng., W. Va. Univ., 1948-51; Process Design Engr., Vulcan Copper and Supply Corp., Cincinnati, Ohio, 1951-53; Rsch. Engr., Mathieson Chem. Corp., Niagara Falls, N. Y., 1953—. Mem.: Sigma Xi; Phi Lambda Upsilon; Phi Epsilon Nu; Sigma Gamma Epsilon; A.C.S.; Amer. Soc. Engrng. Edn.; W. Va. Acad. Sci. Ph.D. Dissertation: The Kinetics of the Dealkylation of Isopropyl Benzene. Travel: U. S. Hobbies: Outdoor Activities. Special Int.: Thermodynamics and Kinetics.

CORRINGTON, Julian Dana, Assoc. Prof. of Zool., Univ., of Miami, Coral Gables, Fla. COMPARATIVE ANATOMY.

CORSIN, Stanley, Assoc. Prof. of Aeronautics, Johns Hopkins Univ., Baltimore 18, Md. FLUID MECHANICS. b. Philadelphia, Pa., April 3, 1920. s. Herman and Anna (Schor) C. Edn.: B.S., Univ. of Pa., 1940; M.S., Calif. Institute of Technology, 1942; A.E., ibid., 1942; Ph.D., ibid., 1947. m. Barbara Daggett of Pasadena, Calif., Sept. 25, 1945. d. Mr. and Mrs. Eliot Daggett. c.: Nancy Eliot and Stephen David. Exp.: Rsch. Asst. in Aero., Calif. Inst. of Tech., 1940-45; Lectr., 1943-45; Instr., 1945-47; Consultant, Jet Propulsion Lab., Calif. Inst. of Tech., 1946-47; Asst. Prof. of Aero., The Johns Hopkins Univ., 1947-51; Assoc. Prof., ibid., 1951—. Mem.: Tau Beta Pi; Sigma Xi; Amer. Phys. Society; Institute of the Aero. Science. Contrb. to: Journal of the Aero. Science; Jour. of Applied Physics; Amer. Jour. of Physics; Reviews of Scientific Instruments; Reports and Notes of the Natl. Advisory Comm. for Aero. Ph.D. Dissertation: Extended Application of the Hot-Wire Anemometer; Part II, Investigations of the Flow in Round, Turbulent Jets. Hobbies: Reading; Music; Cooking. Listed in: A.M.S. Special Int.: Fluid Mechanics, Especially the Laminar and Turbulent Flow of Viscous Fluids, Turbulent Transport, Hot-Wire Anemometry.

CORSON, Dale R., Assoc. Prof., Cornell Univ., Ithaca, N. Y. PHYSICS.

CORSON, Samuel A., Prof., Pharmacol. and Hd., Div. Pharmacol., Kirksville Coll., Osteopathy and Surgery, Kirksville, Mo.



PHARMACOLOGY AND PHYSIOLOGY. b. December 31, 1909, Odessa, Russia. s. Rev. Abraham and Betty (Karagod) C. Edn.: B.S., N. Y. Univ., 1930; M.S., Univ. of Pa., 1931; Ph.D., Univ. of Tex., 1942. m. Elizabeth Jane O'Leary of St. Paul, Minn., Dec. 12, 1947. d. Norbert; Frances H. G. Russell O'Leary; c.: Candace Naomi. Exp.: Univ. Scholar, Univ. of Pa., 1932-33; Asst. Physiol., Sci. Med., Univ. of Pa., 1932-35; Rsch. Assoc. Cell Physiol., N. Y.

Univ., 1935-37; Instr., Physiol. Div. Gen. Edn., ibid., 1937-39; Consulting Physiol., N. Y., 1938-40; Tutor and Instr. Zool. and Physiol., Univ. of Tex., 1940-42; Asst. Prof. Physiol., Schl. of Med., Univ. of Okla., 1942-43; Instr. Pharmacol., Schl. of Med., Georgetown Univ., 1943-44; Coord. Contemporary Russian Civilization, Ext. Div., Univ. of Minn., 1945-47; Instr., to Asst. Prof. Physiol., Med. Schl., Univ. of Minn., 1944-47; Assoc. Prof. Coll. of Med., Howard Univ., 1947-50; Chf., Dept. Physiol., Toledo Hosp. Inst. Med. Res., 1950-51; Prof. and Hd., Div. of Pharmacology, Kirksville Coll. of Osteopathy and Surgery, 1951—. Developed Method of Producing Exptl. Edema; Investigated Diuretic Properties of Sodium and Potassium Salts of Organic Acids, Renal Function in Edema, Barbiturate Pharmacol.; Designed new Lab. Exp. and Demonstrations in Physiol. and Prepared New Materials for Visual Edn. in Physiol. and Pharmacol. Summers: Investigator, Marine Biol. Lab., Woods Hole, 1931-34, 1936, 38; Rocky Mtn. Biol. Lab., 1948; Mt. Desert Island Biol. Lab., 1949; Univ. of Mich. Biol. Sta., 1950; Jr. Aquatic Physiol., Fish and Wildlife Service, U.S.D.I., 1940; Yale Univ. Aero. Med. Rsh. Unit, O.S.R.D., 1944. Mem.: Tex. and Minn. Br., Amer. Assn. Sci. Workers; Amer. Physiol. Soc.; A.A.A.S.; A.A.U.P.; Okla. Acad. of Sci.; Sigma Xi. Contrb. to: Anat. Record; Biol. Bull.; Amer. Jour. Physiol.; Amer. Biol. Tchr.; Proc. Okla. Acad. of Sci. Ph.D. Dissertation: A Micro-Tension Method for Measuring Instantaneous Permeability Changes in Single Cells under Reversible Conditions. War Record: Civilian with OSRD, Yale Univ., Aeromedical Rsch. Unit. Travel: Europe; Mex. Gen. Int.: Developed: Use of Salts of Organic Acids in Treatment of Edema; A Quantitative Method of Microinjecting Fluids into Single Cells; A Rapid Method of Producing Experimental Edema. Hobbies: Sports; Photography; Sci. Writing and Lecturing. Listed in: A.M.S.; A.A.A.S. Dir.

CORT, William Walter, Prof. of Helminthology, Schl. of Hygiene and Public Health, Johns Hopkins Univ., Baltimore, Md. MEDICAL SCIENCES.

CORWIN, Alolph Henry, Prof. of Chem., Johns Hopkins Univ., Baltimore, Md. ORGANIC CHEMISTRY.

CORWIN, Edward Henry Lewinski, Exec. Secy. and Statistician, N. Y. Acad. Med., 2 East 103rd St., N. Y., N. Y. PUBLIC HEALTH.

CORYELL, Charles D., Mass. Inst. of Tech., Cambridge, Mass. NUCLEAR CHEMISTRY.

CORYELL, Horace Noble, Prof. of Geol., Columbia Univ., N. Y., N. Y. INVERTEBRATE PALEONTOLOGY.

COSBY, Stanley W., Soil Conservation Service, Swan, Island, Portland, Ore. AGRICULTURE.

COSTELLO, Christopher Hollet, Asst. Chm., Mass. Coll. of Pharm. and Chf. Chemist, Pinkham Med. Co., Lynn, Mass. PHARMACEUTICAL CHEMISTRY.

COSTELLO, Donald Paul, Prof. of Zool., Univ. of N. C., Chapel Hill, N. C. EMBRYOLOGY.

COSTELLO, Maurice Hugh, Dean and Vice-Pres., St. Vincent Coll., Latrobe, Pa. **PSYCHOLOGY**.

COTHMAN, John Cleveland, Chmn., Sci. and Math. Div., Duluth Branch, Univ. of Minn., 512 N. 19th Ave., E., Duluth 5, Minn. **INORGANIC CHEMISTRY**. b. Ransomville, N.Y., Nov. 16, 1885. s. Daniel Vanvalsen and Emma (Silsby) C. Edn.: A.B., Cornell Univ., 1908; Ph.D., *ibid.*, 1931. m. Evelyn Belle Cochran, Nov. 8, 1910. c.: Raymond John. Exp.: Asst. Inst. of Chem., Cornell Univ., Ithaca, N. Y., 1908-10; Chemist, Gen. Elec. Co., Harrison, N. J., 1910-11; Chemist, Albany Lubricating Co., N. Y. C., 1911-12; Treas., Cochran Box and Mfg. Co., Inc., Lockport, N. Y., 1912-25; Asst. Instr. of Chem., Cornell Univ., Ithaca, N. Y., 1927-31; Acting Hd. Chem. Dept., Bethany Coll., Bethany, W. Va., 1931-32; Resident Dir., Cornell Univ., Ithaca, N. Y., 1932-33; Hd., Phys. Sci., Duluth State Tchrs. Coll., Duluth, Minn., 1933-44; Prof. of Chem., *ibid.*, 1944-45; Visiting Prof. of Chem., Elmira Coll., Elmira, N. Y.; Chmn., Sci. and Math. Div., Duluth State Tchrs. Coll., Duluth, Minn., 1946-47; Chmn., Sci. and Math. Div., Duluth Branch, Univ. of Minn., Duluth, Minn., 1947—. Hon. Pos.: Past Councillor and Chmn., Lake Superior Sect. of Amer. Chem. Soc.; Past Chmn., Phys. Sci. Sect., N. E. Minn. Edn. Assn.; Fellow, Amer. Inst. of Chem.; A.A.A.S.; Amer. Geog. Soc. of N. Y. Mem.: Amer. Chem. Soc.; Amer. Inst. of Physics; Amer. Assn. of Physics Tchrs.; Amer. Math. Soc.; Math. Assn. of Amer.; Minn. and N. Y. Acad. of Sci.; Minn. Edn. Assn.; A.A.U.P.; Minn. Edn. Assn.; Rocks and Minerals Assn.; Amer. Forestry Assn.; Northern Nut Growers Assn.; Amer. Scientific Affiliation; Duluth Engrs. Club; Kappa Delta Pi, Hon. Mem.; Mason. War Record: Lockport, N. Y. Battalion Home Guards, W. W. I.

COTNER, Frank Boyd, Dean, Div. of Sci. and Hd., Dept. of Botany and Bacteriol., Mont. State Coll., Bozeman, Mont. **MYCOLOGY**.

COTTAM, Walter Pace, Prof. of Botany, Univ. of Utah, Salt Lake City, Utah. **BOTANY**.

COTTEN, Marion deV., Assoc. in Pharmacol., Med. Coll. of S. C., Charleston, S. C. **PHARMACOLOGY**. b. in Charleston, S. C., Nov. 11, 1927. s. Marion D. and Beatrice (Ferri) C. Edn.: B.S., Coll. of Charleston, 1948; M.S., Med. Coll. of S. C., 1951; Ph.D., *ibid.*, 1952. m. Florence Hirsch, May 25, 1950. Exp.: Rsch. Asst., Dept. of Pharmacol., Med. Coll. of S. C., Charleston, S. C., 1948-52; Assoc. in Pharmacol., Dept. of Pharmacol., *ibid.*, 1952—. Mem.: Am. Soc. for Pharmacol. and Exptl. Therapeutics; A.A.A.S.; S. C. Acad. Sci. Contrb. to: Am. Jour. Physiol.; Jour. Pharm. Exptl. Therap.; Proc. Soc. Exptl. Biol. and Med.; etc. Special Int.: Cardiovascular Pharmacodynamics.

COTTER, Ralph U., Pathologist, U. S. D. A., Bureau of Entomol. and Plant Quarantine, Univ. Farm, St. Paul, Minn. **PLANT PATHOLOGY**.

COTTERMAN, Charles William, Rsch. Assoc., Lab. of Vertebrate Biol., Univ. of Mich., Ann Arbor, Mich. **MEDICAL GENETICS**.

COTTINGHAM, Kenneth Charles, Chf. Geologist, Ohio Fuel Gas Co., Columbus, Ohio. **GEOLOGY**.

COTTLE, Delmer Leroy, Rsch. Chemist, Esso Labs., 702 Abbott St., Highland Park, N. J. **ORGANIC CHEMISTRY**.

COTTON, Jack Chilton, Independent Consultant, Speech and Voice Edn., R. F. D. 9, Norwichton, Conn. **SPEECH AND VOICE EDUCATION, RESEARCH**.

COTTON, Richard Thomas, Leader, Stored Plant Products Section, U. S. Bureau of Entomol. and Plant Quarantine, 343 N. 14th St., Manhattan, Kans. **PROTECTION OF STORED FOODSTUFFS FROM INSECT ATTACK**. b. Lydney, England, Jan. 7, 1893. s. William James and Agnes Bertha (James) C. Edn.: B.S., Cornell Univ., 1914; M.S., *ibid.*, 1918; Ph.D., Geo. Washington Univ., 1924. m. Emily Willey, Dec. 18, 1917. c.: Robert T. Exp.: Asst. Entomologist, Insular Exptl. Station, Puerto Rico, 1915-17; Chf. Entomologist, *ibid.*, 1917-18; Entomologist, Bureau of Entomol. and Plant Quar-

antine, U. S. Dept. of Agri., 1919—. Hon. Pos.: Pres., Kans. Entomol. Soc., 1940. Mem.: Fellow, A.A.A.S.; Fellow, Amer. Entomol. Soc.; Wash. Entomol. Soc.; Kans. Acad. of Sci.; Assn. Econ. Entomologists; Amer. Biol. Soc.; Sigma Xi; Gamma Sigma Delta. Author: Insect Pests of Stored Grain and Grain Products, 1941. Contrb. to: Jour. Econ. Entomol.; Indus. and Engrng. Chem.; Cereal Chem. War Record: 2nd Lt., U. S. Army, 1918-19. Special Int.: Fumigation—Biol. and Control of Insect Pests of Stored Foods, Grains, Milled Cereal Products, etc.

COTTRELL, Casper Lehman, Assoc. Prof. of Elec. Engrng., Cornell Univ., Ithaca, N. Y. **ELECTRONICS, PHYSIOLOGY OPTICS**.

COTTRELL, Leonard Slater, Jr., Prof. of Social and Chm., Dept. of Social and Anthropol., Cornell Univ., Ithaca, N. Y. **SOCIAL PSYCHOLOGY**.

COTUI, Frank W., Assoc. Prof. of Exp. Surgery, Coll. of Med., N. Y. Univ., N. Y., N. Y. **MEDICAL SCIENCES**.

COUCH, James Fitton, Chemist, Eastern Regional Rsch. Lab., U. S. D. A., 128 Lismore Ave., Glenside, Pa. **CHEMISTRY**.

COUCH, John Nathaniel, Kenan Prof. of Botany, Univ. of N. C., Chapel Hill, N. C. **MYCOLOGY**. b. Prince Edward Co., Va., Oct. 12, 1896. s. John Henry and Sallie Love (Terry) C. Edn.: A.B., Univ. of N. C., 1919; A.M., *ibid.*, 1922; Ph.D., *ibid.*, 1924. Hon. Deg.: Sc.D., Catawba Coll., 1946. m. Elise Dorothy Ruprecht, May 28, 1927. c.: John Philip; Sally Louise. Exp.: Instr., Botany, Univ. of N. C., 1917-18; Sci. Tchr., H. S., Chapel Hill, N. C., 1919-20; Sci. Tchr. H. S., Charlotte, N. C., 1920-21; Instr., Botany, Univ. of N. C., 1922-25; Asst. Prof., *ibid.*, 1927-28; Assoc. Prof., *ibid.*, 1928-32; Prof., *ibid.*, 1932-45; Kenan Prof., *ibid.*, 1945—. Hon. Pos.: Kenan Prof. of Botany, Univ. of N. C., 1945—. Mem.: A.A.A.S.; Bot. Soc. of Amer.; Amer. Mycol. Soc.; Natl. Acad. Sci.; N. C. Acad. of Sci.; Elisha Mitchell Scientific Soc.; Sigma Xi. Author: The Gasteromycetes of the Eastern U. S. and Can., with W. C. Coker, 1928; The Genus *Septobasidium*, 1938. Contrb. to: Jour. Elisha Mitchell Scientific Soc.; Amer. Jour. of Botany; Mycologia; Sci.; Annals of Botany; Quarterly Jour. of Microscopical Sci.; Botanical Gazette. War Record: W. W. I. Special Int.: Culture, Sexuality, Ciliary Structure and Action of Water Fungi; Fungi Parasitic in Mosquito Larvae; Symbiosis Between Fungi and Scale Insects; Aquatic Forms of Actinomyetales.

COULLIETTE, James Horace, Technical Dir., Industrial Rsch. Inst., Univ. of Chattanooga, Chattanooga, Tenn. **PHYSICS AND SPECTROGRAPHY**. b. Ashford, Ala., Feb. 11, 1899. s. John Thomas and Bertie (Harrison) C. Edn.: A.B., Birmingham Southern Coll., 1918; A.M., *ibid.*, 1919; Ph.D., Columbia Univ., 1941. m. Eve Girardi, Aug. 1, 1927. c. Joan. Exp.: Sci. Instr., Selma H. S., Selma, Ala., 1919; Instr. in Phys., Univ. of Ga., 1920-21; Instr. in Phys., Emory Univ., 1921-22; Instr. in Phys., Hunter Coll., 1925-27; Prof. of Phys., Birmingham Southern Coll., 1927-41; Physicist and Spectrographer, Am. Cast Iron Pipe Co., Birmingham, Ala., 1941-45; Physicist and Spectrographer, Industrial Rsch. Inst., Univ. of Chattanooga, 1946-48; Technical Dir., *ibid.*, 1948—. Mem.: Sigma Xi; Amer. Phys. Soc.; Optical Soc. of Am.; Acoustical Soc. of Am.; A.A.A.S.; Tenn. Acad. of Sci.; Theta Chi; Rotary. Contrb. to: Analytical Chem.; Jour. Optical Soc. of Amer. War Record: Pvt. S.A.T.C., 1918.

COULTER, John Wesley, Prof. of Geography, Dept. of Geol. and Geography, Univ. of Cincinnati, Cincinnati, Ohio. **HUMAN GEOGRAPHY**.

COURANT, Richard, Scientific Dir., Inst. for Mathematics Sciences and Hd. of Math. Dept., N. Y. Univ., 45 Fourth Ave., N. Y. 3, N. Y. **MATHEMATICAL ANALYSIS; MATHEMATICAL PHYSICS; APPLIED MATHEMATICS IN GENERAL**. b. Lublinitz, Poland, Jan. 8, 1888. c. Siegmund and Martha (Freund) C. Edn.: Univ. of Breslau, 1907-08; Univ. of Zurich, 1908; Ph.D. Univ. of Gottingen, 1910. m. Nerina Runge, Jan., 1919. c. Ernst David; Gertrude Elizabeth; Hans Wolfgang

Julius; Marianna Leonore. Exp.: Asst. and Instr. of Math., Univ. of Gottingen, Germany, 1910-14; Prof. of Math., Univ. of Munster, Germany, 1919-20; Prof. of Math., Dir. of Math. Inst., Univ. of Gottingen, Germany, 1920-33; Visiting Prof. at Princeton Univ. and the Univ. of Calif. at Berkeley, 1932-33; Visiting Lectr. Univ. of Cambridge, England, 1933-34; Prof. of Math., N. Y. Univ. and Hd. of the Math. Dept., also Scientific Dir., Inst. for Math. Sciences, 1934—. Mem.: Academies of Sciences in Gottingen, Copenhagen; Accademia dei Lincei, Rome; Am. Math. Soc.; A.A.A.S.; Math. Assn. of Am.; Sigma Xi. War Record: German Army, World War I. Special Int.: Math. Analysis.

COURNAND, Andre, Bellevue Hosp., N. Y., N. Y. CARDIAC RESEARCH.

COURSEN, Charles Blair, Pres. and Dir., General Biol. Supply House, Inc., 761 E. 69th Pl., Chicago, Ill. ORNITHOLOGY.

COURT, Nathan Altshiller, Prof. of Math., Univ. of Okla., Norman, Okla. MODERN GEOMETRY.

COURTIS, Stuart Appleton, Prof. Emer. of Edn., Univ. of Mich., 9110 Dwight Ave., Detroit, Mich. EDUCATION.

COURTNEY, George W., Rsch. Chemist and Chem. Engr., Van Camp Sea Food Co., 26308 Senator Ave., Harbor City, Calif. CHEMISTRY. b. Hutchinson, Kans., Nov. 9, 1915. s. John William Harvey and Katie Mable (Carder) C. Edn.: A.B., Univ. of Calif. at Los Angeles, 1939. m. Mary Louise, Sept. 11, 1940. c.: Susan Louise. Exp.: Development Chemist, D. F. Chemical Co., 1941; Rsch. Chemist, Van Camp Sea Food Co., Harbor City, Calif., 1941—. Mem.: Amer. Chem. Soc.; A.A.A.S. Contrb. to: Arch. of Biochem. and Biophysics. Special Int.: Amino Acids; Biometrics; Chemical Engrng.

COURTNEY, Wilbur Doane, Assoc. Nematologist, U. S. D. A., Bureau of Plant Indus., Beltsville, Md. NEMATOLOGY.

COURTS, Frederick A., Asst. Prof. of Psychol. and Edn., Reed Coll., Portland, Ore. EXPERIMENTAL PSYCHOLOGY.

COUTTS, John Wallace, Asst. Prof. of Chem., Mt. Union Coll., Alliance, Ohio. PHYSICAL CHEMISTRY. b. Neepawa, Manitoba, Can., Feb. 2, 1923. s. J. Wallace and Lavina E. (Murray) C. Edn.: B.Sc., Univ. of Manitoba, 1945; M.Sc., ibid 1947; Ph.D. Purdue Univ., 1950. Exp.: Rsch. Fellow, Univ. of Manitoba, Winnipeg, Can., 1945-46; Grad. Asst., Rsch. Fellow, Purdue Univ., Lafayette, Ind., 1946-50; Asst. Prof., Mt. Union Coll., Alliance, Ohio, 1950—. Mem.: Am. Chem. Soc.; Sigma Xi; Phi Lambda Upsilon. Contrb.: Industrial and Engr. Chem.; Jour. of the Am. Chem. Soc. Special Int.: Phase Rule; Molecular Structure.

COVEN, Allen Willis, Radio Engr., Naval Rsch. Lab., 17 Woodmont Rd., Belle Haven, Alexandria, Va. PHYSICS.

COVENTRY, Frances A., 158 Wilson Dr., Lancaster, Pa. PARASITOLOGY.

COWAN, R. Guy, Onondaga Pottery Co., Syracuse, N. Y. CERAMICS.

COWDRY, Edmund Vincent, Hd. and Prof. of Anatomy, Wash. Univ., Schl. of Med., St. Louis, Mo. CYTOLOGY.

COWIE, Dean Bruce, Staff Member, Carnegie Inst. of Wash., 5241 Broad Branch Rd., N. W., Washington 15, D. C. NUCLEAR PHYSICS AND BIOPHYSICS. b. Vancouver, B. C., Can., Mar. 6, 1913. s. Louis James and Cora (Graf) C. Edn.: B.S., Swarthmore Coll., 1939. m. Jean Vardeman Cockrell, Aug. 19, 1946. c.: Dean B., Jr.; Carol Vardeman; Katharine M. Exp.: Fellow, Natl. Cancer Inst. U. S. Pub. Health Service, Washington, D. C., 1940-44; Physicist and Biophysicist, Terrestrial Magnetism, Carnegie Inst. of Washington, D. C., 1944—. Hon. Pos.: Chmn. Subcom., Heavy Particles, Natl. Radiation Protection Comm. Mem.: Fellow, Amer. Phys. Soc.; Fellow, A.A.A.S.; Hon. mem., Tex. Radiol. Soc.; Wash. Acad. of Sci.;

Wash. Philos. Soc.; Cosmos Club. Contrb. to: Jour. of Natl. Cancer Inst.; Jour. Cellular and Comp. Physiol.; Arch. of Biochem. and Biophysics; Jour. of Bacteriol.; The Phys. Rev.; Power Plant Engrng.; The Rev. of Scientific Instruments; The Amer. Jour. of Roentgenol. and Radium Therapy; Amer. Jour. of Ophthalmol.; Jour. of Applied Physics; The Amer. Jour. of Physiol.; Amer. Jour. of Obstetrics and Gynecol.; Annals of N. Y. Acad. of Sci.; Jour. of Tropical Med.; etc. Special Int.: Nuclear Physics; Biochem.; Sulfur Metabolism of Microorganisms; Cellular Physiol.; Radiation Physics.

COWGILL, Donald O., Prof. and Hd., Social Dept., Univ. of Wichita, Wichita, Kans. POPULATION AND URBAN SOCIOLOGY.



b. Wood River, Nebr., May 10, 1911. s. Olen and Gertrude (Quisenberry) C. Edn.: A.B., Park Coll., 1933; A.M., Wash. Univ., 1935; Ph.D., Univ. of Pa., 1940. m. Mary Strain, Sept. 1, 1935. c.: Martha Jane; Donald Franklin; Catha Jean. Exp.: Hd. and Assoc. Prof. of Sociol., Drury Coll., 1937-42; Dean of Men., ibid., 1941-42; Sr. Rsch. Analyst, Mo. Social Security Commn., 1942-43; Rsch. Asst. to the Vice-Pres., Studebaker Corp., 1943-45; Hd. and Prof. of Sociol., Drake Univ., 1945-46; Hd. and Prof. of Sociol., Univ. of Wichita, 1946—. Hon. Pos.: Pres., Midwest Sociol. Soc., 1952-53; Com. on Enumeration Areas, U. S. Bureau of the Census, 1948—; Chmn., Wichita Citizens' Comm. on Displaced Persons, 1947-49; Bd. of Dirs., Wichita Family Consultation Service, 1948-50; Bd. of Dirs., Mo. Assn. for Social Welfare, 1939-43; Rsch. Consultant, Wichita Community Planning Council, 1946—. Mem.: Amer. Sociol. Soc.; Midwest Sociol. Soc.; A.A.U.P.; Social Work Rsch. Group; Amer. Acad. Political and Social Sci.; Pi Kappa Delta; Alpha Kappa Delta. Author: Residential Mobility of an Urban Population, 1935; Mobile Homes, 1941; Methodology of Planning Census Tracts, 1949; Social Characteristics of a Central Area of Wichita, 1952; A Pictorial Analysis of Wichita, 1953. Contrb. to: Jour. Social Psychol.; Amer. Jour. Sociol.; Amer. Sociol. Rev.; Midwest Sociologist; Mo. Index of Public Assistance. Special Int.: Urban Sociol.; Human Ecology; Population and Social Theory.

COWLES, Alfred, Pres., Cowles Commission, Rsch. Econ., Univ. of Chicago, 1130 Lake Shore Dr., Chicago, Ill. ECONOMICS.

COWLES, Edward Spencer, Dir. Gen., Body and Mind Clinic, 591 Park Ave., N. Y., N. Y. NEUROLOGY, PSYCHIATRY.

COWLES, John T., Dir., Testing Programs Div., Ednl. Testing Service, Princeton, N. J. PSYCHOLOGY. b. Burlington, Vt., July 31, 1911. s. Clarence P. and Laura E. (Golden) C. Edn.: A.B., Princeton Univ., 1934; Ph.D., Yale Univ., 1937. m. Viola M. Hovey, Aug. 13, 1937. c. Hovey M.; Ethan B.; Roger A.; Cleveland J. Exp.: Instr. in Psychol. and Dir. of Lab., Univ. of Ala., 1938-39; Asst. Prof. in Psychol., Univ. of Ill., 1939-46; Dir. of Rsch., Psychol. Rsch. and Exam. Unit, U. S. A. F. Air Trng. Command, 1946-48; Dir., Testing Programs Div., Ednl. Testing Service, Princeton, N. J., 1948—. Mem.: Am. Psychol. Assn.; A.A.A.S.; Midwestern Psychol. Assn.; Phi Beta Kappa; Sigma Xi; Psychometric Soc. Contrb. to: Jour. Comparative Psychol.; Jour. Applied Psychol.; Jour. Psychol.; Psychol. Rev.; etc. Gen. Int.: Developed Methods of Studying Animal Motivation and Learning; Contributed Rsch. on Selection and Classification of Air Force Specialized Personnel. Special Int.: Development and Admin. of Testing Programs for Selection and Evaluation of Coll. and Grad. and Professional Personnel; Development and Admin. of Techniques for Measuring Aptitudes, Achievement, and Personality Characteristics.

COWLIN, Robert William, Dir., Pacific Northwest Forest Expt. Station, 423 U. S. Courthouse, Portland, Ore. **FORESTRY**. b. Chicago, Ill., Mar. 9, 1899. s. Frederic W. and Josephine (McCartney) C. Edn.: B.S., Univ. of Calif., 1922; M.S., *ibid.*, 1928. m. Frances Thayer (dec.), 1922. 2nd m. Marcile Bates, Mar. 26, 1949. c.: Marjorie. Exp.: Assoc. Forest Economist, 1928-34; Regional Dir., Forest Survey, 1934-38; Chf., Div. Forest Economics, Pacific Northwest Forest Expt. Station, U. S. Forest Service, 1938-50; Dir., *ibid.*, 1950—. Mem.: A.A.A.S.; Soc. of Amer. Foresters; Forest Products Rsch. Soc.; Amer. Soc. of Range Management; Sigma Phi Epsilon; Phi Sigma; Xi Sigma Pi; Alpha Zeta. Contrb. to: Jour. Forestry. War Record: Private, U. S. Army, 1918.

COWLING, Donald John, Pres. Emer., Carleton Coll., 444 Otis Ave., St. Paul, Minn. **EDUCATION**.

COWLING, Vincent Frederick, Assoc. Prof. of Mathematics, Department of Mathematics, Univ. of Ky., Lexington, Ky. **MATHEMATICS**. b. St. Louis, Mo., December 15, 1918. s. Ross A. and Alice (Frederick) C. Edn.: B.A., Rice Institute, 1941; M.A., *ibid.*, 1942; Ph.D., *ibid.*, 1944. m. Alison Campbell, Dec. 24, 1944. d. Maud and Marvin Croom. c.: John Frederick; Margaret Ann. Exp.: Samuel Fain Carter Fellow of Math., Rice Inst., 1943-44; Instr. of Math., Ohio State Univ., 1945-46; Asst. Prof. of Math., Lehigh Univ., 1946-49; Assoc. Prof. of Math., Univ. of Ky., 1949—. Mem.: Pi Mu Epsilon; Sigma Xi; Amer. Math. Soc.; Amer. Math. Assn. Contrb. to: Bull. of Amer. Math. Soc. Ph.D. Dissertation: On Functions Defined by a Taylor Series. Listed in: A.M.S. Special Int.: Complex Variables and Functional Analysis.

COWPERTHWAIT, Irving Archibald, Chf. Engr., Thompson Wire Co., 41 Mildred Ave., Boston 26, Mass. **PHYSICAL CHEMISTRY**. b. Worcester, Mass., Oct. 28, 1904. s. Allan Leigh and Edith Echo (Ring) C. Edn.: B.S., Mass. Inst. of Tech., 1926; Ph.D., Columbia Univ., 1931. m. Fae Irene Poore, June 10, 1931. Exp.: Fellow, Rockefeller Inst. of Med. Rsch., New York, N. Y., 1926-28; Asst., *ibid.*, 1928-30; Instr. in Chem., Columbia Univ., N. Y. C., 1930-37; Chf. Engr., Thompson Wire Co., Boston, Mass., 1937—. Mem.: Amer. Chem. Soc.; Amer. Inst. of Chemists; A.A.A.S.; Amer. Soc. for Metals; Amer. Sci. Affiliation: Sigma Xi; Phi Lambda Upsilon; Epsilon Chi. Contrb. to: Jour. Amer. Chem. Soc.; Trans. Faraday Soc.; Proc. Natl. Acad. of Sci.; Jour. Chem. Edn. Special Int.: Phys. Chem. of Solutions; Ferrous Metallurgy.

COX, Alonzo Bettis, Prof. of Cotton Marketing, Chf. Office of Cotton Rsch., Univ. of Tex., Austin, Tex.

COX, Alvin Joseph, Professional Engr., 1118 Emerson St., Palo Alto, Calif. **CONSULTING CHEMICAL**

ENGINEER AND CHEMIST. b. Lawrence, Kans., June 14, 1875. s. Benjamin and Mary (Morris) C. Edn.: A.B., Stanford Univ., 1901; A.M., *ibid.*, 1902; Ph.D., Univ. of Breslau, Germany, 1904. m. Mary Amelia, Mar. 22, 1906. c.: Alvin J., Jr., Mrs. Walter Beckh; Mrs. Paul H. Kocher. Exp.: Asst., Stanford Univ., Calif., 1899-1901; Instr. Anal. Chem., *ibid.*, 1901-02; Chem., 1902-08; Phys. Chem. and Chf. Section, Weights and Measures and Mineral Analysis, Bur. of Sci.,

Govt. of P. I., 1906-10; Acting Prof., Montana, 1909-10; Ch. Div. Chem., 1910-12; Asst. Dir., Acting Dir., and Dir. Bur. of Sci. and Gen. Editor, Philippine Jour. of Sci., 1912-19; Consulting Chem. Engr., 1919-32; Chf. Bur. Chem., State of Calif., Dept. Agri., 1932-45. Mem.: Amer. Chem. Soc.; Calif. Entomol. Club; Phi Beta Kappa; Sigma Xi. Contrb. to: Jour. Amer. Chem. Soc.; Zeitschr. f.

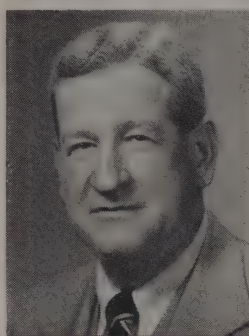
Phys. Chem.; Zeitschr. f. Inorg. Chem.; Philippines Jour. of Sci.; Deutsche Mechan. Zeitg.; Mineral Resources; Philippine Agri. Rev.; Agri. Chem.; Soap and Sanitary Chem. Special Int.: Acid, Neutral and Basic Chromates of the Difficulty Soluble Metals; Oxidation and Deterioration of Coal, Copra and Other Coconut Products, Cement Materials; Effect of Litsea Chenensis on the Hardening of Lime Mortar, Indus. Alcohol, Paint, Indus. Resources of the Philippine Islands; Nomenclature, Agri. Chem. including Econ. Poisons, Spray Residue, Fertilizing Materials and Soils.

COX, Benjamin Burton, Staff Geologist, Gulf Rsch. and Development Co., P. O. Box 2038, Pittsburgh, Pa. **GEOLOGY**.

COX, Clare Francis, Hd., Dept. of Botany, Arsenal Technical Schls., 528 N. Oxford St., Indianapolis, Ind. **BOTANY**.

COX, Edwin, Vice-Pres., Va.-Carolina Chem. Corp., P. O. Box 667, Richmond, Va. **CHEMISTRY AND**

CHEMICAL ENGINEERING. b. Richmond, Va., Sept. 20, 1902. s. Edwin P. and Sallie Bland (Clarke) C. Edn.: B.S., Va. Military Inst., 1920; M.S., *ibid.*, 1925. m. Virginia Bagby De Mott, May 19, 1927. c.: Edwin. Exp.: Analytical Chemist, Va.-Carolina Chem. Corp. and subsidiary Tobacco By-Products and Chem. Corp., Richmond, Va., 1920-21; Foreman, Sulfuric Acid Production, *ibid.*, 1921-22; Plant Chemist, *ibid.*, 1923; Production Supt., *ibid.*, 1924; Rsch. Chemist, *ibid.*, 1925-27; Asst. to Exec., *ibid.*, 1927-33; Vice-Pres. of Subsidiary, *ibid.*, 1934-36; Asst. Div. Mgr., *ibid.*, 1936-39; Div. Mgr., *ibid.*, 1940-48; Vice-Pres., *ibid.*, 1948—. Hon. Pos.: Officer, Chmn., Councilor, Va. Section, Amer. Chem. Soc.; Chmn., Sci. Advisory Com., Univ. of Va.; Distinguished Service Award, Va. Section, Amer. Chem. Soc. Mem.: Fellow, A.A.A.S.; Amer. Chem. Soc.; Fellow, Amer. Inst. Chemists; Amer. Inst. Chem. Engrs.; Soc. Chem. Industry; Industrial Rsch. Inst.; Va. Acad. Sci. Author: Rancidity in Wheat Flour. Contrb. to: Chem. and Engrng. News. War Record: Lt. Col. Inf., Col. Inf., Col. G.S.C., Brig. Gen. (ret.). Special Int.: Nicotine and Insecticides; Phosphorous and Phosphatic Compounds; Protein Fibers; Fertilizers; Phosphate Rock Mineralogy.

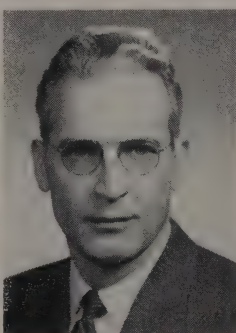


COX, Gerald Judy, Rsch. Chemist, Corn Products Ref. Co., 200 S. Seventh Ave., La Grange, Ill. **BIOCHEMISTRY**.

COX, Gertrude, N. C. State Coll., Raleigh, N. C. **STATISTICS**.

COX, Gilbert Lee, In Chg., Empire State Tech. Sect., Development and Rsch. Div., The Internat.

Nickel Co., Inc., 45 Exchange St., Rochester 14, N. Y. **METALLURGY AND METALLURGICAL ENGINEERING**. b. Bristersburg, Va., Mar. 2, 1906. s. Eppa Sherman and Carrie (Lee) C. Edn.: B.S., Va. Poly. Inst., 1928; S.M., Mass. Inst. of Tech., 1930. c.: Shirley Virginia and Lee Randolph. Exp.: Rsch. Assoc., Mass. Inst. of Tech., Cambridge, Mass., 1928-31; Rsch. Engr., The Internat. Nickel Co., Inc., Bayonne, N. J., 1931-34; Development Engr., *ibid.*, N. Y. C., 1934-41; Metallurgical Rsch. and Development of Ordnance Material, Ordnance Corps, U. S. Army,



1941-46; Tech. Representative, The International Nickel Co., Inc., Rochester, N. Y., 1946—. Mem.: Amer. Soc. for Metals; Amer. Inst. of Mining and Metallurgical Engrs.; Amer. Inst. of Chem. Engrs.; Amer. Foundrymen's Soc.; A.A.A.S.; Natl. Assn. of Corrosion Engrs.; Amer. Chem. Soc.; Amer. Ordnance Assn.; Phi Kappa Phi. Special Int.: Corrosion and its Accompanying Phenomena, Ordnance Material Rsch. and Development; Metallurgical and Engrng. Applications of Alloy Steels, High Temp. Alloys; Alloy Irons and Bronzes.

COX, Henry Leon, General Mgr., Chem. Div., Corn Products Refining Co., Argo, Ill. **CHEMISTRY.**

COX, Herald Rea, Dir., Virus Rsch., Lederle Labs., Inc., Pearl River, N. Y. **BACTERIOLOGY.**

COX, James Carl, II, Prof. of Chem., U. S. Naval Acad., Annapolis, Md. **PHYSICAL ORGANIC CHEMISTRY.** b. Wolf Summit, W. Va., June 17, 1919. s. James Carl, Sr. and Maggie Lillian (Merrells) C. Edn.: B.S., W. Va. Wesleyan Coll., 1940; M.S., Univ. of Del., 1947; Ph.D., ibid., 1949. m. Alma Lee Tenney, Sept. 8, 1945. c.: James Carl, III; Joseph Merrells, II; Alma Lee. Exp.: Asst. in Chem. and Physics, W. Va. Wesleyan Coll., 1938-40; Chemist, Ammonia Dept., E. I. du Pont de Nemours and Co., Belle, W. Va., 1940-43; Instr. in Chem., Univ. of Del., 1946-49;



E. I. du Pont Rsch. Fellow in Chem., ibid., 1948-49; Chemist, Glidden Corp., Macon, Ga., 1949; Prof. and Hd., Chem. Dept., Wesleyan Coll., Macon, Ga., 1949-51; Visiting Prof. of Organic Chem., Middle Tenn. State Coll., summer, 1950; Prof. of Chem., U. S. Naval Acad., Annapolis, Md., 1951—. Mem.: Amer. Chem. Soc.; A.A.A.S.; Franklin Inst.; W. Va. Acad. Sci.; Ga. Acad. Sci. Contrb. to Jour. Amer. Chem. Soc.; Jour. Southern Rsch.; Chemical Abstracts. War Record: U. S. Army, 1943-45. Special Int.: Dehydration of Alcohols; Intramolecular Rearrangements; Aldol Condensation; Oxidation of Organic Compounds; Organometallic Compounds.

COX, John Lyman, retired, 609 E. Gravers Lane, Chestnut Hill, Philadelphia, Pa. **MECHANICAL, METALLURGICAL ENGINEERING.**

COX, Joseph Frank, U. S. Dept. Agri., Rm. 3572, South Bldg., Washington, D. C.

COX, Lionel Audley, Dir. of Rsch., Johnson and Johnson Ltd., Montreal, P. Q., Canada. **HIGH POLYMERS, MAN MADE FIBERS, TEXTILES, CELLULOSE, PAPER.** b. Winnipeg, Man., Canada, Sept., 18, 1916. s. Harry Audley and May Julia (Racine) C. Edn.: B.A., Univ. of British Columbia, 1941; M.A., ibid., 1943; Ph.D., McGill Univ., 1946. m. Evelyn Juliet, Sept. 1, 1942. c.: Victoria Margaret; Christopher Bruce; David Allen. Exp.: Tchr. of Gen. Sci., Univ. Schl., Victoria, B. C., Can., 1935-40; Chf. Chemist, Sidney Roofing and Paper Co., Ltd., ibid., 1941-44; Lectr. in Gen. and Organic Chem., Univ. of B. C., Vancouver, B. C., Can., 1943-44; Rsch. Chemist, Amer. Viscose Co., Marcus Hook, Pa., 1946-51; Sr. Rsch. Chemist, ibid., 1951-53; Dir. of Rsch., Johnson and Johnson Ltd., Montreal, P. Q., Can., 1953—. Mem.: Amer. Chem. Soc.; A.A.A.S.; Sigma Xi. Contrb. to: Indus. and Engrng. Chem.; Encyclopedia of Chem. Tech. War Record: Reserve Canadian Officers Trng. Corp. Special Int.: Work on Asphalt, Asphalt Shingles and Paper Boards, Fundamental Rsch. Work on Cellulose, Cellulose Derivatives and Related Topics; Pilot Plant Work on the Manufacture of Cellulose Acetate Flakes. Recent Work has been concerned with the solution behavior and filtration of High Polymers.

COX, Marion Monroe, Dir., Reading Div., Psycho-Educational Clinic, Univ. of Southern Calif., Los Angeles, Calif. **PSYCHOLOGY.**

COX, Paul E., 520 N. Tenth St., Baton Rouge 8, La. **CERAMICS.**

COX, Richard Threlkeld, Prof. of Physics, Johns Hopkins Univ., Baltimore, Md. **PHYSICS.**

COX, Rufus Francis, Prof. of Animal Husbandry, Kansas State Coll., Manhattan, Kans. **SHEEP INVESTIGATIONS.**

COXE, Warren Winfred, Dir., Div. of Rsch., N. Y. State Dept. of Edn., Albany, N. Y. **EDUCATIONAL ADMINISTRATION AND PSYCHOLOGY.** b. Belvidere, Ill., July 19, 1886. s. Herbert J. and Nellie M. (Warren) C. Edn.: B.S., Dak. Wesleyan Univ., 1911; Ph.D., Ohio State Univ., 1923. m. Gertrude E. Burton of Albany, N. Y., July 13, 1935. d. Henry and Delia Burton. c.: Sara Elizabeth. Exp.: Tchr., Rushford, Minn., 1911-13; Prin., Fountain, Minn., 1913-15; Asst. Dir., Voc. Bur. of Pub. Schls., Cincinnati, Ohio, 1916-21; Psychol., Part-time, Gen. Hosp., Cincinnati, 1916; Psychol. Examiner, U. S. Army, 1918; Instr., Ohio State Univ., Summer Schl., 1922-23; State Coll. for Tchrs., Albany, N. Y., 1924-25; Lectr., Univ. of Wis., 1927; Univ. of Tex., 1930; Chief, Bur. of Edn. Measurements, State Dept. of Edn., Albany, N. Y., 1923-29; Dir., Div. of Rsch., N. Y. State Dept. of Edn., Albany, 1929—. Mem.: Sigma Xi; Amer. Edn. Rsch. Assn.; A.A.S.A.; N.S.S.E.; Edn. Rsch. Assn. of N. Y. S.; A.A.A.S.; A.P.A.; Phi Delta Kappa; Albany Club of Sigma Xi; Albany Chapt., Amer. Statis. Assn.; N. Y. S. Psych. Assn.; N. Y. S. Hist. Assn.; Univ. Club; Torch Club. Coauthor: Scale of Performance Tests, 1934. Contrb. to: Various Ednl. Jours. Ph.D. Dissertation: The Influence of Latin on English Spelling. War Record: Psychological Examiner, 2nd Lt., S. C., U. S. Army, 1918. Travel: England; Nova Scotia; Bermuda. Listed in: A.M.S.; Who Knows—and What; World Biography. Special Int.: Tests; Schl. Administration; Secondary Edn.; Schl. Surveys.

COYKENDALL, Frederick, Chm. Trustees, Columbia Univ. and Pres. Columbia Univ. Pres., 1 W. 72nd St., N. Y., N. Y. **EDUCATION.**

COYLE, Elizabeth Eleanor, Asst. Prof. of Biol., Coll. of Wooster, Wooster, Ohio.

CRABB, Edward Drane, Prof. of Biol., Univ. of Colo., Boulder, Colo. **ZOOLOGY.**

CRABTREE, John Ickeringill, Asst. Supt. in Chg., Kodak Rsch. Labs., Photographic Chem. Dept., 26 Broadway, Rochester 7, N. Y. **PHOTOGRAPHIC CHEMISTRY.** b. Clayton-le-Moors, Lancashire, England, Mar. 27, 1901. s. John and Ann (Fish) C. Edn.: B.Sc., Victoria Univ., 1912; M.Sc., ibid., 1913. Exp.: Rsch. Chemist, Eastman Kodak Co., Rochester, N. Y., 1913-16; Hd. of Dept., Photographic Chem., ibid., 1916—; Asst. Supt. and Chf. Photographic Chemist, 1929—. Mem.: Amer. Chem. Soc.; Optical Soc. of Amer.; Oval Table Soc.; Acad. of M.P. Arts and Sci.



Fellow of A.A.A.S.; Photographic Soc. of Amer.; Royal Institute of Chem. of Great Britain and Ireland; Royal Photographic Soc.; Soc. of Motion Picture and Television Engineers (Pres., 1930-31). Awarded Progress Medal of French Photographic Soc., 1924; Henderson Award of Royal Photographic Society, 1944; Jour. Award, Soc. Mot. Pict. Engr., 1944; Jour. Award, Phot. Soc. of Amer., 1949, Progress Medal Award, Soc. of Mot. Pict. and Tel. Engr., 1952; Jour. Award, Phot. Soc. of lung Photographischer Lösungen und Behandlung Photographischer Chemikalien, 1929; Le Developpement des Films Cinematographiques, 1925; Photographic Chem. and Solutions, with G. E. Matthews, 1939. Contrb. to: Photographic and Scientific Jours. Special Int.: Chem. Photography; Motion Picture Engrng.

CRADDOCK, George Washington, Div. Chf. Chf. of Forest Influences Investigations, Intermountain Forest and Range Expt. Station, Ogden, Utah. **FOREST INFLUENCES.**

CRAFT, William A., Dir., Regional Swine Breeding Laboratory, 108 Curtiss Hall, Iowa State Coll., Ames, Iowa. **APPLICATION OF GENETICS IN ANIMAL BREEDING.** b. September 9, 1894, Jonesboro, Ark. s. John M. and Ellar (Gambill) C. Edn.: B.S., Iowa State Coll., 1922; M.S., *ibid.*, 1923; Ph.D., Univ. of Wis., 1932. m. Rosalie Rathbone of Denton, Texas, 1950. d. John K. and Myrtle Rathbone. Exp.: Prof. of Animal Husbandry, Okla. A. and M. Coll., 1923-36; In Chg., Swine Investigations, Bur. Amer. Indust., U. S. D. A., 1936-37; Present Position, 1937—. Mem.: Pres., Amer. Soc. Animal Prod., 1947; Pres., Natl. Block and Bridle Club, 1923-26; A.S.A.P.; Gen. Soc. Amer.; A.A.A.S.; Sigma Xi; Phi Sigma; Alpha Gamma Rho; Alpha Zeta; Mason; Lions. Author: Bull. and Jour. Articles; Ed., Animal Prod. Sect., Biol. Abst. Ph.D. Dissertation: Sex Ratios in Mules and Other Hybrid Mammals. War Record: Quartermaster Corps, Remount Service, 1918-19. Q. M. Sgt. Travel: N. Amer.; Europe. Gen. Int.: Superior Service Award, U. S. D. A., 1949. Hobby: Photography. Listed in: Who's Who in Ia.; Who Knows—and What; Internatl. Blue Book; A.M.S. Special Int.: Inbreeding, Crossbreeding and inheritance in farm animals.

CRAFTS, Alden S., Prof. of Botany and Botanist, Expt. Station, Botany Div., Univ. of Calif., Davis, Calif. **BOTANY.**

CRAIG, Cecil Calvert, Prof. of Math., and Dir. of the Stat. Rsch. Lab., (1946—), Univ. of Mich., Ann Arbor, Mich. **MATHEMATICAL STATISTICS.** b. April 14, 1898, Ottwell, Ind. s. Harley E. and Lula (Abbott) C. Edn.: A.B., Ind. Univ., 1920; A.M., *ibid.*, 1922; Ph.D., Univ. of Mich., 1927. m. Ruth Swan of Plainville, Ind., 1927. c.: Mary Elizabeth. Exp.: Instr. of Math., Ind. Univ., 1920-22; Instr. of Math., Univ. of Mich., 1922-24, 1925-29; Asst. Prof. of Math., *ibid.*, 1931-36; Assoc. Prof. of Math., *ibid.*, 1936-42; Prof. of Math., 1942—. Mem.: Fellow, Amer. Soc. for Quality Control; Math. Assn. of Amer.; Amer. Math. Soc.; Fellow, Amer. Statistical Assn.; Fellow, Inst. of Math. Statistics; Sigma Nu; Phi Beta Kappa; Sigma Xi; Pres., Inst. of Math. Stat., 1942-44; Biometric Soc.; Assn. for Computing Machinery. Ph.D. Dissertation: An Application of Thiele's Semi-Invariants to the Sampling Problem. Contrb. to: Annals of Math. Statistics; Metron; Biometrika; Annals of Math.; Amer. Math. Monthly; Journal of Amer. Statistical Assn.; Indus. Qlty. Control. War Record: S.A.T.C., Officers Trng. Schl., 1918. Exp.: Year as Fellow of Amer.-Scandinavian Foundation at Lund, Sweden, 1924-25; Natl. Res. Coun. Fellow in Math., Princeton Univ., 1929-30; Stanford Univ., 1930-31; Fellow of the Rockefeller Foundation, Univ. of London, 1937-38. Special Int.: Statistical Theory and Methodology; Statistical Quality Control.

CRAIG, Gerald Spellman, Prof. of Natural Sciences, Tehrs. Coll., Columbia Univ., N. Y., N. Y. **NATURAL SCIENCE, EDUCATION.**

CRAIG, Hugh, Editor, Oil, Paint and Drug Reporter, 59 John St., N. Y., N. Y. **CHEMISTRY.**

CRAIG, Lyman C., Mem., Rockefeller Inst., 66th St. and York Ave., N. Y. 21, N. Y. **ORGANIC CHEMISTRY.** b. Palmyra, Iowa, June 12, 1906. s. William McCoy and Anna (Kitchell) C. Edn.: B.S., Iowa State Coll., 1928; Ph.D., *ibid.*, 1931. m. Rachel Parker, Nov. 25, 1937. c.: Anna; David; Mary Elizabeth. Exp.: Natl. Rsch. Coun. Fellow, Johns Hopkins Univ., Baltimore, Md., 1931-33; Asst., Assoc., Assoc. Mem. and Mem., Rockefeller Inst. for Med. Rsch., N. Y. C., 1933—. Mem.: Sigma Xi; Amer. Chem. Soc.; A.A.A.S.; N. Y. Acad. of Sci.; Natl. Acad. of Sci. Contrb. to: Analytical Chem.; Jour. of Amer. Chem. Soc.; Jour. of Biol. Chem. Special Int.: Organic Chem.; Structure of Alkaloids; Antibiotics and Polypeptides; Separation Processes.

CRAIG, Palmer Hunt, Coll. of Engrng., Univ. of Miami, Coral Gables, Fla. **ENGINEERING, PHYSICS.**

CRAIG, Roderick, Assoc. Prof. of Insect Physiology, Univ. of Calif., Berkeley, Calif. **ENTOMOLOGY.**

CRAIG, W E Jack, Hd. Rsch. Lab., Rohm and Haas Co., 3445 Oakmont Ave., Philadelphia 36, Pa. **CHEMISTRY.** b. September 8, 1909, Harrisonville, Missouri. s. Clarence E. and Abbie (Warner) C. Edn.: Sterling Coll., Kans., 1927-29; B.S., 1931; M.S., 1932, Ph.D., 1934, Univ. of Nebr. Exp.: Rohm and Haas Co., Phila., 1935—; Rsch. Chem., 1935-49; Lab. Hd., Synthetic Organic Rsch., 1949-51; Lab. Hd., Pesticide Rsch., 1951—; Granted Forty U. S. and For. Patents. Mem.: Internatl. Torch; Sigma Xi; Pi Mu Epsilon; Phi Lambda Upsilon; Alpha Chi Sigma;

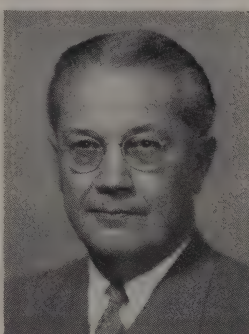


Phila. Acad. of Nat. Sci. Ph.D. Dissertation: Research on Organic Arsenicals. War Record: Natl. Guard, Kans., 1928-30; Chem. Warfare Reserve Officer, 1939-42. Travel: N. Amer.; Caribbean. Hobby: Travelogues with Motion Picture and Three-dimensional Photography. Listed in: A.M.S.; Who's Who in the East; Internatl. Blue Book. Special Int.: Carbohydrates, Organic Arsenicals, Pesticides.

CRAIG, Wallace, Rsch. Fellow in Psychol., Harvard Univ., Cambridge, Mass. **ANIMAL PSYCHOLOGY.**

CRAIG, William Moore, Prof. of Chem., Tex. Tech. Coll., 2321 18th St., Lubbock, Tex. **PHYSICAL CHEMISTRY AND SPECTROGRAPHY.**

CRAIG, Winchell McKendree, Hd. of Section of Neurol. Surgery, Mayo Clinic and Prof. of Neuro-



surgery, Mayo Foundation, Univ. of Minn., Mayo Clinic, Rochester, Minn., 1925—. Mem.: Amer. Coll. of Surgeons; A.M.A.; Amer. Surgical Assn.; Amer. Neurol. Assn.; Amer. Acad. of Neurol.; Soc. of Neurol. Surgeons; Harvey Cushing Soc.; Southern Surgical Assn.; Western Surgical Assn.; Central Neuropsychiatric Assn.; Central Soc. for Clin. Rsch.; Internatl. Neurol. Assn.; Internatl. Soc. of Surgery; Assn. of Milit. Surgeons of the U. S.; Soc. of U. S. Med. Consultants in W. W. II; Minn. State Med. Assn.; Minn. Surgical Soc.; Minn. Soc. of Neurol. and Psychiatry; Olmsted, Houston, Fillmore, Dodge Co. Med. Soc.; Southern Minn. Med. Assn.; Internatl. Coll. of Surgeons; Amer. Acad. of Neurol. Surgery; Italian Soc. of Surgery; Miss. Valley Med. Soc.; Soc. of Neurosurg. of the French Lang.; Italian Soc. of Neurosurgery; Sigma Xi; Beta Theta Pi; Phi Beta Pi. Contrb. to: Annals of Surgery; Surgery, Gynecol. and Obst.; Surgical Clinics of N. Amer.; Amer. Jour. of Surgery; Arch. of Surgery; Arch. of Neurol. and Psychiatry; Jour. of A.M.A.; Minn. Me.; Southern Surgeon; Jour. of Neurosurgery; Posgrad. Med.; U. S. Navy Med. Bull.; Prof. Staff Meetings, Mayo Clin.; Arch. of Surgery, etc. Special Int.: Rsch. Work Carried on

with Regard to Compression and Injuries to the Spinal Cord and Brain as well as Physiol. Aspects of the Removal of the Sympathetic Nervous System.

CRAIGHEAD, Frank Cooper, Chf. Forest Insect Investigations, Bureau of Entomol. and Plant Quarantine, U. S. D. A., Washington, D. C. ZOOLOGICAL SCIENCES.

CRAIGIE, John Hubert, Assoc. Dir. of Sci. Service and Cominon Botanist, Botanical Bldg., Center Expt. Station, 479 Kensington Ave., Ottawa, Ont., Can. PLANT PATHOLOGY.

CRAIN, Cullen Malone, Assoc. Prof., 3409 Hillview Rd., Austin, Tex. ELECTRONICS. b. Sept. 10, 1920, Goodnight, Tex. s. John and Margaret (Gunn) C. Edn.: B.S., Univ. of Tex., 1942; M.S., ibid., 1947; Ph.D., ibid., 1952. m. Virginia Raftery of Evanston, Ill., Jan. 16, 1943. d. Mr. and Mrs. W. C. Raftery. c.: Michael and Karen. Exp.: Tex. Power and Light Co.; Philco Radio and Telev. Corp.; Univ. of Tex., Elec. Engrng. Dept.; Univ. of Tex., Rsch. Lab. Mem.: Sigma Xi; A.I.E.E.; I.R.E.; Tau Beta Pi; Eta Kappa Nu. Ph.D. Dissertation: Atmospheric Refractive Index Measurements. Hobbies: Tennis; Gardening. Listed in: Who's Who in S. and So. West; A.M.S. Special Int.: Dielectric Constants of Gases. Atmospheric Refractive Index Measurements.

CRALL, Howard William, Assoc. Prof. of Biol., Western Ill. State Coll., Macomb, Ill. ZOOLOGY, ENTOMOLOGY AND THE TEACHING OF BIOLOGY. b. Akron, Ohio, Sept. 30, 1915. s. Howard Claire and Gertrude Mae (Richards) C. Edn.: B.S., Ohio State Univ., 1938; M.Sci., ibid., 1941; Ph.D., ibid., 1950. m. Erna Johanna Eva Jaap. Dec. 9, 1942. Exp.: Sci. Tehr., Champion Jr. High Schl., Plainessville, Ohio, 1938-39; Grad. Asst.; Purdue Univ., West Lafayette, Ind., 1941-42; Clinic Lab. Technician and Instr., U. S. Army, 1942-45; Asst. Prof. of Biol., Culver-Stockton Coll., Canton, Mo., 1946-47; Assoc. Prof. of Biol., West Ill. State Coll., Macomb, Ill., 1947—. Hon. Pos.: Western District Chmn., Ill. Jr. Acad. of Sci.; Ill. Acad. of Sci.; Second Vice-Pres. Mem.: A.A.A.S.; Ill. Acad. of Sci.; N.A.R.S.T.; A.A.U.P.; Ill. Edn. Assn.; Amer. Assn. of Econ. Entomologists; N.S.T.A.; Natl. Assoc. of Biol. Teachers; Assn. of Student Teaching; Sigma Zeta. Contrb. to: Transaction of the Ill. Acad. of Sci.; Sci. Edn. Special Int.: Teaching of Biol. Sci. Edn., Secondary Edn.; General Biol.; Zoology; Entomology.

CRAM, Eloise Blaine, Sr. Zoologist, Natl. Inst. of Health, U. S. P. H. S., 6624 River Rd., Bethesda, Md. PARASITOLOGY.

CRAM, S. Winston, Hd. Dept. of Phys. Sci., Dir. of Audio-Visual Aids, Kans. State Tchrs. Coll., Emporia, 1620 Sherwood Way, Emporia, Kans. PHYSICS, GASEOUS ELECTRONICS, SPECTROSCOPY. b. Waterville, Minn., Aug. 28, 1907. s. H. D. and Myrtle P. (Green) C. Edn.: B.A., St. Olaf Coll., 1929; Ph.D., Univ. of Wis., 1935. m. Florence Robinson, Sept. 4, 1930. c.: Stuart P.; Leighton Scott; Alan Bradley. Exp.: Instr. of Physics, St. Olaf Coll., Northfield, Minn., 1929-30; Rsch. Asst., Univ. of Wis., Madison, Wis., 1931-35; Kosciuszko Fellow, Univ. of Warsaw, Poland, 1935-36; Instr., Univ. of Wis., 1936; Hd. Physics Dept., Kans. State Tchrs. Coll., Emporia, 1937-44; Supvr. of Electronics Rsch., Sylvania Elec. Prod., 1944-45; Hd., Phys. Sci., Kans. State Tchrs. Coll., Emporia, Kans., 1945—. Mem.: Sigma Xi; Natl. Pres., Lambda Delta Lambda; Amer. Phys. Soc.; Amer. Assn. of Physics Tchrs.; Gamma Alpha; Phi Sigma Epsilon. Author: Phys. Lab. Manual, 1949. Contrb. to: Phys. Rev.; Nature; Zeit. für Physik; Rev. Sci. Instruments;

Kans. Acad. of Sci. Trans.; Coll. Physics Lab. Manual. Special Int.: Electronics; Thermodynamics; Light Emission and Band Spectra.

CRAM, Ira Higgins, Sr. Vice-Pres. and Dir., Continental Oil Co., P. O. Box 2197, Houston 1, Tex. GEOLOGY. b. St. Paul, Minn., Mar. 10, 1901. s. Edson B. and Lulu Belle (Short) C. Edn.: B.A., Univ. of Minn., 1923; M.A., ibid., 1924. m. Cathryn Haisley, Apr. 15, 1925. c.: Ira Higgins, Jr.; Nancy Cathryn. Exp.: Geologist, The Pure Oil Co., 1924-47; Mgr. of Exploration, ibid., 1948; Sr. Vice-Pres. and Dir., Continental Oil Co., 1949—. Mem.: Fellow, Geol. Soc. Amer.; Geol. Soc. Houston; Amer. Assn. Petroleum Geol., Sec., Treas., 1937-39, Pres., 1944-45; Amer. Inst. Mining and Metallurgical Engrng.; Soc. Econ. Geol.; Amer. Geophys. Union; Soc. Exploration Geophys.; Phi Beta Kappa; Sigma Xi. Contrb. to: Amer. Assn. Petroleum Geol. Special Int.: Geology.

CRAMBLET, Wilbur Haverfield, Pres., Christian Bd. of Publication, 2700 Pine Blvd., St. Louis 3, Mo. MATHEMATICS: FUNCTIONS OF REAL VARIABLES. b. Harrison Co., Ohio, July 10, 1892. s. Thomas Ellsworth and Della S. (Weaver) C. Edn.: A.B., Bethany Coll., 1910; A.M., ibid., 1910; A.M., Yale Univ., 1911; Ph.D., ibid., 1913. Hon. Deg.: LL.D., Univ. of Pittsburgh 1945; D.D., Bethany Coll., 1952. m. Mildred M. Barnacle, Aug., 1914. c. Thomas E.; Wilbur H., Jr.; Joan Anthony. Exp.: Instr. of Math., Rochester Univ., Rochester, N. Y., 1913-15; Prof. of Math., Phillips Univ., 1915-17; Prof. of Math., Bethany Coll., 1917-34; Treas., ibid., 1919-51; Pres., ibid., 1934-52; Pres., Christian Bd. of Publications, St. Louis, Mo., 1952—. Mem.: Am. Math. Soc.; A.A.A.S.; A.A.S.A.; N.E.A.; Alpha Sigma Phi; Mason. Special Int.: Monotone Sequences and Their Associated Integrable Sets.

CRAMER, Howard Irving, Dir. of Development, Sharples Chemicals, Inc., 123 S. Broad St., Philadelphia 9, Pa. ORGANIC CHEMISTRY: RUBBER CHEMISTRY AND TECHNOLOGY. b. Akron, Ohio, Sept. 21, 1904. s. Irving Henry and Florence May (Higgins) C. Edn.: B.S., Univ. of Akron, 1926; M.S., Univ. of Wis., 1928; Ph.D., ibid., 1929. m. Josephine Brown, June 21, 1930. c.: Joanne; Catherine; Stanton Howard. Exp.: Rsch. Chemist, Goodyear Tire and Rubber Co., 1929-33; Asst. Prof. in Chg. of Course in Rubber Chem., Univ. of Akron, 1933-41; Development Dept., Sharples Chemicals, Inc., 1941-44; Dir. of Development, ibid., 1944—. Mem.: Amer. Chem. Soc.; Amer. Inst. Chem. Engrs.; Soc. Chem. Ind.; Inst. of Rubber Indus. (Great Britain); Industrial Rsch. Inst.; Sigma Xi; Phi Lambda Upsilon; Alpha Chi Sigma. Contrb. to: Jour. Amer. Chem. Soc.; Indus. Engrng. Chem. Special Int.: Catalytic Hydrogenation of Organic Compounds at Elevated Pressures; Synthesis and Development of Organic Chemicals for use as Vulcanization Accelerators and Anti-oxidants for Rubber.

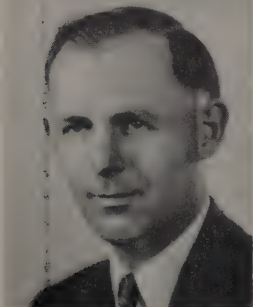


CRAMER, Paul, Asst. Prof. of Math. and Engrng., Monmouth Coll., Monmouth, Ill. MATHEMATICS.

CRAMER, W. E., Industrial Ceramic Products, Inc., 965 W. Fifth Ave., Columbus 12, Ohio. CERAMICS.

CRAMPTON, Henry Edward, Rsch. Assoc., Am. Museum of Natural History, Central Park W. at 77th St., N. Y., N. Y. EVOLUTION DISTRIBUTION.

CRANE, Evan J., Editor of Chemical Abstracts, McPherson Chem. Lab., Ohio State Univ., Columbus 10, Ohio. CHEMISTRY. b. Columbus, Ohio, Feb. 14, 1889. s. George Winfield and Minnie Alfretha (Blair) C. Edn.: B.A., Ohio State Univ., 1911. Hon. Deg.: Dr. of Sci., Ohio State Univ., 1938. m. Marie Eugenia Grant, Sept. 30, 1914 (dec. 1924). c. Grant; Martha. 2nd m. Helen



Rachel Game, Aug. 10, 1943. Exp.: Assoc. Editor of Chemical Abstracts, 1911; Editor, *ibid.*, 1915—. Mem.: Am. Chem. Soc.; A.A.A.S.; N. Y. Acad. Sci.; Alpha Tau Omega; Sigma Xi; Phi Beta Kappa; Phi Lambda Upsilon; Lambda Sigma; Rotary; Kit-Kat. Co-author: A Guide to the Literature of Chem., 1927. Contrb. to: Chem. Eng. News. Awarded medal by Soc. Chem. Ind. (Brit.), 1937; Priestley medal, 1951; Austin M. Patterson Award for Documentation of Chemistry, 1953. Special Int.: Chemical Nomenclature; Chemical Literature; Indexing Science.

CRANE, Horace Richard, Prof. of Physics, Univ. of Mich., Randall Lab., Ann Arbor, Mich. PHYSICS.

CRANE, Harry Wolven, Prof. of Psychol. and Psychological Consultant, Univ. of N. C., Chapel Hill, N. C. PSYCHOLOGY.

CRAYER, Bradford N., Dir., Johnson and Johnson Rsch. Foundation, New Brunswick, N. J. PHARMACOLOGY.



Wayne Coll. of Med., 1941-44; Rsch. Assoc., Manhattan Engrng. Project, Rochester Univ., 1944-45; Sr. Pharmacologist, Ciba Pharmaceutical Products, Inc., 1945-51; Dir., Johnson and Johnson Rsch. Foundation, New Brunswick, N. J., 1951—. Mem.: N. Y. Acad. Sci.; A.A.A.S.; Industrial Hygiene Assn.; A.A.U.P.; Natl. Soc. for Med. Rsch.; Amer. Soc. for Pharmacol. and Exptl. Therapeutics, Inc.; Soc. for Exptl. Biol. and Med. Contrb. to: Science; Jour. Lab. and Clinical Med.; Jour. A.M.A.; Federation Proc.; etc. War Record: Manhattan Engrng. Project, Atomic Energy Comm., 1944-45. Special Int.: Autonomic Drugs; Screening Procedures for the Development of New Therapeutic Agents; Cardio Vascular Drugs.

CRAYER, Harrison Warwick, Consulting Librarian, Engrng., Societies Lib. 29, West 39th St., N. Y. N. Y. ENGINEERING.

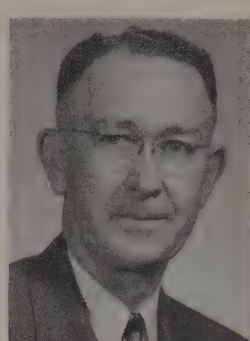
CRAWFORD, Arthur Lorenzo, Dir., Utah Geol. and Mineral. Survey, Coll. of Mines and Mineral Indus.,



Univ. of Utah, Salt Lake City, Utah. GEOLOGY AND MINERAL TECHNOLOGY. b. Washington, Utah, Apr. 10, 1899. s. Arthur DeBardeleben and Mary Johanna (Bastian) C. Edn.: A.B., Brigham Young Univ., 1924; M.A., Stanford Univ., 1926. m. Vesta Pierce, Apr. 3, 1924. c.: Marion. Exp.: Instr. in Geol. and Petrography, Brigham Young, Provo, Utah, 1926-27; Consulting Crystallographer, Crock-er Rsch. Lab., San Francisco, Calif., 1927; Instr. in Geol. and Mineralogy, Univ. of Wyo., Laramie, Wyo., 1927-28; Asst. Microscopist, Met. Rsch. Dept., Univ. of Utah, Salt Lake City, Utah, 1928-30; Dir., Coop. Microscopic Rsch. and Service Lab., *ibid.*, 1930-32; Geol. and Mineral Tech., Utah Engrng. Expt. Sta., *ibid.*, 1932-44; Asst. Prof. Ore. Dressing Microscopy, *ibid.*, 1932-44; Raw Materials Engr., Geneva Steel Co.,

Geneva, Utah, 1944-45; Commn., Raw Materials Div., Utah State Dept. of Publicity and Indus. Development, *ibid.*, 1946-49; Dir., Utah Geol. and Mineral. Survey, Coll. of Mines and Mineral Indus., Univ. of Utah, Salt Lake City, Utah, 1949—. Mem.: Geol. Soc. of Amer.; Natl. Geographic Soc.; Seismol. Soc. of Amer.; Mineralogical Soc. of Amer.; Utah Hist. Soc.; Amer. Assn. of Petroleum Geol.; Assn. of Amer. State Geol.; Sigma Xi; Phi Kappa Phi. Contrb. to: The Amer. Mineralogist; Mining and Metallurgy; The Mining Jour.; Compact Comments, etc.

CRAWFORD, Charles William, Hd., Mech. Engrng. Dept., A. and M. Coll. of Tex., Coll. Sta., Tex.



MECHANICAL ENGINEERING EDUCATION. b. Aug. 29, 1897, Bryan, Tex. s. Charles Wesley and Artie (McCulloch) C. Edn.: B.S. in M.E., A. and M. Coll. of Tex., 1919; M.S. in M.E., *ibid.*, 1929; Summer Work, Govt. and Econ., Univ. of Tex., 1922. m. Lillian Moore of Rosebud, Tex., June 7, 1926. d. James L. and Callie Moore. c.: Amaryllis Gail. Exp.: Instr., Mech. Engrng., A. and M. Coll. of Tex., 1919; Asst. Prof., Mech. Engrng., 1922; Assoc. Prof., Mech. Engrng., 1925; Prof., Mech. Engrng., 1928; Hd., Dept., Mech. Engrng., 1929; Summer Work: Tex. Co. and City of Port Arthur, 1919; Westinghouse in South Phila., 1923; Western Elect. Co., W. Chicago, 1925, 1928; Tex. Power and Light, Trinidad, Tex., 1927; Gen. Elect., Schenectady, N. Y., 1936. Mem.: A.S.M.E.; Vice-Pres., Tex. Sect., S.P.E.E.; Tau Beta Pi; Pi Tau Sigma; Registered Professional Engr. in Tex.; Rotary; C. of C. Author: Engrng. Problems, 1928; Introductory Problems in Engrng., 1929; Rev., Five Times. War Record: R.O.T.C., Camp Ft. Sheridan, Ill., 1918; S.A.T.C.; Tex. A. and M., 1919; Central Inf. Officer Trng. Schl., Camp MacArthur, Waco, Tex., 1919. Travel: N. Amer. Listed in: Who's Who in Southwest; A.M.S.

CRAWFORD, David Livingston, 77 Paseo de la Reforma, Mexico City, Mex. ENTOMOLOGY.

CRAWFORD, George E., 221 Summer Ave., New Castle, Pa. CERAMICS.

CRAWFORD, H. Marjorie, Prof. of Chem., Vassar Coll., Poughkeepsie, N. Y. ORGANIC CHEMISTRY.

CRAWFORD, J. Hamilton, Clin. Prof. of Med., 178 8th Ave., Brooklyn, N. Y. CARDIOLOGY.



Scotland, June 15, 1894. s. James and Helen (Robb) C. Edn.: M.B., Univ. of Edinburgh, 1918; M.D., *ibid.*, 1922. m. Isabelle B. Crawford, July 16, 1927. c.: J. Hamilton, Jr., James L. Exp.: Surgeon Probationer, Royal Naval Volunteer Reserve, Scotland, 1915-18; Surgeon, Royal Navy, 1918-20; Res'dent Phys., Edinburgh Royal Infirmary, Scotland, 1920-21; Tutor in Clin. Med., Edinburgh Univ., *ibid.*, 1921-23; Asst. in Pharmacol., *ibid.*, 1921-23; Asst. in Cardiol., Hosp. of Rockefeller Inst., N. Y. C., 1923-26; Asst. in Clin. Med. and Therapeutics, Edinburgh Univ., Scotland, 1926-27; Assoc. in Med., L. I. Coll. of Med., N. Y., 1928-29; Asst. Clin. Prof. of Med., *ibid.*, 1929-32; Assoc. in Physiol. and Pharmacol., *ibid.*, 1928-29; Asst. Prof., *ibid.*, 1929-34; Asst. Prof., *ibid.*, 1934-37; Clin. Prof. of Med., *ibid.*, 1935-37; Prof., *ibid.*, 1937; Asst. Physician, L. I. Coll. Hosp.,

ibid., 1927-37; Attending Physician, ibid., 1937-46; Dir. of Med., ibid., 1946—; Chf. of Cardiac Clinic, ibid., 1928—; Assoc. Att. Physician and Cardiologist, Kings Co. Hosp., 1933-35; Attending Physician, ibid., 1935-46; Consulting Physician, ibid., 1946—; Dir. of Med., L. I. Coll. Div., Kings Co. Hosp., ibid., 1937-46; Cardiologist, Peck Memorial Hosp., N. Y., 1936—; Dir. of Med., ibid., 1940—; Attending Physician, Coney Island Hosp., N. Y., 1931-32; Asst. Attending Physician, Caledonian Hosp., ibid., 1928-34; Assoc. Physician and Cardiol., ibid., 1934-37; Consulting Physician, ibid., 1947—; Consulting Physician, Brooklyn Eye and Ear Hosp., N. Y., 1935—; Consulting Physician, Bethel Hosp., N. Y., 1947—; Consulting Physician, Mather Memorial Hospital, Port Jefferson, L. I., 1948—; Consulting Physician Norwegian Hosp., Brooklyn, 1952—. Mem.: Amer. Soc. for Clin. Investigation; A.M.A.; Amer. Heart Assn.; Amer. Coll. of Physicians; N. Y. Heart Assn.; Kings Co. Med. Soc.; Alpha Kappa Kappa. Contrb. to: Amer. Heart Jour.; Archives of Internal Med.; Jour. for Clin. Investigation; Annals of Internal Med. War Record; Surgeon Lt., Royal Navy, 1915-18. Special Int.: Cardiology.

CRAWFORD, J. L. Walsh Refractories Corp., 101 Ferry St., St. Louis 7, Mo. CERAMICS.

CRAWFORD, Malcolm L. Univ. of Toronto, Toronto, Ont., Canada. ATOMIC SPECTRA.

CRAWFORD, Ralph Dixon, Prof. Emer. of Mineralogy and Petrology, Univ. of Col., 1050 10th St., Boulder, Colo. PETROLOGY.

CRAWFORD, Russell Tracy, Students Observatory, Univ. of Calif., Berkeley, Calif.

CRAWFORD, Stanton Chapman, Dean, Coll. Arts and Sciences, Univ. of Pittsburgh, Pittsburgh, Pa. ZOOLOGY.

CRAWFORD, William Hopkins, Dean and Prof. of Dentistry, Univ. of Minn. Schl. of Dentistry, 4234 Dupont Ave., S., Minneapolis, Minn. DENTISTRY.

CREAMER, Warren M., Chief Engineer, Conn. State Hwy. Dept., 165 Capitol Ave., Hartford, Conn.



HIGHWAYS AND BRIDGES, DESIGN, CONSTRUCTION, MAINTENANCE AND RESEARCH. b. Williamsport, Pa., July 18, 1894. s. Warren Emerson and Margaret (Bunnell) C. Edn.: B.S., Trinity Coll., 1917. m. Elizabeth Loomis Glazier, Oct. 20, 1923. c.: Warren Milton, Jr., (dec.); Cordelia Glazier. Exp.: Construction and Maintenance Engr., Pa. R. R., Philadelphia, Pa., 1917-20; Asst. Engr., Pa. State Hwy., 1920-22; Asst. Engr., Sr. Hwy. Engr., Engr. of

Design, Dir. Engrng. and Constrn., Prin. Engr., Chf. Engr., Conn. State Hwy. Dept., Hartford, Conn., 1922—. Hon. Pos.: Pres., Conn. Soc. of Civil Engrs.; Chmn., Conn. Cancer Soc. Fund Drive for Hartford; Chmn. for Farmington Fund Drive. Mem.: Natl. Acad. of Sciences (Hwy. Rsch. Bd.); Amer. Assn. State Hwy. Officials; Hwy. Officials of N. Atlantic States; Amer. Road Builder Assn.; Conn. Soc. of Prof. Engrs.; Delta Psi. Author: A Road Menders Rhymes, 1948. Contrb. to: New England Constrn.; Engrng. News Record; Hwy. Mag.; Better Roads, etc. Special Int.: Hwy. Traffic; Econ.; Finance. Winner Gen. Motors "Better Highways" Award-State of Conn., 1953.

CREASER, Charles William, Prof. of Zool., Wayne Univ., 4841 Cass Ave., Detroit, Mich. ZOOLOGY.

CREECH, Hugh John, Hd. Dept. of Chemotherapy, Inst. for Cancer Rsch., Fox Chase, Philadelphia 11,



Pa. IMMUNOCHEMISTRY. b. Exeter, Ont., Can., June 27, 1910. s. Richard N. and Edith (Sanders) C. Edn.: B.A., Univ. of Western Ont., 1933; M.A., ibid., 1935; Ph.D., Univ. of Toronto, 1938. m. E. Marie Creech, July 10, 1937. c.: Richard and Joan. Exp.: Rsch. Asst., Univ. of Toronto, Toronto, Can., 1935-38; ibid., Harvard Univ., 1938-41; Asst. Prof., Univ. of Md., College Park, Md., 1941-43; Assoc. Prof., ibid., 1943-45; Immunochemist, Inst. for Cancer Rsch., Philadelphia, Pa., 1945-47; Lectr., Bryn Mawr Coll., Bryn Mawr, Pa., 1945-47; Hd. Dept. of Chemotherapy, Inst. for Cancer Rsch., Philadelphia, Pa., 1947—. Hon. Pos.: Chmn., Admin. Com., Inst. for Cancer Rsch.; Sec.-Treas., Amer. Assn. for Cancer Rsch. Mem.: Amer. Chem. Soc.; Amer. Assn. for Cancer Rsch.; Sigma Xi; Kappa Tau Sigma. Contrb. to: Jour. of Amer. Chem. Soc.; Cancer Rsch.; Jour. of Immunol.; Jour. Optical Soc. of Amer. Special Int.: Chemotherapy; Immunochem.; Synthetic Organic Chem.; Protein Modification; Immunol. of Polysaccharides and Carcinogen-Protein Conjugates used in Cancer Rsch.

CREEL, Cecil Willis, Dean, Agri. and Dir. of Agri. Extension, Univ. of Nev., Reno, Nev. ENTOMOLOGY.

CREELMAN, George Douglas, Rsch. Coordinator, M. A. Hanna Co., 1300 Leader Bldg., Cleveland 14,



Ohio. CHEMICAL ENGINEERING, FUELS PRODUCTION RESEARCH. b. Winsted, Conn., Nov. 18, 1908. s. George Willis and Helen (Douglas) C. Edn.: A.B., Harvard Univ., 1931. m. Marjorie Broer, 1932. c.: Douglas; Stewart; Katherine. Exp.: Rsch. Lab., Process Engrng. and Patent Dept., The M. W. Kellogg Co., N. Y. C., 1931-42; Rsch. Engr., Monsanto Chem. Co., St. Louis, Mo., 1943-44; Admin. Asst., Inst. of Gas Tech., Chicago, Ill., 1944-45; Rsch. Coordinator, M. A. Hanna Co., Cleveland, Ohio, 1946—. Mem.: A.A.A.S.; A.I.Ch.E.; Amer. Chem. Soc.; A.I.M.E.; A.G.A.; A.P.I.; A.S.E.E.; A.I.C.; Operations Rsch. Soc. of Amer. Gen. Int.: Patents in Petroleum Refining and Coal Processing. Special Int.: "Fluidized" processing of Solids; Synthetic Liquid Fuels; Fuel Engrng.

CREHORE, Albert Cushing, 1652 E. 117th St., Cleveland 6, Ohio. ELECTRODYNAMICS AND ATOMIC PHYSICS. b. Cleveland, Ohio, June 8, 1868. s. John Davenport and Lucy (Williams) C. Edn.: A.B., Yale Univ., 1890; Ph.D., Cornell Univ., 1893. c.: Dorothy D. Exp.: Asst. Prof. of Phys., Dartmouth Coll., 1893-97; Physical Laboratories, Nela Park, Cleveland, Ohio, 1920-21. Mem.: Amer. Inst. of Elec. Engrs.; Amer. Phys. Soc.; Alpha Delta Phi; Eugene Field Soc.; Mark Twain Soc. Author: Alternating Currents, with F. Bedell, 1892; The Polarizing Photochronograph, with G. O. Squier, 1897; Synchronous and other Multiple Telegraphs, 1905; Atomic Theory, 1942; Autobiography of Albert Cushing Crehore, 1944; Electra. Atoms, Molecules, 1946; What the Neutron Is, 1947; A New Electrodynamics, 1950; The All-Nuclear Atom and Its Implication, 1951; etc. Contrb. to: The Phys. Rev.; The Philos. Mag.; Jour. A.M.A.; Jour. of Experimental Med.; Trans. Amer. Inst. of Elec. Engrs.

CREIGHTON, Henry Jermain Maude, Prof. and Chmn., Dept. of Chem., Swarthmore Coll., Swarthmore, Pa. **ELECTROCHEMISTRY**.

CREIGHTON, Harriet Baldwin, Assoc. Prof. and Chmn., Dept. of Botany, Wellesley Coll., Wellesley, Mass. **CYTOLOGY**.

CRENSHAW, James Llewellyn, Prof. of Chem., Bryn Mawr Coll., Bryn Mawr, Pa. **CHEMISTRY**.

CRESCITELLI, Frederick, Assoc. Prof., Dept. of Zool., Univ. of Calif., Los Angeles, Calif. **GENERAL PHYSIOLOGY**.

CRESPI, Leo Paul, Asst. Prof. of Psychol., Princeton Univ., Princeton, N. J. **PSYCHOLOGY**.

CRESSEY, George Babcock, Chm., Dept. of Geography, Syracuse Univ., Syracuse, N. Y. **GEOGRAPHY**.

CRESSMAN, Luther Sheeleigh, Dir., Museum of Natural History, 2064 Potter St., Eugene, Ore. **ARCHAEOLOGY**.

CRETCHER, Leonard Harrison, Asst. Dir., Mellon Inst. for Industrial Rsch., Univ. of Pittsburgh, Pittsburgh, Pa. **CHEMISTRY**.

CREW, Henry, (Died Feb. 17, 1953), Emeritus Prof. of Physics in Northwest Univ., Evanston, Ill. **EXPERIMENTAL PHYSICS**. b. Richmond, Ohio, June 4, 1859. s. William H. and Deborah A. (Hargrave) C. Edn.: B.A., Princeton Coll., 1882; Ph.D., Johns Hopkins Univ., 1887. Hon. Deg.: Sc.D., Univ. of Mich., 1914. m. Helen Cecilia Coale, July 17, 1890. c.: Alice H.; Mildred; William H. Exp.: Asst. in Physics, Johns Hopkins Univ., Baltimore, Md., 1887-88; Instr. in Physics, Haverford Coll., Haverford, Pa., 1888-91; Astronomer at Lick Obs., 1891-92; Prof. of Physics, Northwest Univ., Evanston, Ill., 1892-1930; Emeritus Prof. of Physics, *ibid.*, 1930—. Mem.: Amer. Phys. Soc.; Ill. Acad. of Sci.; Amer. Philos. Soc.; A.A.U.P.; Hist. of Sci. Soc.; Natl. Acad. of Sci.; Amer. Acad. of Arts and Sci.; Univ. Clubs of Evanston and Chicago. Author: Prin. of Mechanics, 1908; Gen. Physics, 1908; Rise of Modern Physics, 1928; Translator of Galileo's Two New Sciences, with De Salvio, 1914; Translator of Maurolycus Optics, 1940. Contrb. to: Astrophys. Jour. Special Int.: Spectroscopy; Wavelength Maps of Six of the Elements.

CREW, William Henry, Asst. Dean, Rensselaer Poly. Inst., Troy, N. Y. **PHYSICS**.

CRICKMAY, Colin Hayter, Staff Geol., Imperial Oil Ltd., 525 Salem Ave., Calgary, Alberta, Can. **GEOLOGY AND PALEONTOLOGY**. b. Apr. 6, 1899, Vancouver, Can. s. A. E. and Agnes (Dawson) C. Edn.: B.A., Univ. of B.C., 1922; Ph.D., Stanford Univ., 1925. m. Mary J. Mathews, June 4, 1927. c.: Colin J.; Marian C.; Alan W.; William D. and Evelyn V. M. Exp.: Asst. Prof., Univ. of Calif., Los Angeles, Calif., 1926-31; Asst. Prof., Univ. of Ill., Chicago, Ill., 1931-33; Consulting Geol., private practice, 1933-44; Staff Geol., Imperial Oil Ltd., Calgary, Alberta, Can., 1945—. Contrb. to: Am. Jour. of Sci.; Calif. Acad. of Sci.; Proc. Am. Phil. Soc.; Jour. of Geol.; Bull. Geol. Soc. of Am.; Jour. of Paleontol. Special Int.: Paleontol. of the Devonian, Jurassic, etc.; Hist. and stratigraphical geol.; Dynamics of superficial geol. processes.

CRIDER, Blake, Chm., Dept. of Psychol., Fenn Coll., 2250 Prospect, Cleveland, Ohio. **PSYCHOLOGY**. b. Personville, Tex., Aug. 7, 1902. s. Allen Blake and Delia (Newsome) C. Edn.: B.A., Univ. of Mo., 1924; M.A., Univ. of Chicago, 1928; Ph.D., Western Reserve Univ., 1934. m. Doris Towne, June 15, 1932. c. Andrew Blake; Harlan Towne. Exp.: Tchr. Orange Tex. H. S., 1924-26; Tchr., Albion Coll., Albion, Mich., 1926-29; Psychologist, Shaker Hts. Schls., 1929-31; Dept. of Psychol., Fenn Coll., Cleveland, Ohio, 1933; Staff Psychologist, part-time, Mt. Sinai Mental Hygiene Clinic, 1934-44; Staff Psychologist St. Lukes Hosp., 1934-50; Staff Psychologist, Cleveland State Hosp., 1944-47. Mem.: Am. Psychol. Assn.; Cleveland Psychol. Assn.; Ohio Psychol. Assn.; Assn. for the Advancement of Psychotherapy; A.A.U.P.; Alpha Tau

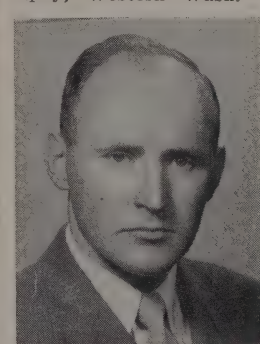
Omega; Phi Delta Kappa. Contrb. to: Am. Jour. Psychol.; Child Development; Schl. and Soc.; etc. Special Int.: Psychology.

CRIDER, Joseph Otterbein, Asst. Dean and Assoc. Prof. of Physiol., Jefferson Med. Coll., Philadelphia, Pa. **PHYSIOLOGY**.

CRIEP, Leo Hermann, Assoc. Prof. of Med., Schl. of Med., Univ. of Pittsburgh, Pittsburgh, Pa. **INTERNAL MEDICINE**. b. 1896, Romania. s. Herman J. and Gertrude (Zuckman) C. Edn.: B.A., Univ. of Pittsburgh, 1918; M.D., *ibid.*, 1920. m. Merla Rosenfield, 1942. c. Susan Lee and Leo, Jr. Exp.: Sr. attending in Med., Presbyterian and Montefiore Hosp., 1932—; Consulting Physician, Passavant Hosp., 1939—; Assoc. Prof. Med., Univ. of Pittsburgh, Pa., 1946—. Mem.: Soc. Am. Immunol.; Am. Acad. of Allergy Biol. Rsch. Soc.; Phi Delta Epsilon. Author: Essentials of Allergy, 1945. Contrb. to: Numerous Med. Jour. Special Int.: Allergy. Basic rsch. in Immunol.

CRITTENDEN, Eugene Casson, Jr., Assoc. Prof. of Physics, Case Schl. of Applied Sci., Cleveland, Ohio. **PHYSICS**.

CRITCHFIELD, Howard John, Asst. Prof. of Geography, Western Wash. Coll., Bellingham, Wash.



AGRICULTURAL GEOGRAPHY AND CLIMATOLOGY. b. Vernon, Colo., Sept. 24, 1920. s. Owen and Mabel Lulla (McCutehan) C. Edn.: B.A., Univ. of Wash., 1946; M.A., *ibid.*, 1947; Ph.D., *ibid.*, 1952. m. Rose Doreen, Feb. 17, 1950. c.: David Owen. Exp.: Instr. in Geography, State Coll. of Wash., 1947-48; Visiting Lectr. in Geography, Canterbury Univ. Coll., Christ Church, New Zealand, 1948-50; Asst. Prof. of Geography, Western Washington Coll., Bellingham, Wash., 1951—. Mem.: Assn. Amer. Geographers; Amer. Meteorol. Soc.; New Zealand Geographical Soc.; Assn. Pacific Coast Geographers; Sigma Xi. Contrb. to: Econ. Geography; New Zealand Geographer; Econ. Botany. War Record: U. S. Air Force Weather Service, 1942-46. Special Int.: New Zealand Agri.; Agril. Climatology.

CRITTENDEN, Eugene Dwight, Dir. of Development, Nitrogen Division, Allied Chemical and Dye Corp., Hopewell, Va. **CHEMISTRY**. b. Saline, Mich., May 1, 1898. s. Allen Dwight and Ella (Cobb) C. Edn.: B.A., Mich. State Normal Coll., 1919; M.A., Columbia Univ., 1921; Ph.D., *ibid.*, 1922. m. Meltina Feldamp on June 24, 1920. c.: Eugene Dwight, Jr.; David Gray. Exp.: Instr. of Chem., Mich. State Normal Coll., 1918-19; Instr. of Chem., Columbia Univ., 1920-23; Rsch. Chemist, Fixed Nitrogen Rsch. Lab., 1923-26; Rsch. Chemist, Atmospheric Nitrogen Corp., 1926-30; Asst. Chf. of Rsch., Solvay Process Co., 1930-45; Chf. of Rsch., *ibid.*, 1945-51; Dir. of Development, *ibid.*, 1951—; Div. of Dev., Nitrogen Div., Allied Chem. and Dye Corp., Hopewell, Va. Mem.: Am. Chem. Soc.; Phi Lambda Upsilon; Sigma Xi; Mason; Torch Club; Fellow Am. Institute of Chemists. Contrb. to: Jour. of Am. Chem. Soc.; Indus. and Engrng. Chem.; Jour. of Agron. War Record: 2nd Lt., Infantry, 1918-19. Special Int.: Catalysis; Solutions; Rsch. Admin.; Market Surveys; Econ. Analysis of Chem. Processes.

CROCKER, William, Managing Dir., Boyce Thompson Inst. for Plant Rsch., Inc., 1086 N. Broadway, Yonkers, N. Y. **PLANT PHYSIOLOGY**.

CROFT, Lysle Warrick, Dir. of Personnel, Univ. Personnel Office, Assoc. Prof., Psychol., Univ. of Ky., Ky. **PSYCHOLOGY; STUDENT PERSONNEL; COUNSELING AND TESTING**. b. Mar. 5, 1902, Earlington, Ky. s. Frederick Ongram and Cornealia Alice (Harris) C. Edn.: B.S., Commerce, Univ.

of Ky., 1926; M.A., Psychol., *ibid.*, 1932; Ph.D., Psychol., *ibid.*, 1938. m. Daisy Allen Taylor of Lexington, Ky., Sept. 24, 1927. d. Otho O. and Jennie Taylor. Exp.: U. S. Army, on Active Duty, 1941-46, Col., Inf., Univ. of Ky.; Asst. Dean of Men, Instr., Asst. Prof., Asst. Dean of Coll. of Arts and Sci., Assoc. Prof. Dir. of Personnel, Univ. Personnel Office. Mem.: Fellow, A.A.A.P.; Fellow, Amer. Psychol. Assn.; Fellow, Ind. Assn. of Clin. Psychol.; Professional Mem., N.V.G.A.; Ky. Edn. Assn.; Ky. Psychol. Assn.; Amer. Coll. Personnel Assn.; Phi Delta Kappa; Alpha Sigma Phi; Delta Sigma Pi; Keys; Lances; Reserve Officers Assn. Hobby: Photography. Listed in: A.A.A.P.; A.P.A.; A.M.S.; Amer. Assn. Adv. of Sci. Ph.D. Dissertation: An Empirical Comparison of the Thurstone Voc. Interest Schedule and the Strong Voc. Interest Blank Among Sr. H. S. and Freshman Coll. Students. In 1939-40, Recipient of Grant from Carnegie Corp. for Study, Coll. Admin. and Student Personnel Procedures. Diplomate of Amer. Bd. of Examiners in Professional Psychol. Special Int.: Tests and Measurement; Counseling Techniques; Personality.

CROFUTT, Charles Burton, Orono, Maine. PHYSICS.

CROM, George Curtis, Tularosa, N. Mex. ELECTRICAL ENGINEERING.

CRONEIS, Carey Gardiner, Pres., Beloit Coll., Beloit, Wis. GEOLOGY, PALEONTOLOGY.

CRONKITE, Eugene Pitcher, Hd., Hematology Div., Naval Med. Rsch. Inst., Bethesda 14, Md. HEMATOLOGY; RADIOBIOLOGY. b. Los Angeles, Calif., Dec. 11, 1914. s. C. E. and Anita (Pitcher) C. Edn.: A.B., Stanford Univ., 1935; M.D., *ibid.*, 1940. m. Elizabeth E. Kaitschuk, Aug. 17, 1940. c. Christina Elizabeth. Exp.: Hd. Hematology Div., Naval Med. Rsch. Inst., Bethesda, Md., 1946—. Mem.: Wash. Acad. of Sci.; A.A.A.S.; Soc. of Hematology; Am. Federation Clin. Rsch.; Soc. Exptl. Biol. & Med. Contrb. to: Am. Jour. Physiol.; Jour. Lab. Clin. Med.; Blood; Jour. Am. Med. Assn.; Proc. Soc. Exptl. Biol. & Med. Special Int.: Hematology; Blood Coagulation; Effects of Radiation on Mammals.

CROOK, Mason N., Rsch. Assoc., Psychol. Lab., Tufts Coll., Medford, Mass. EXPERIMENTAL PSYCHOLOGY.

CROOKER, Arthur Mervyn, Prof. of Physics, Univ. of British Columbia, Vancouver, B. C., Can. OPTICS.

CROOKS, Donald Mundell, Hd. Horticulturist in Chg. Div. Tobacco, Medicinal and Special Crops, Bureau of Plant Indus., Soils and Agri. Engrng., U. S. D. A., 6910 Wake Forest Dr., College Park, Md. HORTICULTURE.

CROOKS, George Chapman, Asst. Prof. of Chem., Univ. of Vt., Burlington, Vt. BIOCHEMISTRY.

CROSBY, Elizabeth Caroline, Prof. of Anatomy, Univ. of Mich. Med. Schl., Ann Arbor, Mich. NEURONATOMY.

CROSBY, Irving Ballard, Consulting Geologist, Rm. 219, 6 Beacon St., Boston, Mass. GEOLOGY.

CROSS, Clarence Leroy, Assoc. Prof. of Physical Sciences and Physics, Ill. State Normal Univ., Normal, Ill. ATOMIC PHYSICS, ELECTRICITY.

CROSS, Claude Brownley, Tchr., Grinnell, Iowa. AGRONOMY, PLANT BREEDING; CORN AND SMALL GRAINS. b. Jan. 16, 1890, Sheldon, Mo. s. John W. and Sarah Juliza (Warnick) C. Edn.: B.S., Kans. State Coll., 1921; M.S., Univ. of Neb., 1926. m. Effie Matilda Clawson, May 17, 1914. c.: Beth Vanietia; Claude B.; and Albert Lavaine. Exp.: Asst. Prof. in Agron., Okla. A. and M., Stillwater, Okla., 1929-33; Assoc. Prof., *ibid.*, 1933-46; Proj. Mgr., Soil Cons. Serv., Seiling, Okla., 1936-37; Asst. Prof., Iowa State Coll., 1947-48; Plant Breeder, Ahrens, Hybrid Corn Co., 1946-47; Farmer and Tchr., 1947—. Mem.: Phi Kappa Phi; Gamma Sigma Delta; Sigma Xi; Amer. Soc. of Agron. Special

Int.: Plant breeding and experimental tech., perfected methods of harvesting and cleaning small grains without contamination by other varieties in tests.

CROSS, Hardy, Prof. of Civil Engrng. and Chmn. of Dept., Yale Univ., 15 Prospect St., New Haven, Conn. CIVIL ENGINEERING. b. Nansemond Co., Va., Feb. 10, 1885. s. Thomas and Eleanor Elizabeth (Wright) C. Edn.: B.A., Hampden-Sydney Coll., 1902; B.S., *ibid.*, 1903; B.S. in C.E., Mass. Inst. of Tech., 1908; M.C.E., Harvard Univ., 1911. Hon. Deg.: Sc.D., Hampden-Sydney Coll., 1934; M.A., Yale Univ., 1937; D.Eng., Lehigh Univ., 1937. m. Edythe Hopwood Fenner, Sept. 5, 1921. Exp.: Instr. in English and Math., Norfolk Acad., 1903-05; Instr. in English and Math., Norfolk Acad., 1903-05; Engr., Bridge Dept., M. P. Ry., 1908-10; Asst. Prof. of Civil Engrng., Brown Univ., 1911-18; General Practice, Structural Engrng., 1918-21; Prof. of Structural Engrng., Univ. of Ill., 1921-37; Prof. of Civil Engrng., Yale Univ., New Haven, Conn., 1937. Mem.: Amer. Soc. Civil Engrs.; Amer. Concrete Inst.; Conn. Soc. Civil Engrs.; Amer. Soc. Engrng. Edn.; Amer. Inst. Consulting Engrs.; Amer. Acad. Arts and Sci.; Royal Soc. of Arts (British); Phi Beta Kappa; Kappa Alpha; Sigma Xi; Tau Beta Pi; Sigma Tau; Chi Epsilon; Omicron Delta Kappa. Co-author: Continuous Frames of Reinforced Concrete, 1932. Special Int.: Virtual Work; A Restatement; Continuity as a Factor in Reinforced Concrete Design; Dependability of the Theory of Concrete Arches; Analysis of Continuous Frames by Distributing Fixed-End Moments; The Column Analogy; The Relation of Analysis to Structural Design; Analysis of Flow in Net Works on Conduits or Conductors; Limitations and Applications of Structural Analysis; Relation Between Structural Mechanics and Design.

CROSS, Olive Merritt, Asst. Prof., Hunter Coll., N. Y., N. Y. BIOLOGY.

CROSSEN, Harry Sturgeon, Prof. Emer., Clinical Gynecology, Wash. Univ., 37 Algonquinwood, Webster Groves, Mo. GYNECOLOGY.

CROSSLEY, Moses Leverock, Rsch. Dir., Am. Cyanamid Co., Bound Brook, N. J. CHEMISTRY.

CROSWAIT, David N., Jr., Technical Adviser, C. A. Dunham Co., 506 Second St., Michigan City, Ind. MECHANICAL AND ELECTRICAL ENGINEERING.

CROUSE, William Austin, Asst. Physicist, Natl. Bureau of Standards, 301 Indus. Bldg., Washington, D. C. ORGANIC PLASTICS.

CROUT, John Shaw, Assoc. Dir., Battelle Inst., Columbus, Ohio. RESEARCH ADMINISTRATION AND MANAGEMENT. b. July 5, 1899, Olney, Ill. s. Norman Lincoln and Elizabeth (Shaw) C. Edn.: B.S., Ore. State Coll., 1923. m. Georgia Jacobs, Sept. 3, 1925. c.: John Richard; Norman George. Exp.: Rsch. Engr., Natural Gas Pipeline Co., 1930-35; Dir., By-Product Rsch., Interlake Iron Corp., 1936-41; Asst. Dir., Battelle Inst., Columbus, Ohio, 1941—. Mem.: Amer. Chem. Soc.; Amer. Inst. Mineral and Metal Engrs.; Rotary; C. of C. War Record; U. S. Army, 1917-19. Special Int.: Rsch. Admin.

CROW, Hollie Ernest, Prof. of Biol., Friends Univ., Wichita, Kans. EMBRYOLOGY.

CROWDLE, James Henry, Chmn., Dept. of Chem., Canisius Coll., 2001 Main St., Buffalo, N. Y. ORGANIC CHEMISTRY.

CROWE, Marguerite O'Loughlin, Physicist, N. Y. State Dept. of Health, Div. Lab. and Rsch., New Scotland Ave., Albany, N. Y. SPECTROSCOPY.

CROWELL, Bowman Corning, Assoc. Dir., Amer. Coll. of Surgeons, 40 E. Erie St., Chicago, Ill. PATHOLOGY.

CROWELL, Victor Leroy, Prof. and Hd., Sci. Dept., State Tchrs. Coll., Trenton, N. J. GEOLOGY, EDUCATION.

CROWLEY, Clyde Aubrey, Chmn., Bd. of Dir., Graham, Crowley and Assoc., Inc., 341 East Ohio

St., Chicago 11, Ill. **ELECTROCHEMISTRY PROCESSES, PRIMARY, AND SECONDARY BATTERY RESEARCH, ELECTRODEPOSITION, ELECTROMETALLURGY.** b. Ray Co., Mo., June 25, 1902. s. C. J. and Onie Lee (Carter) C. Edn.: B.S., Chicago Technical Coll., 1934; M.S., Loyola Univ., 1936; Ph.D., *ibid.*, 1940. m. Jeannette Barkulow in 1927. c.: Jean Lee; James Thomas. Exp.: Chmn. of Bd. of Dir., Graham, Crowley and Assoc., Inc., 1944—. Mem.: Amer. Chem. Soc.; Electrochem. Soc., Inc.; Western Soc. of Engrs.; Amer. Inst. of Chemists; Amer. Soc. for Testing Materials; A.A.A.S.; Ill. Soc. of Professional Engrs. Contrb. to: Electrochem. Soc. Special Int.: Electrochem. Processes, primary, and secondary battery rsch., electrodeposition, electrometallurgy.

CROWLEY, Daniel J., Supt., Cranberry-Blueberry Lab., Wash. Agri. Expt. Station, Long Beach, Wash. **AGRICULTURE, BOTANY.**

CROXTON, Frank Cutshaw, Supt., Chem. Rsch., Battelle Memorial Inst., Columbus, Ohio. **INDUSTRIAL CHEMISTRY.**

CROXTON, Fred C., 3200 16th St., N. W., Washington, D. C. **INDUSTRIAL RELATIONS.**

CROXTON, Frederick Emory, Prof. of Statistics, Columbia Univ., N. Y., N. Y. **STATISTICS.**

CROXTON, Walter Clyde, Prof. of Biol. and Chmn., Div. of Math. and Sci., State Tehrs. Coll., St. Cloud, Minn. **ECOLOGY, SCIENCE EDUCATION.**

CRUESS, William Vere, Prof. of Food Tech. and Chemist, Agri. Expt. Station, Univ. of Calif. Coll. of Agri., Berkeley, Calif. **FOOD CHEMISTRY AND TECHNOLOGY.**

CRUM, Harry Edwin, Geologist, Columbia Carbon Co., 41 E. 42nd St., N. Y., N. Y. **PETROLEUM GEOLOGY.**

CRUMLEY, William Escal, Jr., Instr. Chem. and Physics, Norfolk Jr. Coll., Norfolk, Nebr. **PHYSICS.** b. Red Oak, Iowa, Nov. 18, 1925. s. William and Mary Kathryn (Johnson) C. Edn.: B.S., Midland Coll., 1943; M.A., Colo. State Coll. of Edn., 1950. m. Wilma Jean Bruner of Fremont, Neb., Aug. 27, 1950. d. Mr. and Mrs. Harold G. Bruner. Exp.: H. S. Prin. and Tchr. of Math. and Sci., Palmer H. S., Neb., 1948-49; Grad. Lab., Asst., Colo. State Coll. of Edn., 1949-50; Tchr. of Math. and Sci., Poplar H. S., Mont., 1950-52; Instr. Chem. and Physics, Norfolk Jr. Coll., Norfolk, Nebr., 1952—. Mem.: Amer. Inst. of Physics; Amer. Assn. of Physics Tehrs.; Phi Delta Kappa; Soc. of Vertebrate Paleontology; Masons. Hobbies: Entomology; Machinist.



CRUMMY, Pressley Lee, Registrar and Prof. of Biol., Juniata Coll., Huntingdon, Pa. **EXPERIMENTAL MORPHOLOGY.**

CRUSE, Andrew William, c/o Internatl. Telecom. Lab., 67 Broad St., N. Y., N. Y. **ENGINEERING, PHYSICS.**

CUFF, John Reginald, Assoc. Prof. of Pathol., Meharry Med. Coll., Nashville, Tenn. **PATHOLOGY.**

CUFFEY, Eleanor, Statistician, Tenn. Valley Authority, Knoxville, Tenn. **AGRICULTURAL STATISTICS, MATHEMATICAL STATISTICS.** b. Waukegan, Ill., June 7, 1916. s. William Henry and Margaret (Ritchie) C. Edn.: B.S., Northwestern Univ., 1938; M.A., Smith Coll., 1939. Exp.: Asst. to the Editors, Math. Reviews, Brown Univ., Providence, R. I., 1939-40; Rsch. Asst., Univ. of Princeton, Princeton, N. J., 1940-43; Statistician, *ibid.*, 1943-1945; Statistician, Div. of Agricultural Relations, Tenn. Valley Authority, Knoxville, Tenn., 1945—. Mem.: Amer. Statistical Assn.; Alpha Lambda Delta; Sigma Xi; Phi Beta Kappa.

CUFFEY, James, Assoc. Prof., Astron., Ind. Univ., Bloomington, Ind. **PHOTOELECTRIC PHOTOMETRY AND APPLICATIONS OF ELECTRONIC TO ASTRONOMY.** b. Oct. 8, 1911, Chicago, Ill. s. Wm. H. and Margaret (Ritchie) C. Edn.: B.S., Northwestern Univ., 1934; M.A., Harvard Univ., 1936; Ph.D., Harvard Univ., Astron., 1938. m. Rita L. Paraboschi of Roslindale, Mass., Sept. 28, 1938. d. Mr. and Mrs. C. L. Paraboschi. c.: Roger James; Hazel Rita; Irene Priscilla. Exp.: R-sch. Fellow in Astron., 1939-41; Navigation Instr., U. S. Naval Acad., 1941-46; Lt. Comdr., USNR. Mem.: Phi Beta Kappa; Sigma Xi; Amer. Astron. Soc. Author: Rsch. Articles on Photometry of Galactic Clusters in Current Astron. Literature. Contrb. to: Astrophysical Jour. Ph.D. Dissertation: The Galactic Clusters in Auriga, Gemini, and Taurus. War Record: Navigation Instr., U. S. Naval Acad. Hobbies: Photography; Optics; Geology. Listed in: A.M.S. Special Int.: Photoelectric Measures of Colors and Magnitudes of Stars.

CULBERTSON, Clyde Gray, Dir. Biol. Rsch. Div., The Lilly Rsch. Laboratories, Indianapolis 6, Ind. **PATHOLOGY.** b. July 27, 1906, Vevay, Ind. s. Carl S. and Anna Mary (Gray) C. Edn.: B.S., Ind. Univ., 1928; M.D., Ind. Univ., Schl. of Med., 1931. m. Margaret O'Neil, June 27, 1931. Exp.: Ind. Univ. Schl. of Med., 1931-33; Asst. Prof. Clin. Path., *ibid.*, 1933-42; Prof., Clin. Path., *ibid.*, 1943—; Res. Assoc., Eli Lilly and Co., 1946-48; Asst. Dir., Biol. Rsch., *ibid.*, 1948-49; Dir. Biol. Rsch., *ibid.*, 1949—. Mem.: Amer. Med. Assn.; Soc. Amer. Bact.; Ind. State Clin. Pathol.; Coll. Amer. Pathol.; Alpha Omega Alpha. Contrb. to: Amer. Jour. Med. Sci.; Arch. Pathol.; Amer. Rev. Tuberculosis; Proc. Soc. Expt. Biol. and Med.; Jour. of Lab. and Clin. Med. Special Int.: Pathol.; Virus Rsch.; Antibiotics.

CULBERTSON, Raymond E., Internatl. Economist-Commodity Specialist, Japan and Korea, G-5, GHQ, FEC, APO 500, San Francisco, Calif. **AGRONOMY AND HORTICULTURE; AGROSTOLOGY; PYRETHRUM; SWEET POTATOES; FOREIGN AGRICULTURE.** b. Spring Run, Pa., Nov. 2, 1899. s. David I. and Emma (Shearer) C. Edn.: B.S., Penn. State, 1922; M.S., Univ. of Ky., 1931; Ph.D., Penn. State, 1940. m. Sara Hartman on June 28, 1924. Exp.: Voc.-Agri. Tchr., Pa. and N. J., 1922-27; Rsch. Fellow, Pyrethrum Investigations, The Natl. Rsch. Council, 1936-43; Sr. Agronomist, Office of Foreign Agril. Relations, U.S.D.A., 1943-46; Agril. Advisor in Korea and Japan, Dept. of the Army, 1946—. Mem.: Sigma Xi; Phi Sigma; Alpha Zeta; Amer. Soc. of Horticultural Sci.; Rotary. Author: Forage Plants of Colombia, S. A., 1945; Sweet Potatoes in Japan, 1951. War Record: S.A.T.C., 1918. Gen. Int.: Helped Rehabilitate the Agri. of Japan; Now Charged with the Agril. Planning for Rehabilitation of Korea; Also the Feeding of 3,500,000 Korean Refugees.

CULBERTSON, Ruth M., Dean, Highland Jr. Coll., Highland, Kans. **MATHEMATICS, PHYSICS.**

CULLEN, Stuart C., Assoc. Prof. of Surgery and Chmn., Div. Anesthesiology, Univ. Hosp., Iowa City, Iowa. **ANESTHESIOLOGY.**

CULLER, Arthur Merl, Prof. of Ophthalmology, Ohio State Univ., 150 E. Broad St., Columbus, Ohio. **OPHTHALMOLOGY.** b. Mt. Morris, Ill., Dec. 10, 1899. s. David D. and Mina (Hoover) C. Edn.: A.B., Mt. Morris Coll., 1920; M.D., Univ. of Mich., 1926. m. Mary Louise Swartsel on Aug. 5, 1933. Exp.: Instr. of Ophthalmology, Univ. of Mich., 1927-30; Assoc. Prof., Ohio State Univ., 1946-47; Prof., *ibid.*, 1947—. Hon. Pos.: Research Consultant in Ophthalmology to Surgeon Gen., U. S. Navy. Mem.: A.A.A.S.; Amer. Ophthalmology Soc.; etc. War Record: Capt., U. S. N. R., 1941-45. Special Int.: Ophthalmology.



CULLEN, Thomas Stephen, Prof. Emer. of Gynecology, Johns Hopkins Univ., 20 E. Eager St., Baltimore, Md. GYNECOLOGY, ABDOMINAL SURGERY.

CULLER, Elmer Augustin, Assoc. Prof. of Ophthalmology, Ohio State Univ., Columbus, Ohio. OPHTHALMOLOGY.

CULLINAN, Frank P., Asst. Chf., Bureau of Plant Indus., Soils and Agril. Engrng., U. S. D. A., 4402 Beechwood Rd., Hyattsville, Md. POMOLOGY, PLANT PHYSIOLOGY.

CULLISON, James Shelley, Prof. and Hd., Dept. of Geology, Fla. State Univ., Tallahassee, Fla. GEOLOGY. b. Lawrence Co., Ill., July 22, 1906. s. Roy D. and Carrie (Eshelman) C. Edn.: A.B., Univ. of Ill., 1928; M.S., Schl. of Mines and Metallurgy, Rolla, Mo., 1930; Ph.D., Yale Univ., 1942. m. Pauline Farrell on Apr. 17, 1931. c.: Carrillee; James S., II. Exp.: Asst. Prof. of Geology, Schl. of Mines, Rolla, Mo., 1935-45; Assoc. Geologist, T.V.A., 1934-37; Geologist, U. S. Geological Survey, 1943-45; Asst. Paleontologist and Supvr., of Geologic Lab., Creola Petroleum Corp., Caracas, Venezuela, 1945-50; Prof. and Hd., Dept. of Geology, Fla. State Univ., Tallahassee, Fla., 1950—. Mem.: Geol. Soc. of Amer.; Sigma Xi; Amer. Assn. of Petroleum Geologists; Amer. Paleontological Soc. Contrb. to Jour. of Geol.; Jour. of Paleontol.; Amer. Assn. of Petroleum Geologists; Geol. Soc. of Amer. Special Int.: Paleontology; Stratigraphy; Sedimentation; Petroleum Geol.; Econ. Geol.; Engrng. Geol.

CULVER, Harold E., Chmn., Dept. of Geol., State Coll. of Wash., Pullman, Wash. ECONOMIC GEOLOGY.

CUMINGS, Edgar Roscoe, Prof. Emer., Ind. Univ., 358 Bank St., Painesville, Ohio. GEOLOGY.

CUMINGS, Glenn A., Project Leader, Bureau of Plant Industry, Soils, and Agril. Engrng., U.S.D.A., Agril. Rsch. Center, Beltsville, Md. FERTILIZER DISTRIBUTING MACHINERY AND FERTILIZER PLACEMENT RESEARCH. b. Washington Co., Iowa, Sept. 19, 1894. s. Ebenezer Harlen and Emma (Johnson) C. Edn.: B.S., Iowa State Coll., 1917. m. Winifred Wenkheimer on Aug. 24, 1924. c.: Richard; Dorothy; Edwin. Exp.: Asst. Agril. Engr., Univ. of Wis., Madison, Wis., 1917-18; Leading Instr., U. S. Naval Aviation Schl., Great Lakes, Ill., 1918-



19; Assoc. Prof. of Farm Mechanics, Colo. Agril. Coll., Ft. Collins, Colo., 1919-22; Asst. in Mechanical Engrng., Colo. Agril. Expt. Station, Ft. Collins, Colo., 1922-27; Assoc. Agril. Engr. and Agril. Engr., Bureau Public Roads, U. S. Dept. of Agril., 1927-32; Agril. Engr., Bureau of Agril. Engrng., ibid., 1932-39; Sr. Agril. Engr., Bureau Agril. Chem. and Engrng., 1939-43; Sr. Agril. Engr. (Project Leader), Bureau Plant Industry, Soils, and Agril. Engrng., U.S.D.A., 1943—. Hon. Pos.: Gen. Chmn., Natl. Joint Comm. on Fertilizer Application, 1940-41; Chmn., Comm. on Fertilizer Application, Amer. Soc. of Agril. Engrs., 1927—. Mem.: Fellow, A.A.A.S.; Gamma Sigma Delta; Amer. Soc. of Agril. Engrs.; Alpha Sigma Phi. Contrb. to: Agronomy Jour.; Sugar Beet Jour.; Agril. Engrng.; U.S.D.A. Yearbook of Agril.; Colo. Agril. Expt. Station Bull.; N. Y. State Agril. Expt. Station Bull.; etc. War Record: U. S. Navy, 1919. Special Int.: Fertilizer Distributing Machinery; Design and Development of Special Fertilizer-Metering and Placement Machinery for Rsch. Purposes; Fertilizer Placement Rsch.

CUMMINGS, A. Donald, Chf. Chemist, Collyer Insulated Wire Co., Pawtucket, R. I. CHEMISTRY.

CUMMINGS, Byron, Dir. Emeritus, Ariz. State Museum, Route 8, Box 549, Tucson, Ariz. AMERICAN ARCHAEOLOGY.



b. Westville, N. Y., Sept. 20, 1860. s. Moses and Roxanna (Hoadley) C. Edn.: A.B., Rutgers Univ., 1889; A.M., ibid., 1892. Hon. Deg.: L.L.D., Ariz. Univ., 1921; Sc.D., Rutgers Univ., 1924. m. Ann Chatham on Oct. 16, 1947. c. Malcolm. Exp.: Instr. in Eng. and Latin, Univ. of Utah, 1893-94; Asst. Prof. in Latin and Greek, ibid., 1894-95; Prof. in Latin and Greek, ibid., 1895-1915; Dean of Coll. of Arts and Sci., Dean of Men, ibid., 1906-15; Founded Utah State Museum, 1908; Prof. in Arch. and Dir. of Ariz. State Museum, 1915-38; Established Dept. of Arch., Developed the State Museum, Dean, Coll. of Liberal Arts, Univ. of Ariz., 1917-21; Dean of Men, ibid., 1917-21; Acting Pres., ibid., 1921, 1926-28; Dir., Emeritus, Ariz. State Museum, 1938—. Mem.: Utah Acad. of Sci.; Amer. Anthropological Assn.; A.A.A.S.; Natl. Geographical Soc.; Sigma Psi; Phi Beta Kappa; Phi Kappa Phi; Delta Upsilon; Rotary; Tucson C. of C. Author: Indians I Have Known, 1952; First Inhabitants of Arizona and the Southwest, 1953; The Ancient Inhabitants of the San Juan Valley, 1910; Cuicuilco and the Archaic Culture of Mexico, Kinshasha, A Prehistoric Pueblo of the Great Pueblo Period, 1940. Contrb. to: Amer. Anthropologist; Natl. Geographic; Kiva, Art and Archaeology; Progressive Ariz.; Sci.; Indians at Work. Gen. Int.: Discovery of Rainbow Bridge, Dir. of Natl. Geographic Expedition to Mex. and the discovery of Cuicuilco, probably the oldest structure yet uncovered in N. Amer.; Discovery of Betatakin, Inscription House, and other Ancient Pueblos. Special Int.: The Southwest and Mex.

CUMMINGS, George Donald, Div. of Labs., Mich. Dept. of Health, Lansing 4, Mich. PUBLIC HEALTH.

CUMMINGS, Harold Neff, Vice-Pres., Newark Coll. of Engrng., Newark, N. J. EDUCATION, ENGINEERING.

CUMMINGS, Herbert Kimball, Chf. Aircraft Engines Section, Natl. Bureau of Standards, Washington, D. C. AIRCRAFT ENGINES AND FUELS.

CUMMINS, Arthur Benson, Mgr., Minerals and Basic Rsch. Dept., Rsch. Center, Johns-Manville Co., Manville, N. J. INDUSTRIAL RESEARCH, TECHNOLOGY OF DIATOMITE AND NONMETALLIC MINERALS: SILICATES. b. Los Angeles, Calif., June 6, 1895. s. Lon C. and Anna (Lancaster) C. Edn.: B.S., Univ. of Chicago, 1920; Ph.D., Univ. of Calif., 1926. m. Teresa Elizabeth Haines, 1940. c.: Thelma Alice; Ann Marie; Arthur B., Jr.; Edgar John. Exp.: Asst. Chem., Univ. of Calif., 1920-24; Rsch. Chemist, Celite Co., 1925-26; Development Engr., ibid., 1926-27; Rsch. Engr., ibid., 1927-29; Mgr., Celite Rsch., Johns-Manville, Manville, N. J., 1930-43; Mgr., Rsch. Dept., ibid., 1948—. Hon. Pos.: Chmn., Industrial Minerals Div. and Dir., A.I.M.E., 1951. Mem.: Amer. Chem. Soc.; Amer. Inst. Chem. Engrs.; Soc. Chem. Industry (British); Amer. Inst. Mining Engrs.; A.A.A.S.; Amer. Ceramic Soc.; Calif. Acad. of Sci.; Amer. Min. Soc. Contrb. to: Jour. Industrial and Engrng. Chem.; Jour. Agril. Sci.; Modern Plastics; Facts About Sugar, Oil and Soap; etc. Gen. Int.: Technology of Diatomite, Asbestos, Mineral Fillers, Industrial Minerals, etc. Special Int.: Silica, Silicates, Diatomite, Asbestos, Industrial Minerals, Filtration, Mineral Fillers, Heat Insulations, Magnesium Carbonates, Air Classification, Industrial Rsch.

CUMMINS, G. B., Purdue Univ., Lafayette, Ind. MYCOLOGY.

CUMMINS, Harold, Prof. and Hd., Dept. of Anatomy, Tulane Univ., New Orleans, La. **ANATOMY.**

CUNHA, Tony J., Prof. and Hd., Dept. of Animal Husbandry and Nutrition, 206 Newell Hall, Univ. of Fla., Gainesville, Fla. **ANIMAL NUTRITION.** b. Aug. 22, 1916, Los Banos, Calif. s. Anthony A. and Maria C. Edn.: B.S., 1940, M.S., 1941, Utah St. Coll.; Ph.D., 1944, Univ. of Wis. m. Emily Gwen Smith of Logan, Utah, Sept. 1, 1941. d. Mr. and Mrs. P. L. Smith. c.: Becky Jane, Sharon Marie. Exp.: St. Coll. of Wash., Instr. and Asst. Animal Husbandman, 1944-45; Asst. Prof. and Asst. ibid., 1945-46; Assoc. Prof. and Assoc. ibid., 1946-48; Univ. of Fla., Assoc. Prof. and Assoc. Husbandman, 1948-50; Hd., Dept. of Animal Husbandry and Nutrition, 1950—. Hon. Pos.: Chmn., Nutrition Com. of the Amer. Soc. of Animal Production, 1948. Mem.: Fellow, A.A.A.S.; Amer. Soc. of Animal Prod.; Amer. Assn. for the Adv. of Sci.; A.A.U.P.; Amer. Inst. of Nutrition; Soc. of Experimental Biology and Medicine; Alpha Zeta; Gamma Alpha; Sigma Xi. Contrb. to Jour. of Nutrition; Archives of Biochem., Proc. Soc. of Exptl. Biol. and Med.; Jour. of Animal Sci. Ph.D. Dissertation: A Study of Nutritional Deficiencies of Corn-soybean Oil Meal Rations for Swine and Rats. Hobbies: Music; Swimming. Listed in: Who's Who on the Pacific Coast: A.M.S.; Who Knows—and What. Special Int.: Nutrition of Swine, Beef Cattle, Sheep and Rats.

CUNNIFF, Hilda Spink, Asst. Botanist, U. S. Soil Conservation Service, 4020 Arkansas Ave., N. W., Washington, D. C. **AGRICULTURE, BOTANY.**

CUNNINGHAM, Bess V., Prof. of Edn., Univ. of Toledo, Toledo, Ohio. **PSYCHOLOGY, EDUCATION.**

CUNNINGHAM, Floyd F., Chmn. Dept. of Geog. and Geology, Southern Ill. Univ., Carbondale, Ill. **GEOGRAPHY.** b. Dec. 24, 1899, Flat Rock, Ill. s. Carl Homer and Lillie Alberta (Seitzinger) C. Edn.: Eastern Ill. St. Coll., 1916-18; B.Ed., Ill. St. Normal Univ., Normal, Ill., 1926; Univ. of Chicago, 1926-27; A.M., 1928; Ph.D., 1930, Clark Univ. m. Helen Blanche Espy, of Palestine, Ill., Sept. 1, 1925. d. Mr. and Mrs. H. G. Espy. c.: Jo Ann; Floyd E. Exp.: Principal, Emerson Schl., Berwyn, Ill., 1925-27; Visiting Prof. of Geog., George Peabody Coll., Nashville, Tenn., 1935; Instr. Geog., Biarritz Amer. Univ., Biarritz, France, 1945; Lectr., Geog., Lectr. Bur., Information and Edn. Div., U. S. Army at Frankfurt, Wiesbaden, Bremen, Berlin, Munich, Karlsruhe, Mannheim, Augsburg, Giessen, Kassel in Germany and Vienna and Salzburg in Austria, 1946; Prof. and Hd. Dept. of Geog., St. Tchrs. Coll., Florence, Ala., 1929-47; Chmn., Dept. of Geog. and Geol., Southern Ill. Univ., 1947—. Hon. Pos.: Delegate, Internatl. Geographical Congress, Warsaw, Poland, 1934. Mem.: Natl. Council of Geog. Tchrs.; Sec., 1937-39; Pres., 1942-44; Assn. of Amer. Geog.; Amer. Geographical Soc.; Natl. Geographic Soc.; Natl. Council of Ednl. Travel; Ill. Geographic Soc.; Ill. Acad. of Sci.; Kappa Delta Pi; Gamma Theta Upsilon; Kiwanis Club. Author: Lab. Manual in the Geog. of North Amer., 1930; Lab. Manual in the Geog. of S. A. (with others) 1932. Contrb. to: Jour. of Geog. Ph.D. Dissertation: The Relation of Forest Invasion and Succession to the Major Soil Types of the Central Mass. Upland. Travel: Europe; England; Germany; Poland; Austria; Switzerland; France; Spain; Bermuda; Azore Islands; Con.; Mex.; Cuba. Hobbies: Farming; Photography. Listed in: A.M.S.; Who's Who in Amer.; Internatl. World Who's Who.

CUNNINGHAM, Harry Allen, 227 N. Depeyster St., Kent, Ohio. **EDUCATION.**

CUNNINGHAM, Howe Symonds, Long Island Vegetable Rsch. Farm, Riverhead, N. Y. **BOTANICAL SCIENCES.**

CUNNINGHAM, John B., Prof. of Metallurgy, Univ. of Ariz., Tucson, Ariz. **METALLURGY.**

CUNNINGHAM, John Ferguson, Dean, Coll. of Agri., Ohio State Univ., Columbus, Ohio. **SOIL CONSERVATION, FORESTRY.**

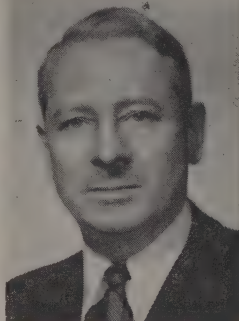
CUNNINGHAM, Leland E., Asst. Prof. of Astron., Students' Observatory, Univ. of Calif., Berkeley, Calif. **MACHINE COMPUTING.**

CUNNINGHAM, Raymond W., Hd., Pharmacol. Rsch., Lederle Labs., Amer. Cyanamid Co., Pearl River, N. Y. **PHARMACOLOGY.**

CUPP, Easter Ellen, Tch., Woodrow Wilson Jr. H. S., 3737 El Cajon Blvd., San Diego, Calif. **BIOLOGICAL OCEANOGRAPHY.**

CURETON, Thomas Kirk, Jr., Prof. of Physical Edn. and Dir., Physical Fitness, Rsch. Lab., Univ. of Ill., Urbana, Ill. **HEALTH AND PHYSICAL EDUCATION.**

CURME, George Oliver, Jr., Vice-Pres., Rsch., and Dir., Union Carbide and Carbon Corp., 30 E. 42nd St., N. Y. 17, N. Y. **CHEMISTRY.** b. Mt. Vernon, Iowa, Dec. 24, 1888. s. Geo. Oliver and Caroline Chenoweth (Smith) C. Edn.: B.S., Northwestern Univ., 1909; Ph.D., Univ. of Chicago, 1913. Hon. Deg.: D.Sc., Northwestern Univ., 1933. m. Lillian Hale on June 29, 1916. c.: Geo. O., III; Katherine Hale; Mary Ellen; Florence Louise; John Henry. Exp.: Rsch. Fellow, Mellon Inst. of Industrial Rsch., Pittsburgh, Pa., 1914-20; Chf. Chemist, Carbide and Carbon Chem.



Corp., N. Y., N. Y. 1920-29; Dir. of Rsch., ibid., 1929-44; Vice-Pres., ibid., 1929-51; Vice-Pres., Union Carbide and Carbon Rsch. Laboratories, Inc., 1938-52; Dir., 1952; Chmn. of the Bd., 1952; Vice-Pres., Bakelite Co., 1939-51; Vice-Pres. and Dir., Carbide and Carbon Chemicals, Ltd., 1944—; Vice-President, Chemicals Research, Union Carbide and Carbon Corp., 1948-51; Vice-President, Rsch., ibid., 1951; Dir., Union Carbide and Carbon Corp., 1952—. Mem.: Fellow, A.A.A.S.; Amer. Chem. Soc.; Amer. Inst. of Chem. Engrs.; Soc. of Chem. Industry; Natl. Acad. of Sci.; Fellow, N. Y. Acad. of Sci.; Phi Beta Kappa; Sigma Xi; Sigma Alpha Epsilon. Contrb. to: Jour. Amer. Chem. Soc.; Berichte: Chem. and Engrng. News; Chem. and Metallurgical Engrng.; Jour. of the Franklin Inst.; Industrial and Engrng. Chem.; Sci. Monthly. Gen. Int.: Chandler Medal by Columbia Univ., 1933; Perkin Medal by the Soc. of Chem. Industry, 1935; Elliott Cresson Medal by The Franklin Inst., 1936; Natl. Modern Pioneer Award by the Natl. Assn. of Manufacturers, 1940; Willard Gibbs Medal by the Amer. Chem. Soc., 1944. Special Int.: Synthetic Aliphatic Organic Chemicals.

CURRAN, C. Howard, Assoc. Curator, Amer. Museum of Natural History, N. Y., N. Y. **ENTOMOLOGY.**

CURRAN, Charles A., Prof. of Psychol., St. Charles Coll., Columbus, Ohio. **COUNSELING AND PERSONALITY RESEARCH.** b. Oct. 9, 1913, Philadelphia, Pa. s. Michael and Mary (Dougherty) C. Edn.: A.B., St. Charles Coll., 1935; M.A., Ohio State Univ., 1941; Ph.D. ibid., 1944. Exp.: Lectr. in Psychol. and Ethics, Mt. Carmel Schl. of Nursing, 1941-49; U. S. O. Trng. Staff, 1944-45; Visiting Prof., Barat Coll., Lake Forest, Ill., 1950-51; Dir. of Inst. on Counseling, Loyola Univ., Chicago, Ill., 1948—; Prof. of Psychol., St. Charles Coll., 1940-52; Personal and Family Counselor, Diocese of Columbus, Ohio, 1944-52. Mem.: Amer. Psychol. Assn.; Amer. Catholic Psychol. Assn.; Ohio Psychol. Assn.; A.A.A.S.; Amer. Catholic Sociol. Soc.; Natl. Catholic Edn. Assn. Author: Personality Factors in Counseling, 1945; Counseling in Catholic Life and Edn., 1952. Contrb. to: Jour. of Abnormal and Soc. Psychol.; Jour. of Allergy; Homilectic and Pastoral Rev.; Amer. Catholic Sociol. Rev. Special Int.: Marriage Counseling; Psychosomatic aspects of illness; Group Discussions and Group Therapy; Philosophy of Personality.

CURRIE, James N. Consultant, Chas. Pfizer, Inc., 11 Bartlett St., Brooklyn, N. Y. **CHEMISTRY.**

CURRIE, Lauchlin MacLaurin, Vice-Pres. and Dir. of Rsch., Natl. Carbon Co., 30 E. 42nd St., N. Y. N. Y. PRIMARY BATTERIES; CARBON AND GRAPHITE PRODUCTS. b. Chapel Hill, N. C., Aug. 13, 1898. s. Daniel J. and Stella (Hogan) C. Edn.: B.A., Davidson Coll., 1918; Ph.D., Cornell Univ., 1925. Hon. Deg.: D.Sc., Clarkson Inst. of Tech., 1950; D.Sc., Davidson Coll., 1951. m. Ethel Snyder Jopp on Aug. 11, 1921. c.: Helen Catherine; Christian MacLaurin. Exp.: Rsch. Chem., Plant Supt., Dir. Vinylite Div., Asst. Dir. of Rsch.; Dir. of Rsch., Vice-Pres., Natl. Carbon Co., 1945—, Mem.: A.C.S.; A.I.Ch.E.; A.S.T.M.; Phi Gamma Delta. Contrb. to: Assoc. Editor, Handbook of Chem. and Physics.

CURRY, E. Thayer, SPEECH AND HEARING.

CURRY, Haskell Brooks, Prof. of Math., Pa. State Coll., State College, Pa. MATHEMATICS.

CURRY, James Rowland, Prof. and Chmn., Dept. of Chem., Williams Coll., Williamstown, Mass. CHEMISTRY.

CURRY, John R(ober)bert, Forester, N. E. Forest Expt. Station, Paul Smiths, N. Y. FORESTRY. b. Nov. 17, 1902, Blue Mt., N. Y. s. David and Katharine (Morrison) C. Edn.: B.S., Cornell Univ., 1924; M.S., Univ. of Calif., 1933. m. Isabelle Granville, 1923. c.: John R., Jr.; David; William; James Alan; Richard K.; and Paul B. Exp.: Asst. Forester, Univ. of Md., 1925-30; Assoc. Silviculturist, U. S. D. A., Forest Service, Berkeley, Calif., 1930-39; Prin., Silviculturist, *ibid.*, New Orleans, La., 1939-47; Forester in Chg., Adirondack Branch, N. E. Forest Expt. Station, Paul Smiths, N. Y., 1947—. Mem.: Soc. of Amer. Foresters; Adirondack Hist. Assn. Contrb. to: Jour. of Forestry; Jour. of Agri. Rsch.; Amer. Forests. Special Int.: Silviculture; Forest Fire Control.

CURTIS, Arthur Covell, Prof. and Dir., Dept. of Dermatol. and Syphilology, Univ. of Mich., Ann Arbor, Mich. DERMATOLOGY, SYPHILOLOGY.

CURTIS, Doris Malkin, Asst. Rsch. Geologist, Scripps Inst. of Oceanography, 473 Marine St., La Jolla, Calif. GEOLOGY—STRATIGRAPHY, PALEOECOLOGY. b. Brooklyn, N. Y., Jan. 12, 1914. d. Meyer and Mary (Berkowitz) Malkin. Edn.: B.A., Brooklyn Coll., 1933; M.A., Columbia Univ., 1934; Ph.D., *ibid.*, 1949. m. Neville MacKay Curtis, Jr., June, 1952. Exp.: Paleontologist, Shell Oil Co., 1942-45; Stratigrapher, *ibid.*, 1945-48; Geologist, *ibid.*, 1948-50; Asst. Prof. of Geol., Univ. of Houston, 1950-52; Asst. Rsch. Geologist, Scripps Institution of Oceanography, Univ. of Calif., La Jolla, Calif., 1952—; Consulting Geologist, Shell Oil Co., 1953—. Hon. Pos.: Gulf Coast Editor, The Micropaleontologist; Secy., Univ. of Houston Sigma Xi Club. Mem.: Sigma Xi; Amer. Assn. Petroleum Geologists; Soc. Econ. Paleontologists and Mineralogists. Contrb. to: Amer. Museum Novitates; Bull. Amer. Assn. Petroleum Geologists; Jour. Paleontology; Micropaleontologist. Special Int.: Principles of Stratigraphy, Biostratigraphy, Paleocology; Cretaceous and Tertiary Ostracoda and Foraminifera; Ecology of Recent Ostracoda; Petroleum Geology; Stratigraphy of Atlantic and Gulf Coastal Plains.

CURTIS, Francis Day, Prof. of Edn. and Sci. Techn., Univ. of Mich., Ann Arbor, Mich. SCIENCE TEACHING.

CURTIS, George M., Prof. of Surgery and Chmn., Dept. of Surgical Rsch., Ohio State Univ., Columbus, Ohio. SURGERY.

CURTIS, Harry A., Dir., Tenn. Valley Authority, Knoxville, Tenn. CHEMICAL ENGINEERING. b. Sedalia, Colo., Feb. 16, 1884. s. Frederick A. and Lydia A. (Cramer) C. Edn.: B.S., Univ. of Colo., 1908; M.A., *ibid.*, 1910; Ph.D., Univ. of Wis., 1914. Hon. Deg.: D.Sc., Colo., 1930; Sc.D., Univ. of Wis., 1937; Dr. Engrng., Univ. of Louisville, 1948. m. Irene Hall, May 14, 1911. c.: Jeanne Carol; Patricia May. Exp.: Prof. of Chem. Engrng., Yale Univ., 1923-30; Natl. Rsch. Council, 1930-31; Dir. of Rsch., Vac. Oil Co., 1931-33; Chf. Chem. Engrng., T. V. A., 1933-38; Dean, Coll. of Engrng., Univ. of Mo., 1938-49; Dir., Tenn. Valley

Authority, Knoxville, Tenn., 1949—. Mem.: Tau Beta Pi; Sigma Xi; A.A.A.S.; Amer. Chem. Soc.; Sigma Nu; Alpha Chi Sigma. Contrb. to: Jour. Indus. and Engrng. Chem.; Chem. and Met. Engrng.; Chem. Progress; World Crops. Special Int.: Phosphates; Nitrogen Compounds; Chemical Processes.

CURTIS, Harvey Lincoln, Physicist, Natl. Bureau of Standards, 6316 Delaware St., Chevy Chase, Md. ELECTRICAL MEASUREMENTS.

CURTIS, James F., SPEECH AND HEARING.

CURTISS, Leon Francis, Consultant in Radioactivity and Chf. of Neutron Measurements Section, Natl.



Bureau of Standards, Garrett Park, Md. NUCLEAR PHYSICS. b. Adrian, Mich., Jan. 5, 1895. s. Arthur T. and Rose M. (Dibble) C. Edn.: A.B., Cornell Univ., 1917; Ph.D., *ibid.*, 1922. m. Chloe Louise James on June 27, 1917. c.: John Arthur; Robert Edmund. Exp.: Natl. Rsch. Council Fellow, Cambridge, England, 1922-24; Natl. Rsch. Council Fellow, Natl. Bureau of Standards, 1924-26; Physicist, Radioactivity, Natl. Bureau of Standards, 1926-40; Chf., Radioactivity Section, *ibid.*, 1940-49; Chf., Neutron Measurements Section and Consultant in Radioactivity, *ibid.*, 1949—; Fulbright Rsch. Scholar in India, 1951. Mem.: Chmn., Comm. on Nuclear Sci., Natl. Rsch. Council, 1946; Mem.: Sigma Xi; A.A.A.S.; Wash. Acad. of Sci.; Wash. Acad. of Med. Contrb. to: Physical Rev.; Jour. of Rsch. of the Natl. Bureau of Standards; Proc. of the I. R. E.; Physics Today. Gen. Int.: Physics. Special Int.: Radioactivity; Cosmic Rays; Neutron Measurements.

tion, *ibid.*, 1940-49; Chf., Neutron Measurements Section and Consultant in Radioactivity, *ibid.*, 1949—; Fulbright Rsch. Scholar in India, 1951. Mem.: Chmn., Comm. on Nuclear Sci., Natl. Rsch. Council, 1946; Mem.: Sigma Xi; A.A.A.S.; Wash. Acad. of Sci.; Wash. Acad. of Med. Contrb. to: Physical Rev.; Jour. of Rsch. of the Natl. Bureau of Standards; Proc. of the I. R. E.; Physics Today. Gen. Int.: Physics. Special Int.: Radioactivity; Cosmic Rays; Neutron Measurements.

CURTIS, Otis F., Prof. of Botany, Cornell Univ., Ithaca, N. Y. PLANT PHYSIOLOGY.

CURTIS, Ralph Wright, Prof. Emer., Cornell Univ., 601 Highland Rd., Ithaca, N. Y. ORNAMENTAL HORTICULTURE.

CURTIS, Winterton Conway, Dean and Prof. Emer., 210 Westmont Ave., Columbia, Mo. ZOOLOGY.

CURTISS, John Hamilton, Chf., Applied Math. Div., Natl. Bureau of Standards, Washington, D. C. MATHEMATICS. b. Dec. 23, 1909, Evanston, Ill. s. David Raymond and Sigrid Sofia (Eckman) C. Edn.: A.B., Northwestern Univ., 1930; M.S., Univ. of Iowa, 1931; Ph.D., Harvard Univ., 1935. Exp.: Asst., Johns Hopkins Univ., Baltimore, Md., 1935-36; Instr. to Asst. Prof., Cornell Univ., 1936-49; Asst. to Dir. Natl. Bureau of Standards, 1946-47; Chf., Applied Math. Div., Natl. Bureau of Standards, 1947—. Mem.: A.A.A.S.; Amer. Math. Assn.; Inst. of Math. Stat.; Math. Assn. of Amer.; Wash. Acad. of Sci. Contrb. to: Various math. and statistical jous. Special Int.: Math. analysis; Math. statistics.

CUSHING, Daniel, Consulting Metallurgist, 148 State St., Boston, Mass. METALLURGY.

CUSHING, Hazel Morton, 8 Webster St., Winchester, Mass. PSYCHOLOGY, EDUCATION.

CUSHMAN, Joseph Augustine, Geologist, U. S. Geol. Survey and Dir., Cushman Lab. for Foraminiferal Rsch., 76 Brook Rd., Sharon, Mass. PALEONTOLOGY.

CUSHMAN, Paul Allerton, Test Engr. and Metallurgist, McGill Mfg. Co., 803 Brown St., Valparaiso, Ind. ENGINEERING MECHANICS.

CUSTER, Richard Philip, Assoc. Pathol., Univ. of Pa. Schl. of Med. and Grad. Schl. of Med., Philadelphia, Pa. MEDICINE.

CUSTER, Robert Louis, Rsch. Chemist, Textile Fibers Dept., E. I. du Pont de Nemours and Co., Inc., 705 Walnut Ave., Waynesboro, Va. **PHYSICAL CHEMISTRY.** b. Manchester, Conn., Aug. 31, 1921. s. Louis Henry and Gertrude Mary (Tyler) C. Edn.: B.S., Univ. of Conn., 1947; Ph.D., *ibid.*, 1952. m. Lillian E. F. Tanner, Nov. 25, 1944. c.: Robert Ernest; Linda Sue; Velma; Carl; Victoria. Exp.: Rsch. Asst., Dept. of Chem., Univ. of Conn., 1950-51; Rsch. Chemist, Textile Fibers Dept., E. I. du Pont de Nemours and Co., Inc., 1951—. Mem.: Amer. Chem. Soc.; Sigma Alpha Epsilon; Sigma Xi; Sigma Pi Sigma; Phi Lambda Upsilon. Contbr. to: Rev. Scientific Instruments; Jour. Amer. Chem. Soc. War Record: U. S. Air Force, 1942-45. Special Int.: Magneto Chem.; Synthetic Textile Fibers.

CUTLER, Frank Allen, Jr., Sr. Chem., Developmental Rsch., Merck and Co., Inc., Rahway, N. J. **ORGANIC CHEMISTRY.** b. Nov. 14, 1920, Pana, Ill. c. Frank A. and Margaret (Coffey) C. Edn.: B.S., Univ. of Ill., 1942; Ph.D., Univ. of Minn., 1948. m. Lauramae Weber, June 22, 1946. c.: William Allen; Robert Brian. Exp.: Chemist, B. F. Goodrich Co., Akron, Ohio, 1944-46; Sr. Chem., Merck and Co., Inc., Rahway, N. J., 1948—. Mem.:

Amer. Chem. Soc.; Sigma Xi. Contbr. to: Jour. Organic Chem. Special Int.: Reactions of Quinones with Metallic Enolates; Steroids.

CUTRIGHT, Paul Russell, Hd., Dept. and Prof. of Biol., Beaver Coll., 312 Summit Ave., Jenkintown, Pa. **ZOOLOGY.**

CYR, Howard M., Supvr. of Metallurgical Rsch., N. J. Zinc Co., Palmerton, Pa. **METALLURGY OF ZINC; ZINC OXIDE; TITANIUM AND ALLIED MATERIALS.** b. Somerville, Mass., July 11, 1896. s. Frank B. and Mary (Mason) C. Edn.: S.B., Mass. Inst. of Tech., 1918. m. Elsie Shipley on Sept. 19, 1921. c. Howard M., Jr. Exp.: Chem. Engr. Chemical Warfare Service, Chemist, N. J. Zinc Co.; Rsch. Investigator, *ibid.*; Chief of Thermal Chemistry Section, *ibid.*; Rsch. Supvr. of Metallurgical Rsch., *ibid.* Hon. Pos.: Chmn., Lehigh Valley Section, Amer. Chem. Soc. Mem.: Amer. Chem. Soc.; Vice-Pres., Palmerton Memorial Park Assn. Contbr. to: Jour. of Amer. Electrochem. Gen. Int.: First made Spectroscopically Pure Zinc by Vacuum Distillation; Developed Methods of Opacifying Paper; Patents on Zinc Metallurgy, Zinc Oxide Mfg. and Treatment, Roasting.

DABNEY, Marye Y., STERILITY.

DAFFIN, John Baker, Prof. of Physics, Bursar-Treas., Mary Baldwin Coll., Staunton, Va. PHYSICS.

DAFT, Floyd Shelton, Asst. Dir., Natl. Inst. of Arthritis and Metabolic Diseases, Natl. Institutes of Health, Bethesda 14, Md. NUTRITION AND MEDICAL BIOCHEMISTRY.



b. Griswold, Iowa, May 19, 1900. s. Edgar William and Sarah Elizabeth (Shelton) D. Edn.: B.A., Simpson Coll., 1921; D.Sc., *ibid.*, 1952; Ph.D., Yale Univ., 1926. m. Pauline Miller Fisk on Nov. 26, 1935. c.: Leon W. Fisk. Exp.: Rsch. Asst., Yale Univ., New Haven, Conn., 1924; Cheney Fellow, *ibid.*, 1924-26; Traveling Fellow from Yale, Guest at Carlsberg Lab., Copenhagen, Denmark, 1926-

27; Asst. in Biochem. and Physiol., Harvard Univ. Schl. of Med. and Pub. Health, Boston, Mass., 1927-29; Eli Lilly Fellow, Yale Univ., 1929-31; Instr. in Biochem. and Exptl. Pathol., Rochester Univ. Schl. of Med., Rochester, N. Y., 1931-37; Mem. Staff of Natl. Institutes of Health, 1937—; Commissioned Officer, U. S. Pub. Health Service, 1945—; Asst. Ch. Div. of Physiology, NIH, 1946-48; Chf., Biochem. and Nutrition Lab., N.I.H., 1948-50; Asst. Dir., Exptl. Biol. and Med. Inst., *ibid.*, 1948-50; Acting Dir., *ibid.*, 1950-51; Asst. Dir., and Chf., Lab Research, Natl. Inst. of Arthritis and Metabolic Diseases, *ibid.*, 1951—. Mem.: Amer. Chem. Soc.; Soc. for Exptl. Biol. and Med.; Amer. Soc. of Biological Chemists; Amer. Public Health Assn.; Amer. Inst. of Nutrition; Wash. Acad. of Sci.; A.A.A.S., (Fellow, 1951); Int'l. Soc. Hematology; Sigma Xi; Kappa Theta Psi; Alpha Chi Sigma; Gamma Alpha; Epsilon Sigma. Contrb. to: Jour. of Biological Chem.; Biochem. Jour.; Soc. of Exptl. Biol. and Med.; Archives of Biochem.; Sci.; Public Health Reports. Gen. Int.: Asst. Editor, Nutrition Reviews, 1944-47; Assoc. Editor, Jour. of Nutrition, 1951—. Special Int.: Vitamins of B-complex; Protein Metabolism; Nutrition.

DAGER, Probert W., 14743 Morrison St., Van Nuys, Calif. CERAMICS.

DAGGS, Ray Gilbert, Dir. of Rsch., Armored Med. Rsch. Lab., Fort Knox, Ky. PHYSIOLOGY.

DAGGY, Richard Henry, Preventive Med. Coordinator, Arabian Amer. Oil Co., Dhahran, Saudi Arabia. MEDICAL ENTOMOLOGY AND TROPICAL PUBLIC HEALTH.



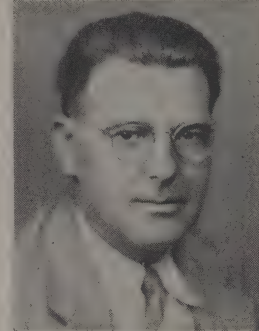
b. St. Paul, Minn., Aug. 23, 1914. s. R. L. and Ida (Bartels) D. Edn.: B.S. (with Distinction), Univ. of Minn., 1934; M.S., Univ. of Minn., 1938; Ph.D., Univ. of Minn., 1941; M.P.H., (magna cum laude), Harvard Univ., Schl. of Pub. Health, 1952. Exp.: Instr. in Biol., State Tehrs. Coll., Bemidji, Minn., 1939-42; Lt., U. S. Navy, 1942-45; Assoc. Entomologist, U. S. Public Health Service, Atlanta, Ga., 1945; Asst. Prof., Univ. of Minn., St. Paul, 1945-47; Preventive Med. Supvr., Arabian Amer. Oil Co., Dhahran, Saudi Arabia, 1947—. Mem.: Sigma Xi; Phi Delta Kappa; A.A.A.S.; Minn. Acad. of Sci.; Entomol. Soc. of Amer.; Amer. Assn. of Econ. Entomologists; Gamma Alpha; Delta Omega; Amer. Soc. of Tropical Med. and Hygiene, Pub. Health Assn.; Alpha Sigma Pi. Contrb. to: Annals

of the Entomol. Soc. of Amer.; Pub. Health Reports; Proc. Entomol. Soc. of Wash.; War Med., Everybody's Health. Ph.D. Dissertation: Taxonomic and Biological Invests. of Minnesota Mayflies (Ephemeroptera). War Record: Lt., USNR, Med. Entomologist with Malaria Control Units in South Pacific; Instr. in U. S. Naval Med. Schl., Bethesda, Md. Travel: New Zealand, New Caledonia, New Hebrides, England, Egypt, Philippines, Canada, Europe, India, Siam, Eritrea Kenya, Middle East, Saudi Arabia. Listed in: A.M.S.; Naturalists Dir.; Natl. Roster of Scientific and Specialized Personnel. Special Int.: Ephemeroptera; Taxonomy and Biol.; Anopheline Biol.; Malaria Control; and Pub. Health.

DAHL, Anthony Orville, Assoc. Prof. of Botany, Univ. of Minn., Minneapolis, Minn. CYTOLOGY.

DAHLE, Chester Disdad, Pa. State Coll., State College, Pa. DAIRYING.

DAHLE, Dan, Dir. of Production Rsch., Bristol-Myers Co., 217 E Westfield Ave., Rosselle Park, N. J. CHEMISTRY.



b. Surte, Sweden, Aug. 30, 1894. s. Aron Svensson and Anna-Kristina (Almgren) D. Edn.: Ch.E., Chalmers Inst. of Technology, Sweden, 1919; M.S., The Amer. Univ., 1934; Ph.D., *ibid.*, 1936. m. Eva Hentz on Sept. 8, 1925. Exp.: Tehr. in Sweden, 1919-20; Chemist, Advex Corp., Brooklyn, N. Y., 1920-21; Chemist, Wilkes-Martin-Wilkes Co., Camden, N. J., 1921-23; Rsch. Chemist, Phosphate Mining Co., Nichols, Fla., 1923; Asst. State Chemist, State of Fla., 1924-28; Asst. Chemist, U. S. Food and Drug Admin., Savannah, Ga., 1928-32; Rsch. Chemist, *ibid.*, Washington, D. C., 1932-33; Chf., Cosmetic Div., *ibid.*, 1938-46; Dir. of Rsch., Bristol-Myers Co., Hillside, N. J., 1946—. Hon. Pos.: First Hon. Mem. elected to the Soc. of Cosmetic Chemists. Mem.: Amer. Chem. Soc.; Soc. of Cosmetic Chemists; Assn. of Rsch. Dir. Contrb. to: Jour. Assn. of Official Agril. Chemists; Jour. of the Soc. of Cosmetic Chemists. Special Int.: Cosmetics and Coal-tar Colors.

DAHLSTROM, Donald Albert, Assoc. Prof., Northwestern Univ., Evanston, Ill. CHEMICAL ENGINEERING.



b. Minneapolis, Minn., Jan. 16, 1920. s. Raymond E. and Dora A. (Bloomgren) D. Edn.: B.S., Univ. of Minn., 1942; Ph.D., Northwestern Univ., 1949. m. Betty Cordelia, Dec. 4, 1942. c.: Mary Elizabeth; Donald Raymond; Christine Dora; Stephanie Lou. Exp.: Chem. and Petroleum Engr., Internatl. Petroleum Co., Negritos, Peru, So. Amer., 1942-45; U. S. N., 1945-46; Instr., Chem. Engrng. Dept., Northwest Univ., Evanston, Ill., 1946-49. Asst. Prof., *ibid.*, 1949-

51; Assoc. Prof., *ibid.*, 1951—. Mem.: Sigma Xi; Amer. Inst. Chem. Engrs.; Amer. Inst. of Mining and Metallurgical Engrs.; Tau Beta Pi; Phi Lambda Upsilon. Contrb. to: Food Technol.; Chem. Engrng. Progress; Mining Engrng. War Record: U. S. Navy, 1945-46. Gen. Int.: Recognized Authority on Liquid Cyclones. Special Int.: Liquid-Solid Separation; Filtrations; Cyclones; Centrifugal Forces; Fluid Mechanics; Mineral Beneficiation; Classification.

DAHLEN, Miles A., Dir. of Sales, Dyes and Chem. Div., E. I. du Pont de Nemours and Co., 8520 Nem-

ours Bldg., Wilmington, Del. **ORGANIC CHEMISTRY.** b. Jan. 4, 1904, St. Paul, Minn. s. Magnus D. and Hulda (Hocanson) D. Edn.: B.S., Univ. of Minn., 1924; Ph.D., *ibid.*, 1928. m. Marion Boyne, June 11, 1928. c.: Miles Boyne; Dean M. and Rolf J. Exp.: Rsch. Chem., E. I. du Pont de Nemours and Co., Wilmington, Del., 1928-32, Div. Hd. Jackson Lab., *ibid.*, 1932-38; Asst. Dir., Tech. Lab., *ibid.*, 1938-46; Asst. Mgr. Dom. Sales, Dyestuffs D.v., *ibid.*, 1946-48; Dir. of Sales, Fine Chem. Div., *ibid.*, 1948-51; Dir. of Sales, Dyestuff Div., 1951-52. Mem.: A.A.T.C.C.; Amer. Chem. Soc.; A.I.Ch.E.; T.R.I.; Sigma Xi. Special Int.: Dyes; Organic Chemicals.

DAKIN, Henry Drysdale, Edgehill, Scarborough-on-Hudson, N. Y. **CHEMISTRY, BIOCHEMISTRY.**

DAKIN, Thomas W., Section Mgr., Insulation Dept., Westinghouse Rsch. Lab., E. Pittsburgh, Pa.



PHYSICAL CHEMISTRY. b. Minneapolis, Minn., May 5, 1915. s. Silas T. and Lena (Bunker) D. Edn.: A.B., Univ. of Minn., 1935; M.S., Mich. State Coll., 1938; A.M., Harvard Univ., 1939; Ph.D., *ibid.*, 1941. m. Theodora Peck, in Dec. 1942. c.: James; Priscilla. Exp.: Jr. Chemist, U. S. Geological Survey, Summer, 1940; Westinghouse Rsch. Fellow, 1941-42; Rsch. Engineer, Westinghouse Rsch. Lab., 1942-46; Group Leader, *ibid.*, 1946-50; Section Mgr.

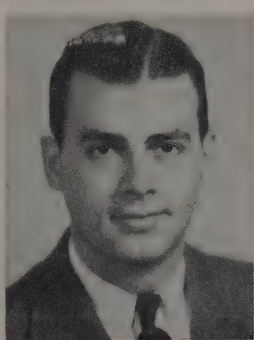
ibid., 1950—. Hon. Pos.: Chmn. Comm. on Chem. and Phys., Natl. Rsch. Council Conf. Elec. Insulation; Editor, Digest of Lit. of Dielectrics, 1949-50. Mem.: Amer. Chem. Soc.; Amer. Phys. Soc.; Amer. Inst. Elec. Engrng.; Sigma Xi; Sigma Pi Sigma; Rotary. Contrb. to: Jour. Amer. Chem. Soc.; Phys. Rev.; Jour. Applied Phys.; Trans. Amer. Inst. Electrical Engrng.; Trans. Electrochem. Soc. Special Int.: Dielectrics; Electrical Insulation.

DALE, Ernest Edward, 831 N. Sunset Blvd., Arcadia, Calif. **PLANT GENETICS.**

DALE, Julian Kalfus, Rsch. Dept., Commercial Solvents Corp., Terre Haute, Ind. **CHEMISTRY.**

DALE, Nelson Clark, Hd., Dept. of Geol. and Dir., Knox Museum of Natural History, Hamilton Coll., Clinton, N. Y. **GEOLOGY.**

DALE, Wesley John, Asst. Prof. of Chem., Old Chem. Bldg., Univ. of Mo., Columbia, Mo. **ORGANIC CHEMISTRY.**



b. Milwaukee, Wis., Aug. 8, 1921. s. Colin B. and Irma M. (Pohl) D. Edn.: B.S., (with Highest Honors), Univ. of Ill., 1943; Ph.D., Univ. of Minn., 1949. m. Pattie Surine, Aug. 20, 1949. c.: Claudia Jean. Exp.: Grad. Student and Tchng. Asst., Univ. of Minn., 1943; Rsch. Chemist, Govt. Synthetic Rubber Rsch. Program, *ibid.*, 1943-46; Grad. Student and Natl. Rsch. Council Predoctoral Fellow in Chem., *ibid.*, 1946-49; Asst. Prof. of Chem., Univ. of

Mo., Columbia, Mo., 1949—. Mem.: Amer. Chem. Soc.; A.A.A.S.; Sigma Xi; Phi Eta Sigma; Phi Lambda Upsilon; Phi Kappa Phi; Pi Mu Epsilon; Gamma Alpha; Alpha Chi Sigma. Contrb. to: Jour. Amer. Chem. Soc.; Jour. Organic Chem.; Jour. Polymer Sci. Special Int.: Synthetic Organic Chemistry; Theoretical Organic Chem.

D'ALELIO, Gaetano Francis, Vice-Pres. and Mgr. of Rsch., Koppers Co., Inc., Pittsburgh 19, Pa. **HIGH POLYMER AND ORGANIC CHEMISTRY; RESEARCH ADMINISTRATION.** b. Charlestown, Mass., Dec. 26, 1909. s. Severino and Francesca (Polcari) D'A. Edn.: B.A., Boston Coll., 1931; Ph.D., Johns Hopkins Univ., 1935. m. Josephine M. McCarthy on Sept. 5, 1932. c.: Denny; Ellen; Jane; William. Exp.: Rsch. Chemist, General Electric Co., Pittsfield, Mass., 1936-39; Dir. of Plastic Laboratories, *ibid.*, 1939-43; Dir. of Rsch., Pro-phy-lac-tic Brush Co., Northampton



Mass., 1943-44; Vice-Pres. in Chg. of Rsch., *ibid.*, 1944-46; Mgr. High Polymer Rsch., Indus. Rayon Corp., Cleveland, Ohio, 1946-47; Asst. Dir. of Rsch., Koppers Co., Inc., Pittsburgh, Pa., 1947-49; Vice-Pres. and Mgr. of Rsch., *ibid.*, 1949—. Mem.: Phi Lambda Upsilon; Phi Beta Kappa; Sigma Xi; Amer. Chem. Soc.; A.A.A.S.; Amer. Inst. of Chemists; N. Y. Acad. of Sci.; Textile Inst.; Natl. Farm Chemurgic Council; Soc. of Chem. Industries of London; Internatl. Mark Twain Soc.; Hist. of Sci. Soc.; Amer. Ordnance Assn.; Amer. Inst. of Chem. Engrs.; etc. Author: A Lab. Manual of Plastics and Synthetic Resins, 1943; Exptl. Plastics and Synthetic Resins, 1946; Substancias Plasticas Experimentaley y Resinas Sinteticas, 1948; Fundamental Principles of Polymerization. Contrb. to: Mod. Plastics; Jour. of Amer. Chem. Soc.; Amer. Jour. of Pharm. Special Int.: Rsch. Admin. and Organization; Organic Syntheses; Plastics; Synthetic Fibers.

DALMAT, Herbert Theodore, Scientist, Lab. of Tropical Diseases, Microbiological Inst., The National Institutes of Health, Bethesda 14, Md. **MEDICAL ENTOMOLOGY.** b. N. Y., N. Y., June 5, 1919. s. Benjamin and Rose (Ruthoser) D. Edn.: B.S., City Coll. of N. Y., 1939; M.S., Iowa State Coll., 1941. m. Ethel Drexler on Mar. 30, 1947. c.: David Joshua; Michael Eli. Exp.: Instr., Medical Entomology and Parasitology, Cornell Univ., 1942-43; Capt., U. S. Army - Natal, Brazil-Officer in Chg.: Aircraft Disinsection; Malaria Survey and Control; Schistosomiasis Control, 1943-46; Capt., U. S. Army-Orlando, Fla., Entomologist, Air Force Comm. for Aerial Dispersal of Insecticides, 1946-47; Capt., U. S. Army, Entomologist, Army Med. Schl., Washington, D. C., 1946; Scientist, U. S. Pub. Health Service, Entomologist Onchocerciasis Project, Guatemala, C. A., 1947-50; Entomologist and Chief of Project, 1950-53; Scientist, Lab. of Tropical Diseases, Microbiological Inst., The Natl. Inst. of Health, Bethesda, Md., 1953—. Mem.: Entomological Soc. of Amer.; Amer. Assn. of Econ. Entomologists; N. Y. Entomological Soc.; Entomological Soc. of Washington; Amer. Mosquito Control Assn.; Amer. Soc. of Parasitologists; Amer. Soc. of Tropical Med.; Masons. Contrb. to: Annals of the Entomological Soc. of Amer.; Jour. of Parasitology; Amer. Midland Naturalist; Jour. of N. Y. Entomological Soc.; Public Health Reports; Cornell Veterinarian. War Record: Capt., Sanitary Corps, U. S. Army. Special Int.: Simuliidae in Relation to Onchocerciasis; Medical Entomology in General.



tosomiasis Control, 1943-46; Capt., U. S. Army-Orlando, Fla., Entomologist, Air Force Comm. for Aerial Dispersal of Insecticides, 1946-47; Capt., U. S. Army, Entomologist, Army Med. Schl., Washington, D. C., 1946; Scientist, U. S. Pub. Health Service, Entomologist Onchocerciasis Project, Guatemala, C. A., 1947-50; Entomologist and Chief of Project, 1950-53; Scientist, Lab. of Tropical Diseases, Microbiological Inst., The Natl. Inst. of Health, Bethesda, Md., 1953—. Mem.: Entomological Soc. of Amer.; Amer. Assn. of Econ. Entomologists; N. Y. Entomological Soc.; Entomological Soc. of Washington; Amer. Mosquito Control Assn.; Amer. Soc. of Parasitologists; Amer. Soc. of Tropical Med.; Masons. Contrb. to: Annals of the Entomological Soc. of Amer.; Jour. of Parasitology; Amer. Midland Naturalist; Jour. of N. Y. Entomological Soc.; Public Health Reports; Cornell Veterinarian. War Record: Capt., Sanitary Corps, U. S. Army. Special Int.: Simuliidae in Relation to Onchocerciasis; Medical Entomology in General.

DALLENBACH, Karl M., Distinguished Prof. of Psychol., Univ. of Tex., Austin, Tex. **PSYCHOLOGY.** b. Champaign, Ill., Oct. 20, 1887. s. John

Jacob and Anna Carolina (Mittendorf) D. Edn.: A.B., Univ. of Ill., 1910; M.A., Univ. of Pittsburgh, 1911; Ph.D., Cornell Univ., 1913. m. Ethel Leila Douglas, Aug. 22, 1914. c.: John Wallace; Elizabeth Ann; Frederick Douglas. Exp.: Fellow in Psychology, Univ. of Pittsburgh, 1910-11; Sage Fellow in Psychology, Cornell Univ., 1911-13; Instr. of Psychol., Univ. of Ore., Portland, Ore., 1913-15; Instr., Ohio State Univ., Columbus, Ohio, 1915-16; Instr., Cornell Univ., Ithaca, N. Y., 1916-20; Asst. Prof. of Psychol., *ibid.*, 1920-30; Visiting Prof. of Psychol., Columbia Univ., N. Y. C., 1930-32; Prof. of Psychol., Cornell Univ., Ithaca, N. Y., 1932-45; Susan Linn Sage Prof. of Psychol., *ibid.*, 1945-48; Distinguished Prof. of Psychol., Univ. of Tex., Austin, Tex., 1948—; Editor, Amer. Jour. of Psychol., 1926—. Mem.: Amer. Psychol. Assn.; Soc. of Exptl. Psychol.; Eastern Psychol. Assn.; A.A.A.S.; Delta Upsilon; Nu Sigma Nu; Sigma Xi; Phi Kappa Phi; Phi Delta Kappa; Psi Chi; Rotary; Southern Soc. of Philos. and Psychol.; Tex. Psychol. Assn.; Psychometric Soc. Contrb. to: Amer. Jour. of Psychol.; Psychol. Rev.; Jour. of Exptl. Psychol.; Psychol. Bull. War Record; Capt., San. C., U. S. A., 1918-19; Capt., O.R.C., 1919-42; Lt. Col., A.G.O., A.U.S., 1942-46. Special Int.: Sensation; Attention; Forgetting; Psychophysics; Psychol. of the Blind; Physiol. Psychol.

DALY, Nelson Beardsley, Rsch. Chem., Du Pont Exptl. Station, Wilmington, Del. ORGANIC CHEMISTRY. b. Sept. 13, 1919, Waterbury, Conn. s. Frank J. and Helen (Beardsley) D. Edn.: B.S., Yale Univ., 1941; Ph.D., *ibid.*, 1947. m. Evelyn Silvers, Mar. 24, 1945. c.: Terrill Ann; and Nelson B., Jr. Exp.: Rsch. Chem., du Pont Exptl. Station, Wilmington, Del., 1943—; Rsch. Chem., Patent Liaison, *ibid.*, 1947—. Mem.: Amer. Chem. Soc.; A.A.A.S.; Sigma Xi; R.E.S.A.; Gamma Alpha; U. S. Naval Inst. Special Int.: Addition and Condensation Polymers—Pharmaceuticals; Local Anesthetics; Tech. Side (as contrasted to legal) of Chem. Patent Practice.

DALY, Reginald Aldworth, Emer. Prof. of Geol., Harvard Univ., 23 Hawthorn St., Cambridge 38, Mass. GEOLOGY. b. Napanee, Ont., Can., May 19, 1871. s. Edward and Jane Maria (Jeffers) D. Edn.: B.A., Victoria Coll., 1891; Ph.D., Harvard Grad. Schl., 1896. Hon. Deg., D.Sc., Toronto Univ., 1923; D.Sc., Heidelberg Univ., 1936; D.Sc., Chicago Univ., 1940; D.Sc., Harvard Univ., 1942. m. Louise Porter Haskell, 1903. c.: Reginald Aldworth, Jr. (died 1909). Exp.: Instr. in Geol., Harvard Univ., 1898-1901; Geologist for Canada, Internatl. Boundary Commn., 1901-07; Prof. of Geol.; Mass. Inst. of Tech., 1907-12; Sturgis Hooper Prof. of Geol., Harvard Univ., 1912-42; Emer. Prof. of Geol., *ibid.*, 1942—. Hon. Pos.: Pres., Geol. Soc. Amer.; Recipient of Hayden, Penrose, Bowie and Wollaston Medals. Mem.: Natl. Acad. Sci.; Geol. Soc. London, Linburg, Stockholm, France, Belgium, S. Africa; Royal Soc. Edinburgh; Swedish Acad. Sci.; French Acad. Sci.; Indian Acad. Sci.; Natl. Inst. Sciences of India; Royal Acad. Sci. and Letters, Netherlands; Geographic Soc. of Finland; Mineralog. Soc. Leningrad; Correspondent, Acad. Sci., U.S.S.R. Author: Igneous Rocks and Their Origin, 1914; Geol. of St. Helena Island, 1927; Igneous Rocks and Depths of the Earth, 1933; Changing World of the Ice Age, 1934; Architecture of the Earth, 1938; Strength and Structure of the Earth, 1940; The Floor of the Ocean, 1942; etc. Contrb. to: Amer. Jour. Sci.; Jour. Geol.; Bull. Geol. Soc. Amer. War Record: Served in France, Y.M.C.A., World War I.

D'AMOUR, Fred E., Prof. of Zool., Univ. of Denver, Denver, Colo. PHYSIOLOGY.

DAMPF, Alfons, Prof. of Entomol. and Hd. Lab., Escuela Nacional de Ciencias Biologicas, Mexico City, Mex. ENTOMOLOGY.

DAMSCHRODER, Rudolph E., Asst. Supt., Rsch. Lab., Eastman Kodak Co., Rochester, N. Y. ORGANIC CHEMISTRY. b. Oct. 11, 1910, Elmore, Ohio. s. John Henry and Emma Louise (Millman) D. Edn.: A.B., Hiram Coll., 1932; M.S., Syracuse Univ., 1934; Ph.D., Univ. of Ill., 1937. m. Dorothy Eaton, Dec. 31, 1938. c.: John Henry; Diana Lee. Exp.: Chemist, Eastman Kodak Co., 1937-47; Asst. Supt., Rsch. Lab., Eastman Kodak Co., Rochester,

N. Y., 1947—. Mem.: Phi Beta Kappa; Phi Kappa Phi.

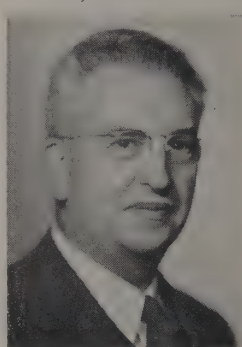
DAMSGARD, Lincoln C., Asst. Prof. of Math. and Astronomy, Pasadena Jr. Coll., Pasadena, Calif. MATHEMATICS, ASTRONOMY.

DAMUSIS, Adolph, Rsch. Chemist, The Sherwin-Williams Co., 1429 E. 93rd St., Cleveland 6, Ohio.



SILICATES AND BUILDING MATERIALS. b. Toscia, Russia, June 16, 1908. s. Pranas and Jadvyga (Sukevicius) D. Edn.: B.S., Univ. of Vytautas the Great, Kaunas, Lith., 1934; M.S., Berlin-Sharlottenbrg. Techn. Hochschule, 1938; Ph.D., Univ. of Vytautas the Great, 1940. m. Jadvyga Psibilskis, Dec. 26, 1937. c.: Vytenis-Bernardas; Saulius-Jurgis; Indre-Marija. Exp.: Asst. in Chem. Tech., Univ. of Lithuania, 1934-39; Assoc. Prof. of Tech. of Silicates, *ibid.*, 1940-43; Dean of Faculty of Tech., *ibid.*, 1942-43; Consult. in the Field of Bldg. Materials, St. Dept. Bldg. Materials 1939-43; Staff, The Sherwin-Williams Co., Cleveland, Ohio, 1949—. Mem.: Amer. Chem. Soc.; Paint, Varnish and Lacquer Club; Coun. on World Affairs. Author: Diss: Alumina and Iron Oxide Ratio and Shrinkage of Portland-cement, 1942; Mineral Resources of Lithuania, 1940. Contrb. to: Extender Pigments; Carbon Black Pigments and their Treatments; Silicate Vehicles. Special Int.: Silicates.

DANA, Alan Standish, Chf. Engr., The Kerite Co., Ansonia, Conn. ELECTRICAL ENGINEERING.



b. Portland, Maine, June 8, 1892. s. John Winchester and Mary Lester (Fobes) D. Edn.: S.B., M. I. T., 1915. m. Edna Burton on Apr. 15, 1933. c.: Alan S. Jr.; John W. Exp.: Rsch. Asst., Western Union Telegraph Co., 1916-19; Chf. Engr., The Kerite Co., Seymour, Conn., 1919—. Mem.: Fellow, Amer. Inst. Elec. Engrs. and Mem. Bd. of Examiners; Amer. Soc. for Tets. Materials; Fellow, Amer. Geographical Soc.; A.A.A.S.; Rotary. Gen. Int.: Eighteen Patents on Electric Cables.

DANA, Baron R., Asst. Prof. of Animal Husbandry, A. and M. Coll. of Tex., College Station, Tex. ANIMAL HUSBANDRY.

DANA, Samuel T., Ann Arbor, Mich. FORESTRY.

DANEHY, James Philip, Asst. Prof., General Program of Liberal Edn., Univ. of Notre Dame, Notre Dame, Ind. ORGANIC CHEMISTRY; PROTEINS. b. Ft. Wayne, Ind., Apr. 27, 1912. s. James Stephen and Rosella (Langard) D. Edn.: B.S., Univ. of Notre Dame, 1933; M.S., *ibid.*, 1934; Ph.D., *ibid.*, 1936. m. Margaret Dickson on June 16, 1934. c.: Margaret Anne; James Stephen; Mary Sheila. Exp.: Rsch. Chem., Gen. Chem. Co., N. Y. C., 1936-38; Rsch. Chem., Harris-Seybold Co., Cleveland, Ohio 1938-42; Protein Group Leader, Corn Products Refg. Co., Argo, Ill., 1942-48; Rsch. Chem., Toni Co., Chicago, Ill., 1948-51; Asst. Prof., Gen. Program of Liberal Edn., Notre Dame Univ., 1951—. Mem.: Amer. Chem. Soc. Contrb. to: Jour. of Amer. Chem. Soc. Special Int.: Isolation and Characterization of Vegetable Proteins; Physical and Chem. Properties of Keratin Fibers.

DANFORTH, Charles Haskell, Stanford Univ., Stanford Univ., Calif.

DANIEL, John H., Jr., Rsch. Chemist, Amer. Cyanamid Co., Stamford, Conn.



AS APPLIED TO SURFACE COATINGS, PAPER, ETC. b. Nottinghamshire, England, Jan. 1, 1913. s. John H. and Ada (Bean) D. Edn.: B.S., Univ. of Ala., 1934; Ph.D., Yale Univ., 1944. m. Elizabeth Saeger on May 18, 1946. c.: Nancy S.; Warren S.; John W.; Roger H. Exp.: Chem., Natl. Aniline Co., 1934-35; Rsch. and Analytical Chemist, Amer. Cyanamid Co., 1936-41, 1943—. Mem.: Amer. Chem. Soc.; Sigma Xi; Greenwich Yale Club. Gen. Int.: Assisted in the Development of Several New Wet-Strength Resins. Special Int.: Resins for Wet-Strength Paper and Surface Coatings.

DANIEL, John Laurence, Hd. Dept. of Chem., Ga. Schl. of Tech., Atlanta, Ga. CHEMISTRY.

DANIEL, Walter Green, Prof. of Edn., Howard Univ., 1206 Lamont St., N. W., Washington, D. C. EDUCATION.

DANIEL, Zaccheus, Astronomer, Allegheny Observatory, Univ. of Pittsburgh, Riverview Park, Pittsburgh, Pa. ASTRONOMY.

DANIELS, Farrington, Prof. of Chem., Univ. of Wis., Madison, Wis. PHYSICAL CHEMISTRY.



b. Mar. 8, 1889, Minneapolis, Minn. s. Franc B. and Florence Farrington D. Edn.: B.S., Univ. of Minn., 1910; M.S. ibid., 1911; Ph.D., Harvard, 1914. m. Olive Bell of Minneapolis, Minn., Sept. 15, 1917. d. Rev. E. A. and Mary Greer Bell. c.: Farrington, Jr., Florence Mary (Drury), Miriam Olive (Ludwig), Dorin Slater. Exp.: Instr. and Asst. Prof., Worcester Poly. Inst., 1914-17; Electrochem., U. S. Nitrogen Rsch. Lab., 1919; Asst. Prof., Univ. of Wis., 1920-24; Assoc. Prof.,

ibid., 1924-28; Prof., ibid., 1928—; Prof., Stanford Univ., summer, 1930; Baker Lectr., Cornell Univ., 1935; Chmn., Sect. Physical and Inorganic Chem., Amer. Chem. Soc., 1931; Vice-Pres., and Chmn., Chem. Sect., A.A.A.S., 1937; Assoc. Editor, Jour. Amer. Chem. Soc., 1933-42. Mem.: Fellow, A.A.A.S.; Vice-Pres. for Chem., 1937 and 1947; Amer. Chem. Soc.; Pres. Amer. Chem. Soc., 1953; A.A.A.S.; Faraday Soc.; Natl. Acad. of Sci.; Amer. Philosophical Soc.; Alpha Delta Phi; Alpha Chi Sigma; Sigma Xi. Author: Mathematical Prep. for Physical Chem., 1928; Chem. Kinetics, 1938; Outlines of Physical Chem.; Exp. Physical Chem. with Others; Investigator, Natl. Defense Research Comm.; Consultant, War Production Bd.; Dir. Metallurgical Lab., Univ. of Chicago, 1945-46. Ph.D. Dissertation: Thermodynamics. Special Int.: Chemical Kinetics, Photosynthesis, Nitrogen Oxides, Atomic Energy; Thermoluminescence of Crystals, Solar Energy.

DANIELS, Fred C. T., Vice-Pres., M.H.Co., 901 Bingham St., Pittsburgh 3, Pa. IRON AND STEEL ROLLS AND CASTINGS. b. Jan. 22, 1882, Starksboro, Vt. s. W. S. and K. B. (Sayles) D. Edn.: B.S., Worcester Poly. Inst., 1904. m. K. W. Rex, Sept. 2, 1916. c.: K. E.; E. S. and S. L. Exp.: Chem., Mackintosh, Hemphill Co., 1904-11; Asst. Supt., Pittsburgh Iron, Steel Co., 1912-13; Met. Why. Mold and Fdy. Co., 1914-22; Div. Supt., Bethlehem Steel Co., 1923-28; Vice-Pres., M.H. Co., 1929—. Mem.: A.S.T.M.; A.M.S.; A.E.M.M.E.; A.I.S.T.; Duquesne Club. Contrb. to: Blast Furn. and Steel Plants.

DANIELS, George E., M.D., Clin. Prof. of Psychiatry, Columbia Univ., 129 E. 69th St., N. Y., N. Y. b. May 17, 1896, Fitchburg, Mass. s. John Herbert and Florence Russell (Dwinnell) D. PSYCHIATRY AND PSYCHOANALYSIS. Edn.: B.S., Dartmouth Coll., 1918; M.D., Harvard Med. Schl., 1922; Grad. Work in neuroanatomy with Constantin von Monakow, Zurich, Switzerland, 1924; Grad. work in psychoanalysis at the Berlin Psychoanalytic Inst., 1927-28. m. Helen Margaret Schaeffer, Mar. 1, 1930. c.: John G. and Robert D. Exp.: Instr. in Psychiatry, Coll. of Physicians and Surgeons, Columbia Univ., N. Y. C., 1928-31; Asst. Physician, Presbyterian Hosp., N. Y. C., 1931-39; Asst. Attending Physician, ibid., 1939-45; Assoc. Attending Physician, ibid., 1945—; Clin. Prof. of Psychiatry, Columbia Univ., N. Y. C., 1931—. Mem.: Assn. for Psychoanalytic Med.; N. Y. Psychiatric Soc.; Amer. Med. Assn.; N. Y. Soc. for Clin. Psychiatry; Amer. Psychosomatic Soc.; Fellow, N. Y. Acad. of Med.; Alpha Kappa Kappa. Contrb. to: Numerous Jours. of Psychiatry; Med.; and Gastroenterol. Special Int.: Psychiatry; Psychoanalysis and Psychosomatic Med.

DANIELS, Joseph, Prof. of Mining Engrng. and Metallurgy, Coll. of Mines, Univ. of Wash., Seattle, Wash. MINING ENGINEERING.

DANIELSON, Irvin S., Manager of Viral and Rickettsial Production, Lederle Laboratories Div., Amer. Cyanamid Co., Pearl River, N. Y.



BIOCHEMISTRY. b. Albuquerque, N. Mex., Feb. 25, 1904. s. Sven O. and Hanna (Larson) D. Edn.: B.S., Univ. of N. Mex., 1926; M.S., Univ. of Washington, 1928; Ph.D., Harvard Univ., 1933. m. Constance Almy on Aug. 7, 1936. c.: Robert Almy; Kenneth Sigwald. Exp.: Asst. Prof. of Biochem., Univ. of Okla. Med. Schl., 1937-42; Assoc. Prof., ibid., 1942; Rsch. Chem., Lederle Laboratories, Pearl River, N. Y., 1942-46; Asst. Dir., Animal Industry Section, ibid., 1946-51; Asst. Dir. of Viral and Rickettsial Prod., ibid., 1951-52; Mgr., ibid., 1952—. Mem.: Amer. Chem. Soc.; Amer. Soc. of Biol. Chems.; N. Y. Acad. of Sci. Contrb. to: Jour. Biol. Chem.; Amer. Jour. Physiol.; Proc. Soc. Expt. Biol. Med.; Proc. Okla. Acad. of Sci.; Trans. N. Y. Acad. of Sci.; Jour. Lab. Clinical Med. Special Int.: Immunizing Agents.

DANIELSON, R. R., Metal and Thermit Corp., Carleret, N. J. CERAMICS.

DANOWSKI, Thaddeus S., Prof. of Rsch. Med., Univ. of Pittsburgh Schl. of Med., 125 DeSoto St., Pittsburgh 13, Pa. INTERNAL MEDICINE; METABOLIC DISEASES.



ES. b. Wallington, N. J., Sept. 6, 1914. s. Anton and Theresa (Kosciuk) D. Edn.: B.A., Yale Univ., 1936; M.D., ibid., 1940. m. Phyllis Margaret Little in 1949. c.: Stanley T. Exp.: Interne in Med., New Haven Hosp., 1940-41; Asst. Resident in Med., ibid., 1941-43; Inst. in Med., Yale Univ. Schl. of Med., 1943-46; Asst. Prof. of Med., ibid., 1946-47; Assoc. Phys., New Haven Hosp.-Grace-New Haven Hosp., 1943-47; Renziehausen Prof. of Rsch. Med., Univ. of Pittsburgh Schl. of Med., 1947—; Faculty Mem., Grad. Schl., Univ. of Pittsburgh, 1949—; Sr. Staff Phys., Presbyterian Hosp., Pittsburgh, Pa., 1947; Sr. Staff Phys., Woman's Hosp., Pitts-

burgh, Pa., 1947—; Sr. Staff Phys., Children's Hosp. of Pittsburgh, 1947—; Elizabeth Steel Magee Hosp., Sr. Staff Phys., Pittsburgh, Pa., 1949—; Phys. in Chg., Renziehausen Memorial Ward and Clinic, 1948—; Staff Phys., Falk Clinic, 1947—; Assoc., Grad. Schl. of Public Health, Univ. of Pittsburgh, 1950—; Hon. Pos.: Chmn., Faculty Rsch. Comm., Univ. of Pittsburgh, 1949—; Clinical Investigation Comm., Magee Hosp., 1948—; Comm. for Clinical Investigation and Control of the Use of New Drugs, Presbyterian Hosp., 1948—; State Comm. of Diabetes, Pa. State Med. Soc., 1948—; Pres., Clinical Soc. of the Pittsburgh Diabetes Assn., 1950-51; Mem. of Univ. Senate, Univ. of Pittsburgh, 1948—; Jr. C. of C. Medical Man of the Year, Pittsburgh, Pa., 1948; Mem. Professional Edn. Comm., Pa. Div., Amer. Cancer Soc.; etc. Mem.: Amer. Soc. for Clinical Investigation; Amer. Soc. for the Study of Goiter; Soc. for Exptl. Biology and Med.; Amer. Coll. of Phys., Fellow; Amer. Diabetes Assn.; Fellow. A.A.A.S.; Pittsburgh Pediatric Soc.; Phi Beta Kappa; Sigma Xi; Alpha Omega Alpha.

DANSEREAU, Pierre, Dir., du Service de Biogéographie, Université de Montréal, 2900 Blvd. du Mont-Royal, Mont-Royal, Montréal, Qué., Can. ECOLOGY.

DARKEN, Marjorie A., Rsch. Microbiologist, Heyden Chem. Corp., Princeton, N. J. PHYSIOLOGY



OF INDUSTRIAL FERMENTATIONS. b. Brooklyn, N. Y., July 15, 1915. d. William H. and Gertrude A. (Stamper) D. Edn.: B.Sc. cum laude, St. Lawrence Univ., 1936; M.A., Univ. of Mich., 1937. Exp.: Rsch. Technician, Univ. Hosp., Ann Arbor, Mich., 1937-39; Rsch. Asst., Neuropsychiatric Inst., Hartford, Conn., 1939-41; Dir. of Laboratories, ibid., 1941-43; Rsch. Microbiologist with Group Leadership Status, Heyden Chem. Corp., Princeton, N. J., 1943. Hon. Pos.: Univ. Scholar

and Newcombe Fellow, Univ. of Mich. Mem.: Phi Beta Kappa; Sigma Xi; N. Y. Acad. of Sci.; A.A.A.S.; Amer. Chem. Soc.; Soc. Amer. Bact.; Theobald Smith Soc.; Amer. Soc. Plant Physiologists; Sigma Delta Epsilon; Iota Sigma Pi; Phi Sigma; Gamma Sigma Epsilon. Contrb. to: Psi; Amer. Jour. Botany; Botanical Rev.; Diseases Nervous System. Special Int.: Physiology and Mycology of Industrial Fermentations including Antibiotics and Vitamins; Biosynthesis of Penicillin; Irradiation of Cultures; Conduction of Radio-Active Substances in Plants; Endocrine Therapy in the Psychoses.

DANSEREAU, Pierre, Assoc. Prof. of Botany, Dept. of Botany, Univ. of Mich., Ann Arbor, Mich. ECOLOGY. b. Montreal, Can., Oct. 5, 1911. s. Jean Lucien and Marie (Archambault) D. Edn.: B.A., Coll. Ste-Marie, 1931; B.Sc., Institut Agricole d'Oka, 1936; D.Sc., Université de Genève, Switzerland, 1939. m. Françoise Masson, Aug. 29, 1935. Exp.: Botanist, Botanical Garden, Montreal, Can., 1939-40; Asst. Dir. of Tech. Services, ibid., 1940-42; Dir. of Service de Biogéographie, Univ. of Montréal, Montréal, Can., 1943-50; Asst. Prof. of Botany, Univ. of Mich., Ann Arbor, Mich., 1950-52; Assoc. Prof., ibid., 1952—. Mem.: Agric. Inst. of Can.; A.A.P.S.S.; A.A.A.S.; Amer. Assn. of Plant Taxonomists; Amer. Biol. Soc.; Amer. Fern Soc.; Amer. Genetic Assn.; Amer. Geographic Soc., Fellow; Arctic Inst. of N. Amer., Charter Assoc.; Assn. of Amer. Geographers; Assn. Canadienne-Française pour l'Avancement des Sci.; Assn. of Pac. Coast Geographers; Botanical Soc. Amer.; British Ecol. Soc.; Calif. Botanical Soc.; Can. Assn. for Adult Edn.; Can. Geographical Soc.; Can. Soc. of Forest Engrs.; Ecol. Soc. Amer.; Indian Ecol. Soc.; Internatl. Assn. of Plant Taxonomy; Internatl. Student Service; Mich. Acad. of Sci.; Mich. Botanical Club; New England Botanical Club; N. Y. Acad. of Sci.; Ottawa Field Naturalists' Club; Rsch. Club of the Univ. of Mich.; Royal Soc. of Can., Fellow; Socie-

dade dos Geografos Brasileiros; Societa Botanica Italiana; Soc. de Biogéographie, Paris; Soc. Botanique de France; Soc. Botanique de Genève; Soc. Canadienne d'Hist. Naturelle; Soc. de Biologie de Montréal; Soc. d'Edn. des Adultes du Québec; Soc. de Géographie de Montréal; Soc. de Québec pour la Protection des Plantes; Soc. Internatl. de Phytosociol.; Soc. for the Study of Evolution; Soc. of Sigma Xi; Southern Appalachian Botanical Club; Torrey Botanical Club. Contrb. to: Rev. Inst. Agri.; Lab. Bot. Univ. of Montréal; Rev. Hort.; Bull. Soc. Bot., France; Bull. Soc. Bot., Genève; Ann. Epiphyt. et Phytogén.; Can. Jour. of Rsch.; Nat. Can.; Rev. Can. Biol.; etc. Special Int.: Study of Plant Communities; Study of Genetic Adaptation to Environment; Study of Structures of Vegetation and World Distribution of Types.

D'ANTONI, Joseph Steven, Chf., Tropical Med. Service, Lakeshore Hosp. and Prof. of Clinical Tropical Med., Tulane Univ., New Orleans, La. INT-ESTINAL INFECTIONS.

DARKENWALD, Gordon G., Asst. Prof. of Geography, Hunter Coll., 695 Park Ave., N. Y., N. Y. GEOGRAPHY.

DARKER, Grant Dooks, Mycologist, Ben Venue Labs., Inc., Bedford, Ohio. MYCOLOGY, INDUSTRIAL FERMENTATIONS.

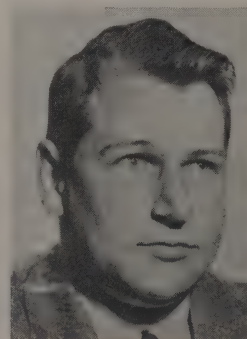
DARKIS, Frederick Randolph, Dir. of Rsch., Liggett and Myers Tobacco Co., Durham, N. C. CHEMIS-



TRY. b. Frederick, Md., July 22, 1899. s. Thomas M. and Maria (Wachter) D. Edn.: B.S., Univ. of Md., 1922; M.S., ibid., 1923; Ph.D., ibid., 1928. m. Mildred Morris, Oct. 6, 1928. c. Frederick R., Jr.; Thomas Morris and Barbara Lee. Exp.: Instr., Univ. of Md., Coll. Park, Md., 1922-23; Analytical Chemist, State Control Labs. of Md., 1923-26; Chemist, Fla. Citrus Expt. Station, 1927-28; Chemist, Liggett and Myers Tobacco Co., Durham, N. C., 1928-33; Rsch. Assoc., Duke Univ., 1933-47; Dir. of Rsch., Liggett and Myers Tobacco Co., 1948—. Mer.: A.C.S.; A.A.A.S.; N. C. Acad. of Sci.; Sigma Xi; Phi Lambda Upsilon; Alpha Chi Sigma; Rotary. Author: Aromatic Tobacco, 1947. Contrb. to: Jour. of Indus. and Engrng. Chem.; Jour. of Assn. of Official Agril. Chemist; Chem. Revs.; Jour. of Phytopathol. Special Int.: Pathol. Diseases of Tobacco. Production of Tobacco. The Relation of the Chem. Composition of Tobacco to its Quality. The Aging, Processing and Mfg. of Tobacco.

DARLEY, John Gordon, Prof. of Psychol. and Dir., Student Counseling Bureau, 101 Eddy Hall, Univ. of Minn., Minneapolis, Minn. PSYCHOLOGY.

DARLING, Samuel Mills, Rsch. Chemist, Standard Oil Co., 2127 Cornell Rd., Cleveland 6, Ohio.



PETROLEUM CHEMISTRY. b. Bradenton, Fla., Jan. 13, 1917. s. Samuel Mills and Maude (Rogers) D. Edn.: B.A., Carleton Coll., 1939; M.S., Western Reserve Univ., 1943; Ph.D., ibid., 1947. m. Janet Parsons on June 21, 1940. c.: Joe Douglas; Paul Parsons; Bruce Lennon. Exp.: Rsch. Div., Standard Oil Co. of Ohio, 1939—. Mem.: Phi Beta Kappa; A.A.A.S.; Amer. Chem. Soc.; Sigma Xi. Special Int.: Heterogenous Catalysis; Halide Catalysis; Combustion.

DARLING, Chester Arthur, Prof. of Biol., Allegheny Coll., Meadville, Pa. BACTERIOLOGY, BOTANY.

DARLING, George Bapst, Dir. of Med. Affairs, Yale Univ., 256 Bradley St., New Haven, Conn. PUBLIC HEALTH.

DARLINGTON, Henry Townsend, retired, 202 Durand St., East Lansing Mich. PHYTOGEOGRAPHY.

DARLINGTON, P. J., Jr., Museum of Comparative Zool., Cambridge, Mass. COLEOPTEROLOGY.

DARRAH, Lawrence Bryce, Prof. of Marketing, Cornell Univ., Ithaca, N. Y., AGRICULTURAL ECONOMICS.

DARRAH, William A., Pres., Intercontinental Engrs., Inc., 176 W. Adams St., Chicago, Ill. ENGINEERING.

DARRAH, William Culp, Materials Engr., Raytheon Co., 122 Lincoln Rd., Medford, Mass. PALEOBOTANY.

DARROW, Chester William, Psychophysicologist and Dir., Physiol. Lab., Inst. for Juvenile Rsch., 907 S. Wolcott Ave., Chicago, Ill. PSYCHOPHYSIOLOGY.

DARROW, George McMillan, Prin. Horticulturist in Chg. Deciduous Fruit Investigations, Bureau of Plant Indus., Beltsville, Md. SMALL FRUIT INVESTIGATIONS; BREEDING. b. Springfield, Vt., Feb. 2, 1889. s. Guy Calvin and Maria (Barnet) McM. Edn.: A.B., Middlebury Coll., 1910; A.M., Cornell Univ., 1911; Ph.D., Johns Hopkins Univ., 1927. m. Grace E. Chapman on Aug. 19, 1919. c.: Leslie; Edith; Carol; Wilson; George, Jr.; Dan. Exp.: Scientific Asst. to Prin. Horticulturist, Bureau of Plant Indus., Beltsville, Md., 1911—Hon. Pos.: Wilder Medal for Fruit Breeding; Pres., Wash. Botanical Soc.; Vice-Pres., Amer. Genetic Soc.; Pres., Amer. Soc. Horticultural Sci. Mem.: Wash. Bot. Soc.; Amer. Genetics Soc.; Amer. Soc. Horticultural Sci.; Wash. Acad. of Sci.; Amer. Phytopathology Soc. Contrb. to: Jour. Heredity; Amer. Soc. Hort. Sci.; Jour. Bot.; Brittonia; Jour. Agri. Rsch. War Record; Hosp. Sgt., 1948-49. Gen. Int.: Breeding of new berry varieties. Special Int.: Fruit Breeding; Polyploidy of Fruits.

DARROW, Karl Kelchner, Mem. of Technical Staff, Bell Telephone Labs., 463 West St., N. Y., N. Y. PHYSICS.

DART, Raymond Osborne, Asst. Dir., Army Inst. of Pathol., Washington, D. C. PATHOLOGY.

DARTON, Nelson Horatio, retired 6969 Brookville Rd., Bethesda, Md. GEOLOGY, GEOGRAPHY.

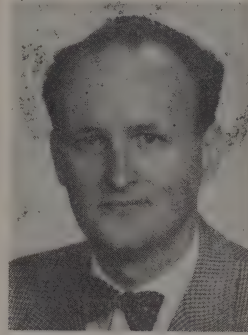
DASHER, Paul J., Dasher Rubber and Chemical Co., Fairport Harbor, Painesville, Ohio, RUBBER TECHNOLOGY.

DASHIELL, John Frederick, Kenan Prof. of Psychol., Univ. of N. C., Chapel Hill, N. C. PSYCHOLOGY.

DASLER, Waldemar, Asst. Prof. of Biochem. Chicago Med. Schl., Chicago 12, Ill. BIOCHEMISTRY. b. St. James, Minn., May 28, 1910. s. Adolph and Melanie (Agather) D. Edn.: B.S., Univ. of Wis., 1932; M.S., *ibid.*, 1933; Ph.D., *ibid.*, 1938. m. Melanie Schulz, July 22, 1939. c.: Elizabeth Doris; Mark Waldemar; James Ralph. Exp.: Hd. Chemist, B. S. Pearsall Co., Elgin, Ill., 1938-41; Rsch. Chem., Nutrition Rsch. Lab., Chicago, Ill., 1941-47; Chief Rsch. Chem., *ibid.*, 1947-48; Asst. Prof. of Biochem., The Chicago Med. Schl., Chicago, Ill., 1948—. Mem.: A.A.A.S.; Amer. Chem. Soc.; Phi Lambda Upsilon; Gamma Alpha. Contrb.: Jour. of Nutrition; Proceedings of the Soc. for Experimental Biol. and Med.; Jour. of Biological Chem.; Jour. of Lab. and Clinical Med.; Sci.; Chicago Med. Schl. Quarterly; Industrial and Engineering Chem.; Jour. of the Amer. Chem. Soc. Spec. Int.: Vitamin D; Lathyrism.

DAUGHTERS, Milo Reason, Consultant and Advisor, Canning and Freezing Foods, 412 Soledad St., Salinas, Calif. FOOD TECHNOLOGY.

DAUNT, John G., Prof. of Physics, Ohio State Univ., Columbus, Ohio.



LOW TEMPERATURE PHYSICS. b. Killiney, Ireland, June 30, 1913. s. George and Constance (Burns) D. Edn.: B.A., Univ. of Oxford, 1935; M.A., *ibid.*, 1937; Ph.D., *ibid.*, 1937. m. Mary Powell, Aug. 31, 1940. c.: Daphne M.; Diana O'N.; Jonathan G. T. Exp.: Lectr. in Physics, Exeter Coll., Univ. of Oxford, 1940-46; Lectr. and Demonstrator in Physics, *ibid.*, 1940-46; Asst. Prof. of Physics, Ohio State Univ., 1946-47; Assoc. Prof. of Physics, *ibid.*, 1947-50; Prof. of Physics, *ibid.*, 1950—. Mem.: Sigma Xi; Phi Beta Kappa; Fellow, Amer. Physical Soc.; Fellow, Physical Soc. of London. Author: *Electrons in Action*, 1946. Contrb. to: *Physical Rev.*; *Rev. of Scientific Instruments*; *Philos. Mag.*; *Proc. Royal Soc.* Special Int.: Properties of Liquid Helium (He3 and He4); Superconductivity; Temperatures below 1°K; Microwave Tubes; Infra-red Detectors.

DAUS, Paul Harold, Prof. of Math., Univ. of Calif., Los Angeles, Calif. MATHEMATICS.

DAVENPORT, Harold A., Northwestern Univ. Med. Schl., Chicago, Ill. ANATOMY.

DAVENPORT, Horace W., Prof. and Hd., Dept. of Physiol., Schl. of Med., Univ. of Utah, Salt Lake City, Utah. PHYSIOLOGY.

DAVEY, Wheeler P., Rsch. Prof. of Physics and Chem., Pa. State Coll., State College, Pa. X-RAY DIFFRACTION.

DAVID, John Archer, Prof. of Physics, Adelphi Coll., Garden City, N. Y. PHYSICS.

DAVIDHEISER, Yorgey Lee, Hd., Chem. Dept., Wagner Coll., Staten Island, N. Y. CHEMISTRY.

DAVIDSON, Arthur William, Prof. of Chem. and Asst. Dean, Grad. Schl., Univ. of Kan., Lawrence, Kans. PHYSICAL AND INORGANIC CHEMISTRY. b. N. Y., Feb. 16, 1896. s. David and Clara (Recht) D. Edn.: B.S., City Coll. of N. Y., 1915; A.M., Columbia 1917; Ph.D., *ibid.*, 1921. m. Elisabeth Elsey of Modesto, Calif., Aug. 5, 1925. d. George and Florence E. c.: David Leo; Dorothy Louise. Exp.: Asst. Prof. of Chem., Univ. of Kan., 1921-27; Assoc. Prof., *ibid.*, 1927-37; Prof., *ibid.*, 1937—; Asst. Dean of the Grad. Schl., *ibid.*, 1950—. Hon. Pos.: Chmn., Kan. City Sect.



of A.C.S., 1929; Chmn.-Elect. Univ. of Kan. Sect., 1953; Editorial Board, *Jour. of the A.C.S.*, 1949—. Mem.: A.C.S.; A.A.A.S.; Kan. Acad. of Sci.; Phi Beta Kappa; Phi Lambda Upsilon; Sigma Xi; Univ. Club. Co-author: *General Chem.; A Systematic Approach*, 1949; *Coll. Chem.; A Systematic Approach*, 1953. Contrb. to: *Jour. A.C.S.*; *Jour. of Chem. Edn.* Ph.D. Dissertation: *The Formation of Addition Sulfates. The Correlation of Solubility and Compound Formation in Solutions.* War Record: Chem. Warfare Service, U. S.; Canada. Hobbies: Philately. Listed in: *A.M.S.; Who Knows—* and *What; Who's Who in Amer. Jewry.* Special Int.: Salt solutions in non-aqueous solvents; ion-exchange.

DAVIDSOHN, Israel, Prof. of Path. and Chmn. of Dept., Chicago Med. Schl., Path. and Dir. of Lab., Mt. Sinai Hosp.; Dir. of Rsch., Mount Sinai Med. Rsch. Foundation, 2750 W. 15th Place, Chicago 8,

III. PATHOLOGY. b. Tarnopol, Austria, April 20, 1895. Edn.: M.D., Univ. of Vienna Med. Schl., 1921. m. Clara Freud, Oct. 10, 1923. d. Samuel and Marie Freud. c.: Ellen Doris; Samuel James. Exp.: Res. Path., Mt. Sinai Hosp., 1925-26; Path. and Dir. of Lab., Mt. Sinai Hosp., Phila., 1926-30; Path. and Dir., Mt. Sinai Hosp., Chicago, 1930—; Instr. then Assoc. then Asst. Prof. of Med. then Asst. Prof. of Path., Rush Med. Coll., Chicago, 1934-41; Asst. Prof. of Path. then Assoc. Prof. of Path., Coll. of Med., Univ. of Ill., 1941-47; Former Ed., Amer. Jour. of Clin. Path.; Senior Surgeon in the Reserve of the U. S. Pub. Health Service, Resident Consultant Armed Forces Inst. of Pathology, Washington, D. C., 1947—; Dir. of Rsch., Mt. Sinai Med. Rsch. Foundation, Chicago, Ill., 1946—. Mem.: A.A.A.S.; Amer. Assn. of Blood Banks; Amer. Assn. for Cancer Rsch.; Amer. Assn. of Immun.; Amer. Assn. of Path. and Bacteriol.; Amer. Coll. of Physicians; Amer. Med. Assn.; Amer. Soc. of Clin. Path.; Amer. Soc. for Expt. Path. and others. Author: About 10 books. Travel: Austria; Germany; Poland; Mex. Hobbies: Chess. Listed in: Who's Important in Med.; A.M.S.; W. W. in Chicago and Ill.; Monthly Supplement Natl. Biographic Reference.

DAVIDSON, Donald Miner, Vice-Pres. and Chf., Geol., E. J. Longyear Co., 1701 Foshay Tower, Minneapolis 2, Minn. GEOLOGY. b. Quincy, Ill., Feb. 20, 1902.



s. Isham Gaylord and Frances (Stillman) D. Edn.: B.A., Univ. of Minn., 1925; M.Sc., ibid., 1926; Ph.D., ibid., 1928. m. Bernadine Dunn of Superior, Wis., 1937. d. E. O. and Jessica Dunn. c. Donald Miner, II. Exp.: Geol., Selection Trust, Ltd., London, Eng., 1928-39; Visiting Lectr., Econ. Geol., Univ. of Minn., 1933, 1940-41; Visiting Lectr., Ec. Geol., Columbia Univ., 1948—. Hon. Pos.: Soc. Ec. Geol. Coun.; Vice-Chmn., Mining Geol. Com.; Amer. Inst. Min. Engr. Mem.: A.A.A.S.; Geol. Soc. Amer.; Soc. Econ. Geol.; Geophysical Union; Amer. Inst. Min. Engr.; Can. Inst. Min. Engr.; Sigma Alpha Epsilon; Gamma Alpha. Clubs: Mpls. Min., Cosmos, Wash. Author: Numerous Articles on Economic Geology. Contrb. to: Mining Engrng.; Ec. Geol. and Others. Ph.D. Dissertation: Geology and Petrol. of Mineral Hill Mining Dist. Lemhi Co., Idaho. War Record: Consultant for Metals Reserve; Corp Engrs. Travel: Every continent except Australia. Hobbies: Fishing; Ornithology; Photography. Listed in: W. W. in Engrng.; A.M.S.; W. W. in Middle West.

DAVIDSON, Helen Pye, Staff Psychologist, Office Public Instruction, Edn. Exceptional Children, 944 S. First St., Springfield, Ill. CLINICAL PSYCHOLOGY.

DAVIDSON, James Allison, Assoc. Prof. of Poultry, Mich. State Coll., East Lansing, Mich. POULTRY MANAGEMENT AND MARKETING.

DAVIDSON, James Grant, retired, 7154 Olivetas Ave., La Jolla, Calif.

DAVIDSON, Norman, Dept. of Chemists, Calif. Instr. of Tech., Los Angeles, Calif. PHYSICAL CHEMISTRY.

DAVIDSON, O. Wesley, Assoc. Prof. and Assoc. Rsch. Specialist in Ornamental Horticulture, Rutgers Univ. and N. J. Agri. Expt. Station, New Brunswick, N. J. FLORICULTURE.

DAVIES, Clarence E., Secy., Amer. Soc. Mechanical Engrs., 29 W. 39th St., N. Y., N. Y. MECHANICAL ENGINEERING.

DAVIES, Earl Claudius Hamilton, Prof. of Chem., W. Va. Univ., Morgantown, W. Va. PHYSICAL CHEMISTRY.

DAVIES, George Reginald, Prof. of Commerce-Statistics, Univ. of Iowa, Iowa City, Iowa. COMMERCE-STATISTICS.

DAVIES, Percy Albert, Prof. and Hd., Dept. of Biol., Univ. of Louisville, Louisville, Ky. PHYSIOLOGY, BOTANY.

DAVIS, Alva Raymond, Prof. of Plant Physiol. and Dean, Coll. of Letters and Sci., 2019 Life Sciences Bldg., Univ. of Calif., Berkeley, Calif. PLANT PHYSIOLOGY.

DAVIS, Arthur Kent, Dept. of Sociology, Union Coll., Schenectady, N. Y. SOCIOLOGY.

DAVIS, Bergen, 44 Morningside Dr., N. Y. 25, N. Y.

DAVIS, Bradley Moore, Prof. Emer. of Botany, Univ. of Mich., 2015 Geddes Ave., Ann Arbor, Mich. BOTANY.

DAVIS, Carl L., Prof. of Anatomy, Univ. of Md. Schl. of Med., 3517 N. Calvert St., Baltimore, Md. ANATOMY.

DAVIS, Charles Henry, Bass River, Cape Cod, Mass. RAILROAD MINING.

DAVIS, David John, Dean Emer. and Prof. Emer. Pathol. and Bacteriol., Univ. of Ill. Coll. of Med., Chicago, Ill. PATHOLOGY.

DAVIS, Donald E., Assoc. Prof. Bot., Dept. Bot. and Plant Pathol., Ala. Poly. Inst., Auburn, Ala. b. Jan. 12, 1916, Charleston, Ill. s. Leonard E. and Jessie (Echard) D. Edn.: B.Ed., E. Ill. State Coll., 1938; M.S., Ohio State Univ., 1940; Ph.D., ibid., 1947. m. Dorothy Richey of Flat Rock, Ill., June, 1940. d. Austin and Matilda Richey. c. Leonard Richey; Dorothy Ann. Exp.: Instr., Bot., Ohio State Univ., 1946-47; Asst. Prof., Bot., Ala. Poly. Inst., 1947-48; Assoc. Prof., Bot., 1949—; Oak Ridge Institute Fellow 1951; Assoc. Prof. and Assoc. Bot., 1952. Mem.: Bot. Soc. of Amer.; A.A.A.S.; Amer. Soc. of Plant Physiologist; Sigma Xi; Phi Epsilon Phi; Kappa Delta Pi; Lions. Contrb. to: Amer. Jour. Bot. Ph.D. Dissertation: A Contribution to the Study of Calcium Deficiency in Soja Max and Pinus Taeda. War Record; Inf., Europe; Hon. Discharge. Travel: England; Europe; N. Amer. Hobby: Sports. Listed in: A.M.S.



DAVIS, Donald Walton, Prof. and Hd., Dept. of Biol., Coll. of William and Mary, Williamsburg, Va. ZOOLOGY, GENETICS.

DAVIS, Ethelyn Clara, Assoc. Prof. of Sociol., Tex. State Coll. for Women, Box 3923, Denton, Tex. SOCIOLOGY. b. St. Joseph, Mo., Oct. 9, 1915. d. Milton C. and Ethelyn (Knapp) D. Edn.: B.A., Southern Methodist Univ., 1935; M.A., ibid., 1936; Ph.D., Univ. of Mo., 1942.

Exp.: Tehr., Brownsville H. S., Brownsville, Tex., 1936-37; Tehr., Grandfalls H. S., Grandfalls, Tex. State Coll. for Volker Scholarship, Univ. of Mo., 1940-42; Assoc. Prof. of Sociol., Tex. State Coll. for Women, Denton, Tex., 1942—. Hon. Pos.: Secy., Southwestern Sociology Soc., 1950-52.



Mem.: Phi Beta Kappa; Alpha Kappa Delta; Amer.

Sociol. Soc.; Southwestern Soc. Sci. Assn.; A.A.U.P.; Natl. Probation Assn.; Pi Lambda Theta; Alpha Delta Pi. Special Int.: Latin Amer. Studies.

DAVIS, Edward Wilson, Dir. and Prof., Mines Expt. Station, Univ. of Minn., Minneapolis, Minn. IRON ORE BENEFICATION.

DAVIS, Elliot Vale, Pres., The Vale Chemical Co., Inc., 814-16 Gordon St., Allentown, Pa. PHARMACY.

DAVIS, Everett F., U. S. Public Health Service, 10209 Connecticut Ave., Kensington, Md. PLANT PHYSIOLOGY.

DAVIS, Franklin Louis, Dept. of Agron. and Soils, Ala. Poly. Inst., Auburn, Ala. SOIL FERTILITY.

DAVIS, Gordon Ernest, Sr. Bacteriologist, Rocky Mountain Lab., U. S. P. H. S., Hamilton, Mont. TICK BORNE DISEASES.

DAVIS, Hallowell, Dir. of Rsch., Central Inst. for the Deaf, 818 S. Kingshighway, St. Louis 10, Mo. NEUROPHYSIOLOGY, BIOACOUSTICS AND AUDIOLOGY. b. N. Y. C., Aug. 31, 1896. s. Horace Andrew and Anna (Norwood) D. Edn.: A.B., Harvard Univ., 1918; M.D., ibid., Med. Schl., 1922. m. 1st Pauline Allen (dec.), July 10, 1923. m. 2nd Florence Eaton, June 29, 1944. c.: Allen Young; Anna N.; Rowland Hallowell. Exp.: Instr., Asst. Prof. and Assoc. Prof. of Physiol., Harvard Univ., Cambridge, Mass., 1923-46; Assoc. Prof. of Physiol., Washington Univ., St. Louis, Mo., 1946-48; Rsch. Prof. of Otolaryngol., ibid., 1946—; Prof. of Physiol., ibid., 1948—; Dir. of Rsch., Central Inst. for the Deaf, ibid., 1946—. Hon. Pos.: Chmn., Comm. on Hearing, Natl. Rsch. Coun.; Chmn., Comm. on Problems of Deafness of Natl. Rsch. Coun.; Chmn., Adv. Comm. on Audiometers and Hearing Aids of Amer. Med. Assn.; Chmn., Consultants on Audiometers and Hearing Aids of Amer. Med. Assn.; Chmn., Subpanel on Vibration, Panel on Aviation Med. of Rsch. and Dev. Bd.; Chmn., Ultrasonics Panel, Aeronautical Bd.; Deputy Mem. of Panel on Aviation Med. of Comm. on Med. Sci. of Rsch. and Dev. Bd.; Mem. of Subpanel III on Acoustic Noise Reduction, Panel on Acoustics, Comm. on Elec. of Rsch. and Dev. Bd.; Mem. of Div. of Med. Sci. of Natl. Rsch. Coun.; Mem. of Rsch. Adv. Bd. of United Cerebral Palsy. Mem.: Amer. Electroencephalographic Soc.; Amer. Physiol. Soc.; Acoustical Soc. of Amer.; Amer. Acad. of Arts and Sci.; Amer. Psychol. Assn.; Assn. for Rsch. in Nervous and Mental Diseases; Natl. Acad. of Sci.; Volta Speech Assn. for the Deaf; Otosclerosis Study Group, Div. of Amer. Acad. of Ophthalmol. and Otolaryngol.; Assoc. mem., Amer. Neurol. Soc.; Assoc. mem., Amer. Otolological Soc.; Phi Beta Kappa; Sigma Xi; Alpha Omega Alpha; Nu Sigma Nu; Mu Iota Sigma. Author: Hearing and Deafness, 1947; Co-Author, with S. S. Stevens, Hearing: Its Psychol. and Physiol., 1938. Contrb. to: Approximately 200 Articles. Special Int.: The Physiol. and Biophysics of Hearing, and Related Areas in Acoustics, Psychoacoustics and Neurophysiol.

DAVIS, Hannibal Albert, Assoc. Prof. of Math., W. Va. Univ., Morgantown, W. Va. MATHEMATICS.

DAVIS, Harry E., Universal Potteries, Inc., Cambridge, Ohio. CERAMICS.

DAVIS, Harvey Nathaniel, Pres., Stevens Inst. of Tech., Hoboken, N. J.

DAVIS, Helen Isabel, 11 Windsor Ave., Buffalo, N. Y. LANDSCAPE GARDENING AND HORTICULTURE.

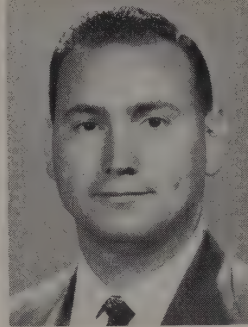
DAVIS, Herbert Perry, Prof. and Chmn., Dept. of Dairy Husbandry, Univ. of Nebr., Lincoln, Nebr. DAIRY HUSBANDRY.

DAVIS, Herbert Spencer, retired, Claiborne, Md. PROTOZOOLOGY.

DAVIS, Jared James, Supvr., Biol. Div., Radiological Sciences Dept., General Electric Co., Richland, Wash. AQUATIC ENTOMOLOGY AND RADIOBIOLOGY. b. Custer, Wash., July 9, 1920. s.

A. Jared and Myrtle (Brown) D. Edn.: B.S., Univ. of Wash., 1942; M.S., Wash. State Coll., 1948. m. Audrey Buchanan, Aug. 17, 1945. Exp.: Aquatic Biologist, Radiobiol. Sciences Dept., General Electric Co., Hanford Works, 1948—. Mem.: Entomol. Soc. Amer.; Ecological Soc. Amer.; Amer. Soc. Limnology and Oceanography; Amer. Inst. Biol. Sciences; A.A.A.S.; Hanford Works Supvrs. Assn.; Phi Sigma; Sigma Xi; Mason. Contrb. to: Annals of the Entomol. Soc. of Amer. War Record: U. S. Army, 1942-45. Special Int.: Radiobiol. and Ecology of Aquatic Invertebrates; Taxonomy of Trichoptera and Tenebrionidae (Diptera).

DAVIS, J. Sanford, Hd., Rsch. Branch, Office of Naval Rsch., Sands Point, L. I., N. Y. PSYCHOLOGY. b. N. Y., N. Y., July 20, 1923. s. Samuel and Gussie (Doctor) D. Edn.: A.B., N. Y. Univ., 1944; A.M., ibid., 1946; Ph.D., ibid., 1949. Exp.: Design Pattern Maker (Engr.), 1941-45; Grad. Asst. in Psychol., N. Y. Univ., 1945-46; Instr. of Psychol. and Chmn., Dept. of Exptl. Psychol., ibid., Instr., part-time, Poly. Inst., 1946-48; Rsch. Psychologist, Beth-El Hosp., N. Y., 1947—; Rsch. Dir., D.R.I. Rsch. Inst., 1949-53; Head, Human Factors Section, Office of Naval Rsch., 1951-52; Head, Rsch. Branch, ibid., 1952—. Mem.: Amer. Psychol. Assn.; Eastern Psychol. Assn.; A.A.U.P.; Amer. Statistical Assn.; N. Y. Acad. Sci.; A.A.A.S.; Sigma Xi; Psi Chi. Special Int.: Mass. Communication (TV-Films); Leadership; Trng. Rsch.; Human Engrng.; Industrial Psychology.



1951-52; Head, Rsch. Branch, ibid., 1952—. Mem.: Amer. Psychol. Assn.; Eastern Psychol. Assn.; A.A.U.P.; Amer. Statistical Assn.; N. Y. Acad. Sci.; A.A.A.S.; Sigma Xi; Psi Chi. Special Int.: Mass. Communication (TV-Films); Leadership; Trng. Rsch.; Human Engrng.; Industrial Psychology.

DAVIS, John Eustace, Hd., Dept. of Physics, William Jewell Coll., Liberty, Mo. PHYSICS.

DAVIS, John June, Hd., Dept. of Entomol., Purdue Univ., LaFayette, Ind. ENTOMOLOGY.

DAVIS, Kingsley, Assoc. Prof. of Anthropol. and Sociology, Princeton Univ., Princeton, N. J. POPULATION.

DAVIS, L. D., Dept. of Pomology, Univ. of Calif., Davis, Calif. HORTICULTURE.

DAVIS, Leslie Martz, Prof. and Hd., Dept. of Geography, Marshall Coll., Huntington, W. Va. ECONOMIC GEOGRAPHY.

DAVIS, Lewis, Secy. and Treas., Davis and Bennett, Inc., 306 Main St., Worcester, Mass. CHEMISTRY, BACTERIOLOGY.

DAVIS, M. Edward, STERILITY.

DAVIS, Malcolm Bancroft, Chf., Div. of Horticulture, Dominion Dept. of Agri., 309 Fairmont Ave., Ottawa, Ont., Can. HORTICULTURE, PLANT NUTRITION.

DAVIS, Nathan Smith, Asst. Prof. of Med., Northwestern Univ. Med. Schl., 303 E. Chicago Ave., Chicago, Ill. INTERNAL MEDICINE.

DAVIS, Paul Bell, Rsch. Chemist, Davison Chemical Co., 20 Hopkins Pl., Baltimore, Md. CHEMISTRY.

DAVIS, Raymond E., Prof. of Civil Engrng., Univ. of Calif., Berkeley, Calif. STRUCTURAL ENGINEERING.

DAVIS, Roy Benton, Hd., Dept. of Chem., Univ. of the South, Sewanee, Tenn. CHEMISTRY.

DAVIS, Royall Oscar Eugene, Asst. Hd., Div. of Soils, Fertilizers and Irrigation, Plant Indus. Station, U. S. D. A., Beltsville, Md. FERTILIZERS, SOILS.

DAVIS, Tenney Lombard, Prof. Emer. of Organic Chem., Mass. Inst. of Tech., Central St., Norwell, Mass. ORGANIC CHEMISTRY.

DAVIS, Ward B., Rsch. Chemist, Lab. of Fruit and Vegetable Chem., U. S. D. A., 148 S. Mission Rd., Los Angeles, Calif. ENZYME CHEMISTRY.

DAVIS, Watson, Dir. and Editor, Science Service, 1719 N St., N. W., Washington, D. C. SCIENCE INTERPRETATION.

DAVIS, William Harris, Internist Physician, 14540 Gilmore St., Van Nuys, Calif. INTERNAL MEDICINE. b. Charlotte, N. C., June 8, 1912. s. William H. and Martha Murray (Moore) D. Edn.: B.S., Ind. Univ., 1939; M.D., *ibid.*, 1940. m. Genevieve Griffey, Dec. 28, 1935. c.: Joan Martha; Dillys Gwendolyn; Walter Rhys. Exp.: Rsch. Asst. Bacteriol. and Immunol., Univ. of N. C., Med. Schl., Chapel Hill, N. C., 1935-37; Internship and residency in Internal Med., Henry Ford Hosp., Detroit, Mich., 1940-42, 1945-47; Physician, Van Nuys, Calif., 1947—. Mem.: Amer. Heart Assn.; Amer. Diabetes Assn.; Amer. Soc. for Study of Arteriosclerosis; Amer. Public Health Assn.; Fellow, Gerontological Soc.; A.A.A.S. War Record: Capt., Med. Corps., 12th Evacuation Hosp., E.T.O., U.S.A., 1942-45. Special Int.: Neurol. and Metabolic Disorders.

DAVISON, Charlotte Isabel, Prof. Emer. of Math., Wilson Coll., 1046 Edgar Ave., Chambersburg, Pa., MATHEMATICS.

DAVISSON, Clinton J., Retired Prof. of Physics, Univ. of Va., 2605 Jefferson Park Circle, Charlottesville, Va. b. Bloomington, Ill., Oct. 22, 1881. s. Joseph and Mary (Calvert) D. Edn.: B.S., Univ. of Chicago, 1908; Ph.D., Princeton Univ., 1911. m. Charlotte Sara Richardson, Aug. 4, 1911. c.: Owen; James Willans; Elizabeth; Richard Joseph. Exp.: Instr. in Physics, Carnegie Inst. of Tech., 1911-17; Engrng. Dept., Western Electric Co., N. Y., 1917-25; Technical Staff, Bell Telephone Labs., N. Y. City and Murray Hill, N. J., 1925-46; Retired, *ibid.*, 1946; Prof. of Physics, Univ. of Va., 1947-49; Retired, Bell Tel. Lab., 1946. Mem.: Amer. Physical Soc.; Natl. Acad. Sci.; Amer. Philos. Soc.; Amer. Acad. Arts and Sci.; Phi Beta Kappa; Sigma Xi. Contrb. to: Physical Rev.; Rev. Modern Physics; Proc. Natl. Acad. Sci. Award: Nobel Prize in Physics, 1937. Gen. Int.: Discovery of Electron Diffraction. Special Int.: Electron Physics.

DAVY, Edward D., Dir. of Pharmaceutical Div., Stersling Winthrop Rsch. Inst., 33 Riverside Ave., Rensselaer, N. Y. PHARMACY RESEARCH.

DAWES, Chester Laurens, Assoc. Prof. of Elec. Engrng., Grad. Schl. of Engrng., Harvard Univ., Cambridge, Mass. ELECTRICAL ENGINEERING.

DAWES, Henry Franklin, Prof. of Physics and Hd. Dept., McMaster Univ., Hamilton, Ont., Can. PHYSICAL OPTICS.

DAWSON, Alden Benjamin, Prof. of Zool., Biol. Labs., Harvard Univ., Cambridge, Mass. ANIMAL HISTOLOGY, CYTOLOGY.

DAWSON, C. R., Columbia Univ., New York, N. Y. BIOCHEMISTRY AND ENZYMES.

DAWSON, James Arthur, Prof. and Chmn., Dept. of Biol., City Coll. of N. Y., N. Y., N. Y. PROTOZOLOGY.

DAWSON, Lyle Ramsay, Prof. of Chem., Hd., Dept. of Chem., Univ. of Ky., Lexington, Ky. PHYSICAL CHEMISTRY. b. Apr. 21, 1904, Long Point, Ill. s. Marcus and Jessie (Ramsay) D. Edn.: B.Ed.; B.Ed., Ill. State Nor. Univ., 1928; M.S., Univ. of Ill., 1932; Ph.D., State Univ. of Ia., 1935. m. Lucile Sanders of Roberts, Ill., Aug. 11, 1926. d. W. O. and Susie B. Sanders. c.: Venita Lu. Exp.: H. S. Sci. Tchr. in Ill., 1928-34; Act. Hd., Dept. of Chem., S. T. C., Eau Claire, Wis., 1935-36; Asst. Prof. of Chem., Univ. of Omaha, 1936-37; Rsch. Chem., Universal Atlas Cement Co., Gary, Ind., 1937-39; Asst. Prof., Assoc. Prof., Prof. of Chem., La. Poly. Inst., 1939-43; Rsch. Chem., Met. Lab., Univ. of Chicago, 1943-45; Prof. of Chem. and Hd. of Dept., Univ. of Ky., 1945—. Mem.: Amer. Chem. Soc.; A.A.A.S.; Sigma Xi; Phi Lambda Upsilon; Kappa Delta Pi; Kappa Mu

Epsilon; Alpha Chi Sigma. Contrb. to: Jour. of Chem. Physics; Ind. Engrng. Chem., Ind. Edn.; Ind. Engrng. Chem., Anal. Edn. Ph.D. Dissertation: The Influence of Salts on Absorption Spectra of Aqueous Cobalt Chloride Solutions. Gen. Int.: Rsch. on Rare Earths; Colored Solutions; Non-aqueous Solvents; Silicates; Radiochem. Hobbies: Golf; Hort. Listed in: A.M.S.; The Internatl. Blue Book; Who's Who in Amer.; Who's Who in the South and Southwest; Who Knows—and What; Chem. Who's Who. Special Int.: Non-aqueous Solutions.

DAWSON, Paul Reber, Hd., Sweetpotato Products Div., Southern Regional Rsch. Lab., 2100 Robert E. Lee Blvd., New Orleans, La. UTILIZATION AGRICULTURAL CROPS.

DAWSON, Percy Millard, Lectr., Stanford Univ., 430 Homer Ave., Palo Alto, Calif. PHYSIOLOGY.

DAWSON, Ralph Ward, Asst. Prof. of Zool., Univ. of Minn., Minneapolis, Minn. ENTOMOLOGY.

DAWSON, Ray Fields, Assoc. Prof. of Botany, Columbia Univ., N. Y., N. Y. PLANT BIOCHEMISTRY.

DAWSON, Walter Myrick, Assoc. Animal Husbandman, U. S. D. A., Animal Husbandry Div., Bureau of Animal Indus., Beltsville Rsch. Center, Beltsville, Md. ANIMAL GENETICS.

DAY, Allan R., Univ. of Pa., 34th and Spruce St., Philadelphia, Pa. MECHANISMS OF ORGANIC REACTIONS.

DAY, Arthur Louis, 9113 Old Georgetown Rd., Bethesda 14, Md.

DAY, Dorothy, Microbiologist, Biol. Labs., Quartermaster Corps, 2800 S. 20th St., Philadelphia, Pa. PLANT PHYSIOLOGY.

DAY, Edmund Ezra, Pres., Cornell Univ., Ithaca, N. Y. ECONOMICS, UNIVERSITY ADMINISTRATION.

DAY, George, Consulting and Rsch. Engr., Cambridge Instrument Co., Grand Central Terminal, N. Y., N. Y. ACOUSTICS AND HEARING.

DAY, Howard Calvin, Chmn. of the Biology Dept., Sacramento Jr. Coll., Sacramento 18, Calif. PROTOZOLOGY. b. Lake Geneva, Wis., May 29, 1902. s. Frederick William and Gertrude Estella (Smith) D. Edn.: A.B., Lawrence Coll., 1924; M.A., Stanford Univ., 1926; Ph.D., *ibid.*, 1928. m. Lucile Burlingame, June 16, 1927. c.: Lance Garfield; Joan Elaine; Patricia Ann. Exp.: Tchr. Asst. Lawrence Coll., Appleton, Wis., 1921-23; Tchr. Asst., Univ. of Colo., Boulder, Colo., 1924-25; Tchr. Asst., Stanford Univ., Palo Alto, Calif., 1925-26; Acting Instr., *ibid.*, 1927-28; Assoc. Prof., Howard Coll., Birmingham, Ala., 1928-29; Instr., Sacramento Jr. Coll., Sacramento, Calif., 1930—. Mem.: A.A.A.S.; Sigma Xi; Western Soc. of Naturalists; A.A.U.P.; Alpha Epsilon Delta; N.E.A.; Calif. St. Tchrs.; Beta Theta Pi. Contrb. to: Univ. of Colo. Studies; Jour. of Experimental Zool.; Jour. of Physiological Zool. Special Int.: Protozoology, Vacuolation.

DAY, Leonard H., Assoc. Pomologist, Univ. of Calif. Coll. of Agri., Davis, Calif. HORTICULTURE.

DAY, Ralph K., Libbey-Owens-Ford Glass Co., 1701 E. Broadway, Toledo 5, Ohio. CERAMICS.

DAYTON, William Adams, Chg., Div. of Dendrology and Range Forage Investigations, U. S. Forest Service, Dept. of Agri., Washington 25, D. C. NATIVE U. S. RANGE PLANTS; DENDROLOGY; PLANT NAME STANDARDIZATION; POISONOUS PLANTS; COSTA RICAN TIMBER TREES; OAKS AND UMBRELLIFERS OF D. C.; BOTANICAL BIOGRAPHY AND BIBLIOGRAPHY. b. N. Y., N. Y., Dec. 14, 1885. s. William Adams and Emma (Samson) D. Edn.: B.A., Williams Coll., 1905; M.A., *ibid.*, 1908. m. Helen Gertrude Rollins, Aug. 18, 1918. c.: William Adams, III; Elva Samson; Orlo Hazen. Exp.: Assoc. Plant Ecologist, Plant Ecologist and Sr. Plant Ecologist, U. S. Forest

Service, 1910-42; Prin. Dendrologist, *ibid.*, 1942—; Chf., Div. of Dendrology and Range Forage Investigations, *ibid.*, 1945—. Hon. Pos.: Mem. of Council, A.A.A.S., 1945; Past-Pres., Biol. Soc. of Wash.; Past-Pres., Botanical Soc. Wash.; etc. Mem.: A.I.B.S.; Amer. Genetic Assn.; Amer. Horticultural Council; Amer. Soc. Range Mgt.; Amer. Fern Soc.; Botanical Soc. Amer.; Calif. Botanical Club; Ecol. Soc. Amer.; Amer. Soc. Plant Taxonomists; New England Botanical Club; Southern Calif. Acad. Sci.; Torrey Botanical Club; Internatl. Union of Plant Taxonomists; Soc. Internatl. Foresters; Sons of the Revolution; Cosmos Club. Co-author: Notes on Important Range Plants, 1914; Important Western Browse Plants, 1931; Standardized Plant Names, 1942; etc. Contrb. to: Jour. Forestry; Proc. Biol. Soc. Wash.; Proc. Wash. Acad. Sci.; etc. Gen. Int.: Gold Medal of the Mass. Horticultural Soc. for Achievement in the Field of Plant Name Standardization, 1940. Special Int.: Taxonomy, Nomenclature, Ecology, Phenology, Life Histories and Values of U. S. Range Plants and Trees; Standardization of Names of all Plants of Econ. Interest in U. S.; Plant Toxicol.

DEACON, Warren McAllister, Prof. and Hd., Dept., of Biol., Vanderbilt Univ., Nashville, Tenn. BACTERIOLOGY.

DEAKIN, Alan, Ottawa-Prescott Highway, Westboro, Ont., Can. GENETICS.

DEAL, Ralph Elbert, Prof. and Chmn., Dept. of Biol., Wagner Coll., Staten Island, N. Y. EMBRYOLOGY, HISTOLOGY.

DEAM, Charles Clemon, retired, former Rsch. Forester, State of Ind., Bluffton, Ind. BOTANICAL SCIENCES.

DEAN, George A., Prof. Emer. of Entomol., Kans. State Coll., 1725 Poyntz Ave., Manhattan, Kans. ENTOMOLOGY.

DEAN, Henry Trendley, Dental Dir., U. S. Public Health Service, Natl. Inst. of Health, Bethesda, Md. EPIDERMIOLOGY.

DEAN, Horace Stewart, Asst. Chf., Div. of Foreign Plant Quarantines, Bureau of Entomol. and Plant Quarantine, U. S. D. A., 211 W. George Mason Rd., Falls Church, Va. PLANT QUARANTINE.

DEAN, Lyman Arnold, Sr. Soil Scientist, Dir. of Soil and Fertilization Investigation, Bureau of Plant Indus., Beltsville, Md. SOIL CHEMISTRY.

DEAN, Paul Marshall, Prof. of Chem. and Hd. Dept., Univ. of Colo., 525 Highland Ave., Boulder, Colo. ORGANIC CHEMISTRY. b. Mar. 24, 1885, Newcastle, Pa., s. Marshall H. and Mollie Irene (Cox) D. Edn.: B.A., Univ. of Colo., 1908; M.A., *ibid.*, 1911; Ph.D., Univ. of Ill., 1916. m. Cleophille Bell of Boulder, Colo., June 4, 1922. d. James Washington and Delphine Paradise Bell. c.: Paul M., Jr. Exp.: Instr., Univ. of Colo., 1911-13, 1915-16; Asst. Prof., 1917; Assoc. Prof., 1920; Prof., 1923; Hd., Dept. Chem., 1943—. Mem.: A.C.S.; A.A.A.S.; Sigma Xi; Alpha Chi Sigma; A.A.U.P. Contrb. to: J.A.C.S. Ph.D. Dissertation: The Place Influence of the Phenyl Radical in Monocarboxy Paraffine Acids. Travel: Europe; Rsch., Coll. De France, Paris, 1924-25; England; Turkey and the Near East; N. Amer. Hobby: Handicrafts. Listed in: A.M.S.; W.W.A.

DEANE, Darrell Dwight, Asst. Prof. of Dairy Industry, Dairy Ind. Dept., Iowa State Coll., Ames, Iowa. DAIRY BACTERIOLOGY; LACTIC BACTERIOPHAGES, CHEESE MAKING. b. Anacortes, Wash. Nov. 9, 1915. s. Dwight E. and Bernice I. (Gould) D. Edn.: B.S., Univ. of Idaho, 1938; M.S., Univ. of Nebr., 1939; Ph.D., Pa. State Coll., 1942. m. Gwendolyn E. Davis, 1943. c.: James D.; Steven G.; Giles D. Exp.: U. S. Army, 1942-46; Asst. Prof. Univ. of Nebr., Lincoln, Nebr., 1946-51; Asst. Prof. of Dairy Industry, Iowa State Coll., Ames, Iowa, 1951—. Mem.: A.A.A.S.; Amer. Dairy Sci. Assn.; Sigma Xi; Alpha Zeta; Gamma Sigma Delta. Contrb. to: Jour. of Dairy Sci. War Record: W. W. II. Special Int.: Lactic Bacteriophages, Cheddar Cheese Ripening and Quality Control of Cottage Cheese.

DEAR, Paul S., Box 205, Blacksburg, Va. CERAMICS.

DEARNESS, John, retired, 30 Marley Pl., London, Ont., Can. MYCOLOGY, NATURE STUDY.

DEARSTYNE, Roy S., Hd., Dept. of Poultry Sci., N. C. State Coll., Raleigh, N. C. POULTRY PATHOLOGY.

DEATHERAGE, Charles F., General Practice, Waverly, Ill. DENTISTRY.

DeBAUFRE, William Lane, Chm., Dept. of Applied Mechanics, Univ. of Nebr., Lincoln, Nebr. APPLIED MECHANICS.

de BODO, Richard Charles, Assoc. Prof. of Pharmacol., N. Y. Univ. Coll. of Med., 477 First Ave., N. Y., N. Y. PHARMACOLOGY.

DEBYE, Peter Joseph William, Emeritus Prof., Chem. Dept., Cornell Univ., 104 Highgate Rd., Ithaca, N. Y. MOLECULAR STRUCTURE.

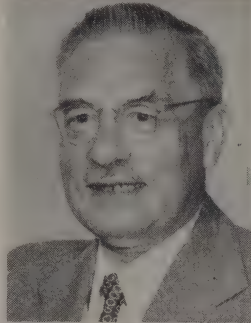
b. Maastricht, Holland, Mar. 24, 1884. s. William and Maria (Reumkens) D. Edn.: Elec. Engr. Aachen, 1905; Ph.D., Univ. of Munich, 1908. m. Mathilde Alberer, Apr. 10, 1913. c.: Peter; Mathilde. Exp.: Prof. of Theoretical Physics, Zurich, Switzerland, 1911-12; Prof. of Theoretical Physics, Utrecht, Holland, 1912-13; Prof. of Theoretical and Exptl. Physics, Goettingen, Germany, 1913-20; Prof. of Exptl. Physics, Zurich, Switzerland, 1920-27; Prof. of Expt. Physics, Leipzig, Germany, 1927-34; Director, Max Planck Research Institute, Berlin, Germany, 1934-39; Prof. of Chemistry and Head, Chemistry Department, Cornell Univ., 1940-50; Prof. Emeritus. Rsch. continued, 1952—. Mem.: Natl. Acad., Wash., D. C.; N. Y. Acad. Sci.; Franklin Inst.; Am. Acad. Sci.; Royal Dutch Acad.; Royal Soc. London; Royal Inst. London; Royal Danish Acad.; etc. Medals: Rumford Medal, 1930; Lorentz Medal, 1935; Franklin Medal, 1937; Willard Gibbs, 1949; Max Planck, 1950; Faraday Medal. Author: Polar Molecules, 1929. Gen. Int.: Nobel Award in Chem., 1936. Special Int.: Molecular Structure; Chem. Physics.

DECKER, Charles E., Prof. Emer. of Paleontology, Univ. of Okla., 508 Chautauqua Ave., Norman, Okla. PALEONTOLOGY.

DECKER, Floyd Archie, Prof. and Chmn., Dept. of Engrng., Tex. Western Coll., El Paso, Tex. ENGINEERING. b. Dec. 15, 1898, Amazonia, Mo. s. Archie L. and Fannie B. (Snapp) D. Edn.: B.S., in Elect. Engrng., Kans. State Coll., 1927; E.E., *ibid.*, 1932; M.S.E., Univ. of Mich., 1945. m. Dorothy L. Newton of Troy, Kans., May 15, 1918. d. Mr. and Mrs. Chas. E. Newton. c.: Virginia Louise (Mrs. Frank V. Whitney). Exp.: Testman, Gen. Elect. Co., 1927-28; Instr. in Elect. Engrng., Univ. of Ariz., 1928-33; Elect. Engr., United Verde Copper Co., Jerome, Ariz., Summer, 1929; Instr. in Engrng., Tex. Western Coll., El Paso, Tex., 1935; Asst. Prof. of Engrng., Tex. Western Coll., 1935-42; Assoc. Prof., Engrng., 1942-47; Prof. and Chmn., Dept. of Engrng., 1947—; Prof. of Elect. Engrng., Univ. of N. Mex., 1943-45 (on leave from Tex. Western); Act. Dean of Engrng., Tex. Western Coll., 1948-49. Mem.: A.I.E.E.; A.S.E.E.; Phi Kappa Phi; Sigma Tau; Phi Kappa Tau. War Record: Inf., W. W. I., 1918-19. Hobbies: Hunting; Fishing. Listed in: Who's Who in Engrng.

DECKER, George C., Dept. of Entomol., Ill. Natural History Survey, Urbana, Ill. ENTOMOLOGY.

DECKER, Mary G., Assoc. Prof. of Physical Sci., Ala. Coll., Montevallo, Ala. ORGANIC AND PHYSIOLOGICAL CHEMISTRY.



DE CLEENE, Louis Antoine Victor, Prof. of Math. St. Norbert Coll., West De Pere, Wis. MATHEMATICS.

DE COURSEY, Russell Myles, Prof. and Hd., Dept. of Zool., Univ. of Conn., Storrs, Conn. ENTOMOLOGY.

DEDERER, Pauline Hamilton, Prof. Emer. of Zool., Conn. Coll., New London, Conn. CYTOLOGY.

DEDERICK, Louis Serle, Assoc. Dir., Ballistic Rsch. Lab., Aberdeen Proving Ground, Md. BALLISTIC COMPUTATION.

DeEDS, Floyd, Prin. Pharmacologist, Pharmacol. Div., Bureau of Agri. and Indus. Chem., Western Rsch. Lab., U. S. D. A., 344 Santa Ana Ave., San Francisco, Calif. PHARMACOLOGY.

DEERE, Emil Olof, Prof. of Biol., Geol. and Dean Registrar, Bethany Coll., Lindsborg, Kans. BIOLOGY, GEOLOGY.

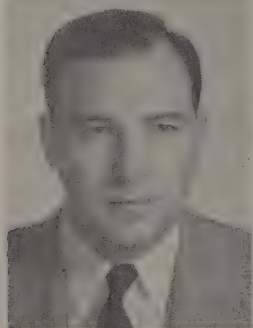
DEES-MATTINGLY, Marie Byrd, Assoc. Prof., Dept. of Anatomy, Tulane Univ. Schl. of Med., New Orleans, La. ANATOMY.

De FOE, Ona Kenneth, Prof. of Physics and Math., St. Louis Coll. of Pharmacy and Allied Sciences, 4588 Parkview Pl., St. Louis, Mo. PHYSICS.

DeFORD, Donald D., 619 Juniper, Glenview, Ill. CHEMISTRY, ANALYTICAL.

DEFRIES, Robert Davies, Dir., Schl. of Hygiene and Dir., Connaught Med. Rsch. Lab., Univ. of Toronto, Toronto, Ont., Can. BACTERIOLOGY, VIROLOGY.

De GENNARO, Louis Dominic, Asst. Prof. of Biol., Le Moyne Coll., Syracuse, N. Y. PHYSIOLOGY, ANATOMY. b. N. Y., N. Y., June 1, 1924. s. James and Angelina (Esposito) DeG. Edn.: B.S., Fordham Univ., 1948; M.S., Boston Coll., 1950. m. Angela Caggiano, Aug. 7, 1949. c.: James. Exp.: Grad. Asst., Boston Coll., 1948; Instr. in Biol., Le Moyne Coll., 1949-53; Asst. Prof. of Biol., ibid., 1953—. Mem.: A.A.A.S.; A.A.U.P.; Elks. Contrb. to: Trans. Amer. Microscopical Soc.; Jour. Aviation Med. War Record: Sgt., Flying Crew Duty, 8th Air Force, 1943-46.



Special Int.: Decompression Studies.

DEGERING, Prof. of Organic Chem., Purdue Univ., La Fayette, Ind. CHEMISTRY.

DeGOLYER, Everette Lee, 1000 Continental Bldg., Dallas 1, Tex.

DEHN, Max, Black Mountain Coll., Black Mountain, N. C. MATHEMATICS.

DEIGNAN, John Vincent, Hd., Dept. of Chem., Spring Hill Coll., Spring Hill, Ala. ORGANIC CHEMISTRY.

DEIGNAN, Stella Leche, Rsch. Analyst, Natl. Inst. of Health, Bethesda, Md. ANATOMY.

DEIMEL, Richard Francis, Prof. of Mech. Engrng., Stevens Inst. of Tech., Hoboken, N. J. MECHANICAL ENGINEERING.

DEISS, Charles Frederick, Prof. and Chmn., Dept. of Geol. and State Geologist for Ind., Onw Hall, Ind. Univ., Bloomington, Ind. STRATIGRAPHY, STRUCTURAL GEOLOGY.

DeKAY, Henry George, Prof. of Pharm., Purdue Univ., Lafayette, Ind. INDUSTRIAL PHARMACY. b. Randolph, Nebr., Aug. 14, 1898.

s. John and Lotta May (Zimmer) D. Edn.: A.B., Wayne S. T. C., Nebr., 1923; B.S., Univ. of Nebr., 1928; M.S., Univ. of Chicago, 1930; Ph.D., Purdue Univ., 1934. m. Eva May Robertson of Chambers, Nebr., July 2, 1920. d. Charles W. and Jane Wyant Robertson. c.: Cleonice Jeanne. Exp.: Coach of Athletics, Tilden, Nebr., 1920; Coach and Prin. of H. S., Wausa, Nebr., 1921; Prin. of H. S., Stuart, Nebr., 1922; Supt. of Schls., Stuart, Nebr., 1923-27; Instr. in Pharm., Purdue Univ., 1928-33; Asst. Prof. in Pharm., 1933-38; Assoc. Prof. in Pharm., Purdue Univ., 1938-43; Prof. of Pharm., 1943—. Hon. Pos.: Natl. Sec., Alpha Kappa Lambda Frat., 1945-47; Natl. Pres., Alpha Kappa Lambda Frat., 1947-51. Mem.: Phi Lambda Upsilon; Sigma Xi; Amer. Pharm. Assn.; Kappa Psi; Rho Chi; Alpha Kappa Lambda; Alpha Phi Omega; A.A.A.S.; A.A.U.P.; Optimist; U. S. Pharmacopoeial Revision Com.; Ind. Pharm. Assn.; Chairman, Professional Relations Com. Author: Qualitative Analysis for Students of Pharm. and Med. Collaborator Text: Amer. Pharm., I; Amer. Pharm., II. Contrb. to: Jour. of Amer. Pharm. Assn. Ph.D. Dissertation: An Assay of Hyoscyamus. War Record: Service 1918. Travel: U. S.; Canada. Hobbies: Stamps; Coins; Movies. Listed in: A.M.S.; Who's Who in Amer.; W. W. in Central States; Who Knows—and What. Special Int.: Pharmacy and Chem.

de la ARENA, Julio Fernandez, Prof. of Gen. Anatomy, Embryol. and Comparative Anatomy, Schl. of Sci., Univ. of Havana, Havana, Cuba. PROTOZOA (EXPERIMENTAL CITOLOGY AND TAXONOMY OF THE AMEBAS). b. Tapia, Oviedo, Spain, Aug. 22, 1899. s. Jose Fernandez and Josefa F. (de la Arena). Edn.: M.D., Univ. of Havana, 1928; D.Sc., ibid., 1934. m. Godes Rosenberg, Sept. 13, 1940. c.: Tatiana Godesa. Exp.: Asst., Dept. of Pediatrics, Univ. of Havana, 1929-34; Grad. Asst., ibid., 1934-35; Assoc. Prof. of Biol. and Comparative Anatomy, ibid., 1935-42; Prof. of Gen. Anatomy, Embryol. and Comparative Anatomy, Schl. of Sci., ibid., 1943—. Mem.: Sociedad Cubana de Pediatria; Sociedad Cubana de Anatomia; Sociedad Cubana de Historia Natural Felipe Poey; A.A.A.S.; Soc. Protozoologists. Contrb. to: Memorias de la Sociedad Cubana de Historia Natural Felipe Poey; Boletin Anatomico; etc. Special Int.: Exptl. Cytology, Biol. and Taxonomy of the Amebas.

DELANEY, Rev. John P., Prof. of Physics, Loyola Coll., Baltimore, Md. PHYSICS.

deLAUBENFELS, Max Walker, Assoc. Prof., Pasadena Jr. Coll., Pasadena, Calif. PORIFERA.

DELBROCK, Max, Calif. Inst. of Tech., Pasadena 4, Calif.

DE LEMON, Hugo, Mgr., Standard Brands, Inc., Price Mfg. Branch, 1015 Independent Blvd., Chicago, Ill. BAKING POWDERS, LEAVENERS.

DELISLE, Albert L., Assoc. Prof. of Botany and Dir. Herbarium, Univ. of Notre Dame, Notre Dame, Ind. ANATOMY, MORPHOGENESIS.

DELLINGER, Oris Pold, Dean, Coll. and Grad. Schl., Kans. State Tchrs. Coll., 1604 South Joplin, Pittsburg, Kans. ZOOLOGY.

DeLOACH, Robert John Henderson, 319 Savannah Ave., Statesboro, Ga. SOCIAL AND ECONOMIC SCIENCES.

DELOACH, Will Scott, Head Dept. of Physical Sci., Ark. St. Tchrs. Coll., Conway, Ark. CHEMISTRY. b. Dec. 22, 1910, Dora, Ala. s. Jas. E. and Susan Frances (Gaines) DeL. Edn.: B.S., 1932, M.S., 1934, Howard Coll.; Ph.D., Univ. of Chicago, 1939. Exp.: Sci. Tchr., West Blocton, Ala., H. S., 1934-35; Grad. Asst., Chem., Univ. of Chicago, 1936-39; Instr. Chem., Coll. of Wm. and Mary, 1940; Tchr. Chem., E. C. Tchrs. Coll., 1940-46; Assoc. Prof., Prof. Chem. Southwestern La. Inst., 1946-47; Assoc. Prof., Chem., E. C. Tchrs. Coll., 1947-48; Prof. Chem. and Hd. Dept., Huntington Coll., 1948-50; Prof. of Chem., Miss. State Coll. for Women, 1950-52; Hd. Dept. of Phys. Sci., Ark. State Tchrs. Coll., Conway, Ark., 1952—. Mem.: A.C.S.; Natl. Assn. for Rsch. in Sci., Tchng.; Sigma Xi; So. Assn. of Sci. and Indus.; Gamma Alpha; etc. Ph.D. Dis-

sertation: The Preparation and Properties of N-derivatives of 1-Amino-2-Methyl-6-Phenyl-Hexatriene-1, 3, 5. War Record: Asst. Sanitarian, U.S. P.H.S., 1945. Hobby: Folk Music. Listed in: A.M.S. Special Int.: Chemical Edn.

DeLONG, Berton Henry, Vice-Pres. and Chf. Metallurgist, Carpenter Steel Co., Reading, Pa. **STEELS**.

DeLONG, Dwight Moore, Prof. of Zool. and Entomol., Ohio State Univ., Columbus, Ohio. **ENTOMOLOGY**.

DeLONG, Walter Anthony, Assoc. Prof. of Chem., Macdonald Coll., Quebec, Que., Can. **AGRICULTURE, CHEMISTRY**.

DeLOR, C. Joseph, Asst. Prof. of Med., Ohio State Univ., Columbus, Ohio. **INTERNAL MEDICINE**.

DELP, Harold Arthur, Coordinator of Educational Activities, The Training



Schl., Vineland, N. J. **PSYCHOLOGY, EDUCATION**. b. Lansing, Mich., Aug. 17, 1912. s. Rolland R. and Minnie Jean (Crane) D. Edn.: B.S., Univ., Fla., 1933; M.S., *ibid.*, 1934; Ph.D., Univ., of Nebr., 1948. m. Mary Susan Barber, 1933. c.: Judith Ann; Sheila Adrienne. Exp.: Tchng. Fellow in Physics, Univ. of Fla., 1933-34; Tch., Asst. H. S. Prin., Auburndale, Fla., City Schls., 1934-37; Instr. in Math., Physics, Univ. of Tampa, Fla., 1935; Supt. of Schls., Lake Alfred, Fla., 1937-40; U.

S. Army, 1940-46; Clician, Psychol Clinic, Univ. of Nebr., 1937, 1938; Instr. Ednl. Psychol. and clician, Univ. of Nebr., 1946-48; Educational Dir., Nebr. State Reformatory for men, 1947; Lectr., Div. of Mental Health, Minn. State Dept. of Health, 1949-51; Asst. Prof., Ednl. Psychol. and Dir., Psycho-Ednl. Clinic, Univ. of Minn., 1948-51; Coordinator of Ednl. Activities, The Training Schl. at Vineland, N. J., 1951—. Mem.: Phi Kappa Phi; Sigma Xi; Phi Delta Kappa; Kappa Phi Kappa; Psi Chi; Amer. Psychol. Assn.; Eastern Psychol. Assn.; Eastern Psychol. Assn.; N. J. Psychol. Assn.; N. J. Psychol. Assn.; Natl. Soc. for Study of Edn.; N.E.A.; A.A.S.A.; Internatl. Council for Exceptional Children; Amer. Assn. Mental Deficiency; A.A.A.S.; Kappa Kappa Psi; Kappa Delta Pi. Contrb. to: Minn. Jour. Edn.; Elem. Schl. Jour.; Jour. Ednl. Psychol.; etc. War Record: Reserve Officer, 1933; Entered active duty July, 1940 as 1st Lt.; Normandy Invasion; Lt. Col., Jan., 1946; Separated active duty July, 1946; Combat thru Europe; Bronze Arrowhead and 5 Battle Stars; Bronze Star with Oak Leaf Cluster. Special Int.: Special Edn. in General and Mentally Retarded in particular; Clinical Psychol. with emphasis on Diagnosis; Ednl. Admin. and Tch. Trng.

DELZELL, Charles Floyd, Asst. Prof. of History, Vanderbilt Univ., Nashville, Tenn. **19TH AND**



20TH CENTURY EUROPEAN HISTORY, WITH EMPHASIS ON RECENT ITALIAN HISTORY. b. Klamath Falls, Ore., Mar. 6, 1920. s. William Abner and Edith May (White) D. Edn.: B.S., Univ. of Ore., 1941; M.A., Stanford Univ., 1943; Ph.D., *ibid.*, 1951. m. Eugenia Robertson, Mar. 21, 1948. c.: William Robertson. Exp.: Special Agent, Criminal Investigations Div., U. S. Army, Italy, 1943-45; Mem., Former Pres. Herbert Hoover's Special Food Mission to

Europe, 1946; Special Repr. in Europe of Hoover

Inst. and Lib. on War, Revolution, and Peace of Stanford Univ., 1946; Curator, Mediterranean Area Collection, Hoover Inst. and Lib., Stanford Univ., 1947-49; Fellow, Benedetto Croce's Inst. of Historical Studies, Naples, Italy, 1948-49; Asst. Prof. of History, Univ. of Hawaii, 1949-50; Instr. in History, Univ. of Ore., 1950-51; Asst. Prof. of History, Vanderbilt Univ., Nashville, Tenn., 1952—. Mem.: Phi Beta Kappa; Phi Alpha Theta; Amer. Historical Assn.; Sigma Nu; Mason. Contrb. to: Jour. Central European Affairs; Amer. Historical Rev. War Record: Special Agent, Criminal Investigations Div., U. S. Army in N. Africa and Italy, 1943-45. Special Int.: Twentieth Century Italian History; 19th and 20th Century European History.

DeLURY, Ralph Emerson, First Asst., Dominion Observatory, 330 Fairmont Ave., Ottawa, Ont., Can. **SOLAR PHYSICS**.

DELWICHE, Edmond Joseph, Prof. Emer. Agron., Univ. of Wis., Rt. 2, Green Bay, Wis. **AGRONOMY, PLANT BREEDING**.

DEMAREST, Charles Sidney, Engr., Bell Telephone Labs., 463 West St., N. Y., N. Y. **ECONOMICS, COMMUNICATIONS**.

DEMEREK, Milislav, Dir., Dept. of Genetics, Carnegie Institution of Wash., Cold Spring Harbor, N. Y. **GENETICS**. b. Kostajnica, Yugoslavia, Jan. 11, 1895. s. Ljudevit and Ljubica (Dumbovic) D. Edn.: B.Sc., Coll. of Agr., Krizeveci, Yugoslavia, 1916; Ph.D., Cornell Univ., 1923. m. Mary Alexander Ziegler, August 24, 1921. c. Zlata Elizabeth, Vera Radoslava. Exp.: Adjunct, Krizeveci Expt. Sta., Yugoslavia, 1916-19; Asst. in Plant Breeding, Cornell Univ., 1921-23; Res. Investigator, Dept. of Genetics, Carnegie Inst. of Wash., 1923-35; Asst. Dir., *ibid.*, 1936-41; Acting Dir., *ibid.*, 1941-43; Dir., *ibid.*, 1943—; Dir., Biological Lab., 1941—; Assoc. in Genetics, Columbia Univ., 1943—. Hon. Pos.: Chmn. U. S. A. Natl. Comm. of the Internatl. Union of Biological Sci.; Permanent Internatl. Comm. of the Internatl. Comm. of Genetics Congress; Consulting Staff of the Huntington Hosp. Assn.; Editorial Bd. of several sci. jour. Mem.: Amer. Philosophical Soc., Natl. Acad. Sci., N. Y. Acad. Sci., Genetics Soc. Amer., Bot. Soc. Amer., Amer. Soc. Zoologists, Amer. Soc. Naturalists, A.A.A.S. Fellow, Amer. Genetic Assoc., Soc. for Study of Evolution, Soc. Amer. Bacteriologists, Radiation Resch. Soc. Council, Sigma Xi, Phi Kappa Phi. Editor Advances in Genetics, 1947—; Biology of Drosophila, 1950; Drosophila Information Service, 1934—; Cold Spring Harbor Symposia on Quantitative Biology, 1941—. Contrb. to: Genetics, Jour. Bact., Proc. Nat. Acad. Sci., Amer. Naturalist, Jour. Clinical Invest., Science, Jour. Hered., etc. Special Int.: Genetics of Maize, Drosophila, Bacteria, and Bacteriophages; Nature and Mechanism of Mutations; Induction of Mutations by Radiations and Chemicals, Particularly Carcinogens; Genetical Basis of Bacterial Resistance.

de MILT, Clara Marie, Hd. and Chmn., Dept. of Chem., Newcomb Coll., Tulane Univ., New Orleans, La. **CHEMISTRY**.

DEMING, Milo Henry, Range Conservationist, U. S. Bureau of Land Management, P. O. Box 659, Salt Lake City, Utah. **FORESTRY AND RANGE MANAGEMENT, ESPECIALLY RANGE ECOLOGY**. Olin, Iowa, Nov. 18, 1894. s. Charles Clinton and Jessie Isabel (Elijah) D. Edn.: B. S., Iowa St. Coll. m. Margaret Corder, Oct. 21, 1936. c. Sara Ann. Exp.: Range Examiner and Asst. Forest Supervisor, U. S. Forest Service, Utah, Wyoming, Idaho, Ogden, Utah, 1920-30; Range Examiner, Intermountain Forest and Range Experiment Station, *ibid.*, 1931-35; Asst. Chief, Range Surveys, (U. S. Grazing Service), Salt Lake City, Utah, 1935-46; Range Examiner, Burns, Ore., 1946-49; Range Conservationist, U. S. Bur. Land Management, Salt Lake City, Utah, 1949-53. Mem.: A.A.A.S.; Ecological Soc. of Amer.; Soc. of Amer. Foresters; Amer. Soc. of Range Management; Utah Acad. of Sci.; Sigma Chi; Alpha Zeta. Author: Collaborated, Forestry Terminology, 1944; Grazing Survey Handbook, 1937. Contrb.: Ames Forester; Jour. of Range Management. Special Int.: Native Ranges of Western U. S.; Especially

Forage Plants, Watershed Relationships, Response to Grazing Pressure, and Carrying Capacity for Livestock and Game. Range Surveys.

DEMING, William Edwards, Advisor Sampling, Bureau of the Budget, Washington, D. C. MATHEMATICAL STATISTICS.

DEMMON, Elwood Leonard, Dir., Lake States Forest Expt. Station, Univ. Farm, St. Paul, Minn. FORESTRY.

DeMONBREUN, William Andrews, Asst. Prof. of Pathol., Vanderbilt Univ. Schl. of Med., and Pathologist, Nashville General Hosp., Nashville, Tenn. PATHOLOGY.

DEMPSTER, Everett Ross, Asst. Prof. of Genetics, 314 Hilgard Hall, Univ. of Calif., Berkeley, Calif. GENETICS.

DEMPSTER, Wilfred Taylor, Asst. Prof. of Anatomy, Univ. of Mich., Ann Arbor, Mich. ANATOMY.

DENBOW, Carl Herbert, Prof. of Math., Ohio Univ., Athens, Ohio. MATHEMATICS. b. Dec. 13, 1911, Zanesville, Ohio. s. E. C. and Edna (Gigax) D. Edn.: S.B., with Honors, Univ. of Chicago, 1932; S.M., *ibid.*, 1934; Ph.D., *ibid.*, 1937. m. Stefania Bjornson of Minneapolis, Minn., June 5, 1939. d. Mr. and Mrs. Gunnar B. Bjornson. c.: Carl Jon; Stefania. Exp.: Instr., Asst. Prof., Assoc. Prof. of Math., Ohio Univ., 1936-46; Regional Supvr., E.S.M.W.T., 1941-43; On Leave as Lt., U. S. Navy, 1943-46; Assoc. Prof., U. S. Naval Postgrad. Schl., 1946-50; Prof., Math., Ohio Univ., 1950—. Mem.: A.M.S.; M.A.A.; Natl. Coun. of Tchr. of Math.; Sigma Xi; Phi Beta Kappa. Contrb. to: Amer. Math. Monthly; Math. Tchr.; Math. Mag. Ph.D. Dissertation: A Generalized Form of the Problem of Bolza. Travel: Europe.

DENGLER, Robert Ewing, Hd., Dept. of Classics and Prof. of Greek, Pa. State Coll., State College, Pa. CLASSICAL LITERATURE AND ARCHAEOLOGY.

DENISON, Albert Rodger, Chf. Geologist, Amerada Petroleum Corp., Box 2040, Tulsa, Okla. PETROLEUM GEOLOGY.

DENISON, George W., Box 1776, Cleveland 5, Ohio. CERAMICS.

DENNISTON, Rollin Henry, retired, 2190 Aloma Ave., Winter Park, Fla. BOTANY.

DENNY, Frank Earl, Plant Physiologist, Boyce Thompson Inst. for Plant Rsch., Inc., Yonkers, N. Y. PLANT PHYSIOLOGY.

de NO, R. Lorente, Rockefeller Inst. for Med. Rsch., New York, N. Y. NEUROPHYSIOLOGY.

DERRYBERRY, Mayhew, Chief Div. of Public Health Education, U. S. Public Health Service, Washington 25, D. C. PUBLIC HEALTH EDUCATION.

DENSMORE, Frances, Collaborator, Bureau Am. Ethnology, Smithsonian Institution, Washington, D. C.; 729 Third St., Red Wing, Minn. RESEARCH IN MUSIC OF AMERICAN INDIAN.

DENT, James Norman, Assoc. Prof. of Zool., Saml. Miller Biol. Labs., Univ. of Va., Charlottesville, Va. DEVELOPMENTAL PHYSIOLOGY. b. Martin, Tenn., May 10, 1916. s. James R. and Alta (Norman) D. Edn.: A.B., Univ. of Tenn., 1938; Ph.D., The Johns Hopkins Univ., 1941. m. Valgerda Nielsen, Evergreen, Ala. c.: Julie Anne; Martha Elizabeth. Exp.: Asst. Prof. of Biol., Marquette Univ., 1945-46; Asst. Prof. of Biol., Univ. of Pittsburgh, 1946-49; Assoc. Prof. of Zool., Univ. of Va., 1949—. Learned Soc.: Sigma Xi; Phi Sigma; Amer. Soc. of Zoologists; Amer. Assn. of Anatomists; A.A.A.S. Frats: Sigma Chi; Gamma Alpha. Contrb. to: Jour. of Morphol.; Physiol. Zool.; Growth; Jour. Exp. Zool.; Anat. Rec. Ph.D. Dissertation: Embryological Devel. of Plethoon Cincerus as Correlated with the Differentiation of the

Thyroid Gland. War Record: Aviation Physiologist, U. S. Army Air Forces, 1942-45. Travel: Caribbean; South Amer. Hobbies: Photography; Mountain Climbing. Special Int.: Vertebrate Zoology-Endocrinology and Vertebrate Development.

DEONIER, Christian C., Entomologist, Bureau of Entomol. and Plant Quarantine, U. S. D. A., P. O. box 3391, Orlando, Fla. ENTOMOLOGY.

DePORTE, Joseph Vital, Dir., Div. of Vital Statistics, State Dept. of Health, Albany, N. Y. VITAL STATISTICS.

DERBY, George McClellan, retired, 1015 S. Carrollton Ave., New Orleans, La. RIVER AND HARBOR WORK.

DERBYSHIRE, Arthur James, Dir., Electroencephalic Dept., Harper Hosp., Detroit, Mich. NEUROANATOMY.

DeREMÉR, J. G., Consulting Engr., Hollow Tree Rd., Darien, Conn. MECHANICAL ENGINEERING.

DERMEN, Haig, Cytologist, U. S. Plant Indus. Station, Beltsville, Md. BOTANICAL SCIENCES.

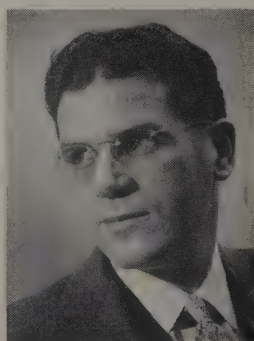
DEROY, George McC., 1015 S. Carrollton Ave., New Orleans, La.

DERSHEM, Elmer, retired, 9775 Vanderpoel Ave., Chicago, Ill. X-RAYS, PHOTOELECTRICITY.

DeRYKE, Willis, Prof. of Biol., Ill. Coll., Jacksonville, Ill. BIOLOGY.

de SMITT, Vladimir Peter, Assoc. Geol., Columbia Univ. and Oceanographer, Western Union Telegraph Co., 60 Hudson St., N. Y., N. Y. OCEANOGRAPHY, METEOROLOGY.

DESPAUL, John Emil, Chf. Chemist, Quartermaster Subsistence Testing Lab., Quartermaster Inspection Service Field Office,



Chicago Quartermaster Depot, Chicago 9, Ill. FOOD ANALYSIS—CHEMICAL, MICROBIOLOGICAL, MICROSCOPICAL, PHYSICAL, IMPROVEMENT OF METHODS, REVISION OF INSPECTION PROCEDURES AND SPECIFICATIONS FOR CONTRACTS. b. Split, Austria-Hungary, Feb. 20, 1910. s. Vincent and Rose (Sasso) D. Edn.: B.S., Lewis Inst., 1936; M.S., Ill. Inst. of Tech., 1947. m. Irma Smith, Apr. 21, 1935. Exp.: Subsistence Insp. Office of the Quartermaster, St. Louis, 1937-38; Analytical Chemist, Quartermaster Supply Officer, Brooklyn, N. Y., 1939-40; Chemist in Chg., Procurement Lab., Chicago Quartermaster Depot, 1940-41; Technical Dir., Control Lab., *ibid.*, 1944-46; Chf. Subsistence Br., Standards Resch. and Control Div., *ibid.*, 1946-47; Chf., Methods Development Sec., Product Evaluation Branch, *ibid.*, 1947-48; Chf. Chemist, Quartermaster Subsistence Testing Lab., *ibid.*, 1948—. Mem.: Amer. Chem. Soc.; Assn. of Official Agril. Chemists; Assn. of Vitamin Chemists; Inst. of Food Technologists; Quartermaster Assn.; Soc. Ill. Bacteriologists; Phi Lambda Upsilon; Sigma Xi. Contrb. to: Analytical Chem.; Jour. Assn. Official Agril. Chemists; Jour. Agril. and Food Chem.; The Glass Packer. War Record: U. S. Army, Quartermaster Corps, Reserve Officer on Active duty from 1942-44. Special Int.: Improvement in the Methodology of Food Analysis, and includes the following procedures: A Direct Colorimetric Method for Determining Glucose and other Carbohydrates; A Rapid Wet-Ash Colorimetric Method for Determining Lipoid Phosphoric Acid in Eggs and Noodles; A Flame Photometric Method for Determining Potassium in Jams and Jellies; and a Rapid Colorimetric Method for Determining Phosphorus in Jams and Jellies. The objective, in

general, is to streamline procedures in order to expedite the analysis of military subsistence items so as to avoid delays in the inspection of food supplies.

DETJEN, Gustav Heinrich Hugo, Jr., Pres., Detjen Corp., Electrocuting Fly Screen Div., Skidmore Rd., Freedom Plains, R. D. 1, Pleasant Valley, N. Y. CONTROL OF HOUSE-FLIES AND PHOTOTROPIC INSECTS BY MEANS OF ELECTROCUTING INSECT CONTROL DEVICES. b. Altona Elbe, Germany, Jan. 20, 1905. s. Gustav Heinrich Nicolaus and Martha (Lueders) D. Edn.: Pace Coll., 1934. m. Marion Louise Kirby, Sept. 16, 1944. c.: Christine Marion; Theodore Gustav; James Thomas; Louise Harriet. Exp.: Treasurer, Electric Insect Control Div., Jay Dreher Corp., 1930-38; Pres., Electrocuting Fly Screen Div., Detjen Corp., 1938—. Mem.: N. Y. Entomological Soc.; Amer. Assn. Econ. Entomologists; Entomological Soc. of Amer.; A.A.-A.S.; N. Y. Acad. Sciences. Special Int.: Control of House-Flies and Night-Flying Insects by Electricity.

DETJEN, Louis Reinhold, Prof. of Hort. and Assoc. Rsch. Prof., Univ. of Del., Newark, Del. HORTICULTURE. b. Algoma, Wis., Feb. 27, 1884. s. Hermann and Bertha (Radunz) D. Edn.: B.S., Univ. of Wis., 1909; M.S., N. C. State Coll., 1911. m. Edith Marion Lefavour, Aug. 28, 1917. c.: Lois Marion and Edson Reinhold. Exp.: Instr. and Asst. in Hort., N. C. State Coll., 1909-20; Assoc. Prof. and Assoc. Hort., Del. Coll., and Expt. Sta., 1920-27; Prof. of Hort. and Assoc. Hort., Univ. of Del. and Expt. Sta., Newark, Del., 1927-45; Prof. of Hort. and Assoc. Rsch. Hort., ibid., 1945—.



Mem.: A.I.B.S.; Amer. Soc. of Hort. Sci.; Phi Kappa Phi; Alpha Zeta. Contrb. to: Jour. of Heredity; Annual Report of Torrey Bot. Club; Elisha Mitchell Sci. Soc.; Proc. Amer. Soc. of Hort. Sci., etc. Special Int.: Physiol. Drop in Fruits; Breeding Cabbage, Beets, Cantaloupes and Grapes; Pollination of Blackberries, Dewberries, Grapes and Peaches; Landscape Gardening; Forestry.

DETTRICK, Lawrence E., Assoc. Dir. of Med., Rsch. Dept., Rexall Drug Co., 3480 Beverly Blvd., Los Angeles, Calif. PHARMACOLOGY.

DeTURK, Ernest E., Prof. of Soil Fertility, Dept. of Agron., Univ. of Ill., Urbana, Ill. SOIL CHEMISTRY, PLANT NUTRITION.

DETTWILER, Herman Andrew, Rsch. Assoc., Biol. Div., Eli Lilly and Co., Indianapolis, Ind. BACTERIOLOGY.

DETWILER, John D., Prof. of Applied Biol., Univ. of Western Ontario, London, Ont., Can. ARTHROPODOLOGY.

DETWILER, Samuel Randall, Coll. of Physicians and Surgeons, 630 W. 168th St., N. Y. 32, N. Y.

DEUBER, Carl G., Fermentologist, Stauffer Chemical Co., 420 Lexington Ave., N. Y., N. Y. ANTI-BIOTICS, FERMENTATION.

DEUEL, Harry James, Jr., Prof. of Biochem., Univ. of Southern Calif. Med. Schl., 3551 University Ave., Los Angeles, Calif. BIOCHEMISTRY.

DEUEL, Thorne, Dir., Ill. State Museum, 2150 Illini Rd., Springfield, Ill. ANTHROPOLOGY.

D'EUSTACHIO, D., Pittsburgh Corning Corp., Port Allegany, Pa., PHYSICS.

DEUTSCH, Martin, Asst. Prof. of Physics, Mass. Inst. of Tech., Cambridge, Mass. NUCLEAR PHYSICS.

DEVERS, Philip K., Editorial Dir., Cleveland Clinic, 2020 East 93rd St., Cleveland, Ohio.

DeVOE, Richard Holly, 265 S. Monterey St., Morgan Hill, Calif. CHEMISTRY, PHARMACY.

DEVOL, Manson Lee, Rsch. Mgr., Hartford-Empire Co., 333 Homestead Ave., Hartford, Conn. INDUSTRIAL RESEARCH.

DEVOR, Arthur William, Asst. Prof. of Physiological Chem., Ohio State Univ., Columbus, Ohio. BIOCHEMISTRY. b. Colo., Apr. 13, 1911. s. Arthur A. and Sarah Jane (Wilklow) D. Edn.: B. S., McPherson Coll., 1933-35; M.S., Kans. State Coll., 1935-37; Ph.D., Univ. of Sou. Calif., 1945-47. m. Mary Adeline Todd of Clay Center, Kans., June 3, 1938. d. Mr. and Mrs. William J. Todd. c.: Kenneth Arthur; Karen Louise. Exp.: Grad. Asst., Kans. State Coll., 1936-41; Instr. of Chem., Erie Center, Univ. of Pittsburgh, 1941-42; Adelphi Coll., Instr. of Chem., 1943-

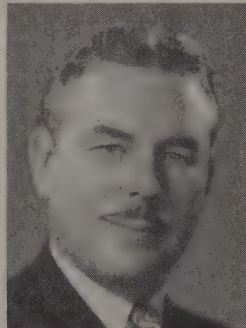


45; Asst. in Biochem., Univ. of Sou. Calif., 1945-46; Assoc. in Biochem., Univ. of S. Dak., 1947; Prof. of Chem. and Hd. of Dept., N. Dak. State Tchrs. Coll., 1947-48; Asst. Prof. of Biochem., S. Dak. State Coll., 1948-52; Asst. Prof., Physiological Chem., Ohio State Univ., Columbus, Ohio, 1952—. Mem.: Amer. Chemical Soc.; A.A.A.S.; S. Dak. Acad. of Sci.; N.E.A.; A.A.U.P.; Sigma Xi; Phi Lambda Upsilon; Gamma Sigma Delta; Kom Double Club of Meth. Ch. Contrb. to: Jour. of Chem. Edn.; Jour. of Amer. Chem. Soc.; Kans. Acad. of Sci.; S. Dak. Acad. of Sci.; Sci. Proc. Amer. Assn. Cancer Rsch.; Jour. of Clin. Investigation. Ph.D. Dissertation: Studies on Isolation and Characterization of Protease from Human Plasma. Hobbies: Hunting; Gardening; Family. Listed in: A.M.S.

DeVOSS, James C., Dean, Upper Div. and Prof. and Hd., Dept. of Psychol., San Jose State Coll., San Jose, Calif. PSYCHOLOGY.

de WEERDT, Ole Niehuis, Private Practice, 405 E. Grand Ave., Beloit, Wis. CLINICAL AND CONSULTING PSYCHOLOGY.

DEWEY, Charles Sherman, Consulting Indus. Psychologist, Charles S. Dewey and Associates, 135 So. LaSalle St., Chicago 3, Ill. PSYCHOLOGY.



b. Oct. 22, 1905. Fairbanks, Alaska. s. Sherman and Mary (Gosa) D. Edn.: B.A., Eastern Wash. Coll. of Edn., 1934; M.A., Wash., 1938; Ed.D., Stanford Univ., 1944. m. Rebecca Arnell of Seattle, Wash., Dec. 26, 1942. d. Mr. and Mrs. John R. Arnell. Exp.: Tch. of Ind. Arts and Voc. Courses, Voc. Council, Public Schls., 1931-41; Dir., Voc. Survey, Tucson, Ariz., 1938; Instr., Univ. of Wash., Seattle, summers, 1939, 40; Ind. Engr., Joshua Hendy Iron Wks., Sunnyvale, Calif., 1943; Ind. Trng. Spec., Army Service Forces, Ft. Mason, Calif., 1943-44; Ind. Psychologist, Stevenson, Jordan & Harrison, Inc., Chicago, 1944-46; Owner, Charles S. Dewey and Associates, Chicago, 1946—.

Mem.: Phi Delta Kappa; Soc. of Amer. Milit. Engrs.; Amer. Management Assoc.; Amer. Mktg. Assn.; Ill. Psychol. Assn.; Fellow, Amer. Psychological Assn.; Midwestern Psychol. Assn.; Amer. Inst. of Management; Fellow, A.A.A.S.; Indus. Relations Rsch. Assn.; Natl. Acad. of Econ. and Polit. Sci.; Amer. Acad. of Polit. and Soc. Sci.; Stanford Club of Chicago, Treas., 1950; Chicago Psychol. Club. Contrb. to: Schl. Rev.; Amer. Schl.

Bd. Jour.; Tex. Personnel Rev.; Amer. Psychologist. Dissertation: Some Concepts of Voc. Edn. and Guid. in Eng. from 1600 to 1760. Listed in: Who's Who in the Midwest; Who's Who in Chicago and Ill.; Who's Who in Commerce and Industry.

DEWEY, Rebecca Arnell (Mrs. Charles Sherman Dewey), Consulting Psychologist, Charles S. Dewey and Associates, 135 So.



LaSalle St., Chicago 3, Ill. **PSYCHOLOGY.** b. Auburn, Wash., Oct. 11, 1902. d. Mr. and Mrs. John R. Arnell. Edn.: B.A., Univ. of Wash., 1926; M.A., ibid., 1936; Ph.D., Stanford Univ., 1946. m. Charles Sherman Dewey, Dec. 26, 1942. Exp.: Tchrr. H. S., 1926-38; Instr., Stanford Univ., 1941-44; Instr., Univ. of Nev., Sum., 1941; Asst. Prof. and Counselor in Student Counseling Clinic, Univ. of Ill., Chicago, 1946-49; Consultg. Psychologist, Charles S.

Dewey and Associates, Chicago, 1946—. Mem.: M.L.A.; Pi Lambda Theta; Chicago Psychol. Club. Treas., 1950-51; Amer. Psychol. Assn.; Midwestern Psychol. Assn.; Fellow, A.A.A.S.; Amer. Personnel and Guid. Assn.; Stanford Club of Chicago; Indus. Relations Rsch. Assn.; Chicago Woman's Club; Ill. Psychol. Assn. Contrb. to: Eng. Jour.; Wash. Curr. Jour.; Amer. Psychologist. Ph.D. Dissertation: The Idea of Progress in Elizabethan Lit. Listed in: Who's Who in the Midwest; Who's Who in Chicago and Ill.; etc.

DEXTER, Emily Smith, Assoc. Prof. of Psychol. and Edn., Agnes Scott Coll., Decatur, Ga. **PSYCHOLOGY.**

DEXTER, Ralph Warren, Assoc. Prof. of Biol., Kent State Univ., Kent, Ohio. **ECOLOGY.**

DEXTER, Stephen Torrey, Assoc. Prof. of Farm Crops, Mich. State Coll., East Lansing, Mich. **FARM CROPS.**

DIACHUN, Stephen, Assoc. Plant Pathologist, Ky. Agri. Expt. Station, Univ. of Ky., Lexington, Ky. **PLANT PATHOLOGY.**

DIAMOND, Grant S., Electro Refractories and Abrasives Corp., 344 Delaware Ave., Buffalo 2, N. Y. **CERAMICS.**

DIAMOND, Louis K., Asst. Prof. of Pediatrics, Harvard Med. Schl., Children's Hosp., 300 Longwood Ave., Boston, Mass. **PEDIATRICS.**

DIAMOND, Moses, Assoc. Prof., Dept. of Anatomy, Coll. of Physicians and Surgeons, Columbia Univ., N. Y., N. Y. **ORAL ANATOMY, HISTORY.**

DICARLO, Louis M., **SPEECH AND HEARING.**

DICE, Lee Raymond, Dir., Lab. of Vertebrate Biol., Assoc. Curator Mammals Museum Zool., and Assoc. Prof. of Zool., Univ. of Mich., Ann Arbor, Mich. **BIOLOGY, ZOOLOGY.**

DICE, Marion English, Mgr., Econ. Dept., General Petroleum Corp., 108 W. Second St., Los Angeles, Calif. **PETROLEUM ECONOMICS.**

DICICCO, John, De Paul Univ., Chicago, Ill. **MATHEMATICS.**

DICKE, Ferdinand Frederick, Entomologist, Bureau of Entomol. and Plant Quarantine, U. S. D. A., P. O. Box 576, Toledo, Ohio. **ENTOMOLOGY.**

DICKERSON, Laurence Major, Soil Conservationist, Soil Conservation Service, U. S. D. A., Box 25, Rt. 2, Charlotte Rd., Hillcrest, Spartanburg, S. C. **GENETICS.**

DICKEL, Herman A., Assoc. Clinical Prof. of Psychiatry, Univ. of Ore. Med. Schl., Portland, Ore.



PSYCHIATRY. b. Republic, Wash., Apr. 15, 1912. s. Theodore E. and Margaret (Anderson) D. Edn.: A.B., Univ. of Mont., 1933; M.B., Northwestern Univ. Med. Schl., 1937; M.D., ibid., 1938. m. Elnora Dillow, Sept. 1, 1940. c.: Charles Timothy. Exp.: Resident in Psychiatry, Hastings State Hosp., Ingleside, Neb., 1938-41; Assoc. in Psychiatry, Johns Hopkins Hosp., Baltimore, Md., 1940—; Resident Psychiatrist, Puget Sound Sanitarium, Tacoma, Wash., 1941-

42; Instr. in Psychiatry, Univ. of Ore. Med. Schl., Portland, Ore., 1942-45; Asst. Clinical Prof., ibid., 1945-49; Assoc. Clinical Prof., ibid., 1949—. Hon. Pos.: Pres., North Pacific Soc. Neurol. Psychiatry, 1948-49; Chmn., Com. on Mental Health, Ore. State Med. Soc., 1951—. Mem.: A.M.A.; A.P.A.; A.C.P.; A.A.A.S.; Assn. for Rsch. in Nervous and Mental Diseases; North Pacific Soc. Neurol. and Psychiatry; Western Soc. Electro Encephalography; Kappa Sigma; Phi Beta Pi; Pi Kappa Epsilon. Contrb. to: Arch. Dermatol. and Syphil., Northwest Med.; Amer. Jour. Med. Sci.; The Child; Focus; etc. Special Int.: The Psychoneuroses, their Ambulatory Treatment and the Physiol. Factors therein Involved.

DICKINSON, Charles Alexius, Retired, Hd. Dept. of Psychol., Univ. of Maine, 617 N. E. 23rd St., Wilton



Manors, Ft. Lauderdale, Florida. **PSYCHOLOGY.** b. Riverton, New Zealand, May 20, 1879. s. Benjamin Alexius and Katherine Walker (Henderson) D. Edn.: M.A., Clark Univ., 1922; Ph.D., ibid., 1925. Hon. Deg.: Sc.D., Univ. of Maine, 1952. m. Alice Elizabeth Jesseman on Aug. 6, 1919. c.: John Jesseman. Exp.: Hd., Dept. of Psychol., Univ. of Maine, 1926-50; Resigned as Hd. of Dept., ibid., 1950—. Honorary Pos.: Chmn., Mental Hygiene Div., Maine Public Health Assn.

Mem. Amer. Psychol. Assn.; Eastern Psychol. Assn.; Natl. Assn. for Mental Health; Organizer Eastern Maine Assn. for Mental Health (1952). Special Int.: Psychol. Rsch. on Vision.

DICKINSON, Harry Edwin, Prof., Head, Sociol. Dept., Howard Coll., 8213 10th Ave., So., Birming-



ham, Ala. **FAMILY LIFE EDUCATION.** b. Gadsden, Ala., July 28, 1904. s. Jeter George and Bertha (McKinley) D. Edn.: A.B., Howard Coll., 1926; Th.M., Southern Bapt. Theological Seminary, 1929; M.A., George Peabody Coll., 1948; Ph.D., ibid., 1950. m. Catharine Hatch, Sept. 4, 1937. c.: Richard H. Exp.: Social Case Worker, Family Service Organization, Louisville, Ky., 1929-30; Clerk, Kansas City Gas Co., Kansas City, Mo., 1930-34; Jackson County Emerg.

Relief Adm., Kansas City, Mo., 1934-36; Pastor, Bapt. Church, Fort Deposit, Ala., 1937-39; Pastor, Bapt. Church, Oxford, Ala., 1939-43; Pastor, Bapt.

Church, Marion, Ala., 1943-46; Prof. Sociol., Judson Coll., Marion, Ala., 1946-47; Instr., George Peabody Coll., Nashville, Tenn., 1947-49; Prof. Head Sociol. Dept., Howard Coll., Birmingham, Ala., 1949—. Hon. Pos.: Trustee, Judson Coll., 1941-46; Chmn. Perry County, Dept. Pub. Welfare. Mem.: National Council of Family Relations; Amer. Sociological Soc.; Southern Sociological Soc.; Phi Delta Kappa; Phi Gamma Mu. Special Int.: Family Life Edn.

DICKINSON, Hobart Cutler, retired, 4629 30th St., N. W., Washington, D. C. CALORIMETRY, AUTOMOTIVE ENGINEERING.

DICKMAN, Albert, Dir., The Dickman Labs., 1415 W. Erie Ave., Philadelphia 40, Pa. BIOLOGICAL



SCIENCE. b. Lake Placid, N. Y., Nov. 3, 1903. s. Morris and Dorothy (Boverman) D. Edn.: A.B., The Johns Hopkins Univ., 1924; M.S., Univ. of Pa., 1931; Ph.D., *ibid.*, 1933. c.: Michael. Exp.: Tchr. of Biological Sci., Secondary Schls., Baltimore, Md., 1924-25; Tchr. of Biological Sci., Secondary Schls., Philadelphia, Pa., 1928-41; Dir., The Dickman Labs., 1933—. Hon. Pos.: Pres., The Natl. Assn. of Clinical Labs.; Editor, The Bull. of the NACL; Mem. of Exec. Comm.

of Amer. Soc. of Prof. Biol. Mem.: Sigma Xi; Amer. Chem. Soc.; S.A.B.; Amer. Assn. of Clinical Chemists; A.P.H.A., Fellow; A.A.A.S.; Amer. Soc. of Professional Biologists; Phi Sigma Delta; Lions. Contrb. to: Biol. Bull.; Jour. of Cell. and Comp. Phys.; Jour. of Lab. and Clin. Med. Special Int.: The Clinical Lab.

DICKSON, Albert Maxey, Agricultural Economist, Production and Mktg. Adm., U. S. D. A., 5723 43rd Ave., Hyattsville, Md. AGRICULTURAL ECONOMY.

DICKSON, James G., Prof., of Plant Pathol., Univ. of Wis., Madison, Wis. FIELD CROP PATHOLOGY.

DIDLAKE, Mary Le Grand, Assoc. Entomologist and Botanist, Ky. Agri. Expt. Station, Univ. of Ky., Lexington, Ky. BOTANY.

DIDUSCH, Rev. Joseph Stephen, Prof. of Biol. and Hd. of Dept., Loyola Coll., 4501 N. Charles St., Baltimore 10, Md. BIOLOGY. b. Baltimore, Md., Nov. 25, 1879. s. Joseph M. and Catherine R. (Doetsch) D. Edn.: A.B., Loyola Coll., 1898; M.A., Joseph's Coll., Phila., Pa., 1915-25; Regent, Georgetown Med. Schl., Wash., D. C., 1925-26; Dean Philosophy Dept. and Prof. Empir. Psychology, Woodstock Coll., Md., 1927-30; Rector, Jesuit Novitiate, Wernersville, Pa., 1930-35; Prof. of Biol., Loyola Coll., Baltimore, Md., 1935—. Mem.: A.A.A.S.; Amer. Inst. of Biol. Sci.; Amer. Genetic Assn.; Ecological Soc. of Amer.; Amer. Assn. of Jesuit Scientists; Amer. Museum of Natural Hist.; Md. Acad. of Sci.; Md. Assn. Biol. Tchrs.; etc. Author: Biol. Syllabus for High Schls., 1923. Special Int.: Hemoglobin; Blood Pigments; Plant Pigments; Allergic Pollens; Parthenogenesis; Anthropoid Fossil Remains.

DIEFENDERFER, Alpha Albert, Prof. Emer. of Quantitative Analysis and Assaying, Lehigh Univ., 725 W. Broad St., Bethlehem, Pa. CHEMISTRY.

DIEHL, Harold S., Dean of Med. Sci., Univ. of Minn., Minneapolis 14, Minn. PREVENTIVE MEDICINE AND PUBLIC HEALTH. b. Nittamy Pa., Aug. 4, 1891. s. Rev. William Kleinfelter and Annie Belle (Sheely) D. Edn.: B.A., Gettysburg, Pa., 1912; M.D., Univ. of Minn., 1918; M.A., *ibid.*, 1921. Hon. Deg.: Sc.D., Gettysburg Coll., 1935. m. Julia Louise Mills, Aug. 7, 1921. c. Annabelle Louise; Antony Mills; Exp.: Prin. and Tchr. of Math., Fulton H. S., N. Y., 1912-14; Part Time Instr. in Chem., Augsburg Seminary, Minneapolis,

Minn., 1914-16, Part Time Asst., Bacteriol. and Pathol. Univ. of Minn., 1916-18; Pathologist, Univ. Hosp., 1920-21; Dir., Students Health Service, *ibid.*, 1921-35; Asst. Prof., Preventive Med. and Public Health, Univ. of Minn., 1921-24; Assoc. Prof., *ibid.*, 1924-29; Prof., *ibid.*, 1929—. Dean of Med. Sci., *ibid.*, 1935—. Mem.: Phi Delta Theta; Nu Sigma Nu; Phi Beta Kappa; Alpha Omega Alpha; Sigma Xi; Am. Public Health Assn.; Minn. State Med. Assn.; A.A.A.S.; Minn. Acad. of Sci.; Minneapolis Acad. of Med.; Am. Student Health Assn.; N. Central Student Health Assn.; A.M.A. Author: Healthful Living, 1935, 1941 and 1949; Periodic Health Examinations in the Practitioner's Library, 1936; Textbook of Healthful Living, 1939, 1945 and 1950; The Health of Am. Coll. Students, 1939. Contrb. to: Jour. A.M.A.; Jour. Preventive Med.; Am. Jour. Public Health. Special Int.: Public Health and Preventive Med.; Med. Edn.; Common Cold.

DIEHL, Helmut Chares, Dir. and Secy., The Refrigeration Rsch. Foundation, 200 Midland Bldg., Colorado Springs, Colo. REFRIGERATED WAREHOUSING; FROZEN FOODS. b. Bridgeport, Conn., June 6, 1894. s. Karl Brossard and Anna Eleanor (Saur) D. Edn.: B.S., Mich. State Coll., 1918. m. Cecelia Anna Maurer, Sept. 28, 1920. c.: Robert; Richard; Lois; Donald; Barbara. Exp.: Physiologist, U. S. Horticultural Field Sta., Wenatchee, Wash., 1924-31; Sr. Chemist, U. S. Frozen Pack Lab., Seattle, Wash., 1931-40; Prin. Chemist and Chf. Commodity Processing Div., Western Regional Rsch. Lab., Albany, Calif., 1940-43; Dir. and Secy., The Refrigeration Rsch. Foundation, Colorado Springs, Colo. Hon. Pos.: Pres., Inst. of Food Technologists, 1949. Mem.: A.A.A.S.; fellow; Amer. Pub. Health Assn.; Amer. Inst. Chemists; Amer. Soc. Refr. Engrng.; Inst. Food Tech.; Natl. Assn. Practical Refr. Engrg.; Soc. Hort. Sci.; Amer. Chem. Soc.; Sigma Xi; Xi Sigma Pi. War Record: Pvt. 1st. Class, Chem. Warfare Service, W. W. I. Gen. Int.: Pioneered Frozen Food Rsch. USDA, Beginning in 1924. Special Int.: Food Technology, Especially Frozen Foods, Handling, Storage and Transportation of Fruits and Vegetables, Maturity and Physiol. of Fruits and Vegetables.

DIEHL, Helmut Charles, Dir. and Secy., Refrigeration Rsch. Foundation, 410 Mercantile Bldg., 2082 Center St., Berkeley, Calif. PLANT PHYSIOLOGY.

DIEHM, Margaret May, Lt. Comdr., U. S. Naval Reserve, H(W), Naval Med. Schl., Bethesda, Md. BACTERIOLOGY.

DIEKE, G. H., Johns Hopkins Univ., Physics Dept., Baltimore, Md. SPECTROSCOPY AND GAS DISCHARGES.

DIENES, Louis, Bacteriologist, Mass. General Hos., Boston, Mass. MEDICAL BACTERIOLOGY.

DIETRICH, Henry, Asst. Prof. of Entomol. and Curator of Insects, Cornell Univ., Ithaca, N. Y. ENTOMOLOGY.

DIETRICHSON, Gerhard, Asst. Prof. of Chem., Mass. Inst. of Tech., Cambridge, Mass. CHEMISTRY.

DIETRICH, Sigismund de Ruedesheim, Hd. Prof., Geog. Dept., 111 Bldg. B, Univ. of Fla., Gainesville, Fla. Educationist, WAE, Dept. of State. GEOGRAPHY. b. Feb. 7, 1906, Budapest, Hungary. s. Max de Ruedesheim and Julia (Papp) D. Edn.: Dip., Econ. Faculty of Univ. of Budapest, Hungary, 1928; Univ. Fellow, Clark Univ., 1928-31; Ph.D., Clark Univ., 1931; Univ. of Chicago, Summer, 1939; D.Sc., Royal Hungarian Palatine-Joseph Univ. of Budapest, 1936. m. Iren Dokupil of Budapest, Hungary, 1932. d. Julius and Julia Dokupil. c.: Rosemary. Exp.: Instr., Econ. Geog., Univ. of Fla., 1931-35; Act. Hd., Dept. of Geog., S. T. C., Florence, Ala., Summer, 1935; Visiting Prof. of Geog., Royal Hung. Palatine-Joseph Univ., 1935-36; Asst. Prof. of Econ. Geog., Univ. of Fla., 1936-41; Assoc. Prof. of Econ. Geog., Univ. of Fla., 1941-44; Act. Hd., Geog. Sect., Div. of Geog. and Geol., 1942-45; Act. Chmn., Div. of Geog. and Geol., 1944; Chmn., War Trng. Courses in Geog., 1943-44; Spec. Consultant Office of Strategic Services, 1943; Regional Geographer, USBGN,

Dept. of the Interior, 1944; Geographer, Asst. to the Chief, Div. of Geog. and Cartog., Dept. of State, Aug., 1944-Sept., 1945; Chmn., Div. of Geog. and Geol., 1945-48; Hd. Prof., Geog. Dept., Univ. of Fla., 1948—; Chmn., Southeast Sect., ASPG-AAG, 1948-49; Chmn., Social Sci. Sect., Fla. Acad. of Sci., 1951—. Mem.: Assn. of Amer. Geog.; Amer. Soc. for Prof. Geog.; Amer. Geog. Soc.; Hungarian Geog. Soc.; Acad. of Polit. and Social Sci.; Fla. Acad. of Sci.; Soil Sci. Soc. of Fla.; Internatl. Commerce Frat. of Delta Sigma Pi; Gainesville Little Theatre; Gainesville Music Assn. Contrb. to: (See Vol. XIII for Complete List). "The Changing Economy of Okaloosa County, Fla."; Economic Leadlets, Vol. IX, No. 9, Aug., 1950; "Fla.'s Climatic Extremes II, Hurricanes"; Memorandum Folio, Southeastern Div., A.A.G., Aug., 1950. Ph.D. Dissertation: Historical Geog. of Thames River Valley, Conn.; D.Sc. Dissertation: The Sociography of the Negro in the South (Written in Hungarian). Travel: U. S.; Europe. Gen. Int.: Past Pres. and Founder, Fla. Fed. of Little Theatres; Past Pres., S. E. Region, Amer. Communal Theatre; Past Pres., Gainesville Music Assn.; Past Pres., Gainesville Girl Scout Coun. Hobbies: Drama; Swimming; Photography. Listed in: A.M.S.; Amer. Young Men; Who's Who in Fla.; Who's Who in Central Europe; Who's Who in the Southeast; Who's Who in Amer. Special Int.: Travel and Fieldwork.

DIETZ, Albert G. H., Prof.; Bldg. Engrng. and Construction, Mass. Inst. of Tech., Cambridge, Mass.



MATERIALS OF CONSTRUCTION WITH PARTICULAR EMPHASIS IN WOOD, PLASTICS, AND RELATED MATERIALS. b. Mar. 7, 1908, Lorain, Ohio. s. Peter and Adele (Grevsmühl) D. (both dec.). Edn.: A.B., Miami Univ., 1930; S.B., M. I. T., 1932; Sc.D., ibid., 1941. m. Ruth Avery, Lorain, Ohio, Sept. 9, 1936. d. H. C. (dec.) and Lura R. Avery (dec.). c.: Margaret; Henry A. Exp.: Natl. Tube Co., Lorain, Ohio, 1933-34; Assistant, Building Engrng. and

Construction, M. I. T., 1934-36; Instr., ibid., 1936-41; Asst. Prof., 1941-46; Assoc. Prof., 1946-50; Prof., 1950—; Sr. Engr., Forest Prod. Laboratory, 1942. Mem.: Phi. Beta Kappa; Tau Beta Pi; Sigma Xi; A.A.A.S.; Amer. Soc. of Civil Engrs.; A.I.M.E.; A.S.T.M.; A.S.E.E.; Beta Theta Pi; A.S.M.E.; S.P.E.; S.P.I.; F.P.R.S. Contrb. to: A.S.M.E. Transact.; A.S.T.M. Bull. and Proceedings; S.E.S.A. Proceedings; F.P.R.S. Proceedings. Sc.D. Dissertation: Stress-Strain Relations in Wooden Beams (Douglas Fir). Publications: Dwelling House Construction, Materials of Construction, Wood, Plastics, Fabrics, D. Van Nostrand and Co.; Engrng. Laminates, John Wiley & Sons, Inc. War Record: Field Serv. Consultant, Office of Field Service, O.S.R.D.; Consultant, Forest Products Lab. Travel: N. Amer.; Europe; Pacific. Listed in: A.M.S.; Who Knows—and What: Who's Who in Engrng.; Who's Who in Amer. World Biography. Special Int.: Plastics; Solar Heating of Buildings.

DIETZ, David Henry, Sci. Editor of the Scripps-Howard Newspapers, The Cleveland Press Bldg., Cleveland 14, Ohio. GENERAL SCIENCE, ASTROLOGY AND ATOMIC ENERGY. b. Cleveland, Ohio, Oct. 6, 1897. s. Henry W. and Hannah (Levy) D. Edn.: A.B., Western Reserve Univ., 1919. Hon. Deg.: Litt.D., Western Reserve Univ., 1948. m. Dorothy B. Cohen, Sept. 26, 1918. c. Doris Jean; Patricia Ann and David Henry, Jr. Exp.: Mem., Editorial Staff, Cleveland Press, Ohio, 1915—; Sci. Editor, Scripps-Howard Newspapers, Ohio, 1921—. Mem.: Fellow, A.A.A.S., Ohio Acad. of Sci., Royal Astron. Soc.; Am. Astron. Soc.; Societe Astronomique de France; Natl. Assn. of Sci. Writers; Zeta Beta Tau; Sigma Delta Chi; Omicron Delta Kappa; Sigma Xi. Author: The Story of Sci., 1931; Med. Magic, 1937; Atomic Energy in the Coming Era, 1945. Contrb. to:

Sci.; Jour. of Applied Physics; Am. Scholar. War Record: U. S. Army, 1918. Consultant to Surgeon General of U. S. Army 1944-47. Special Int.: Gen. Sci.; Popularization of Sci. and Med.; Sci. Journalism; Astronomy and Atomic. Gen. Inst. Author of Article on Atomic Bomb in new edition of Encyclopaedia Britannica and of Annual Article on Atomic Energy in Britannica book of the Yr., 1946—; Winner, Pulitzer Prize in Journalism, 1937; Zeta Beta Tau, New Orleans Trophy 1938; B. F. Goodrich Award for Distinguished Public Service, 1940; War Dept. Certificate of Appreciation, 1945; Geo. Westinghouse Dist. Sci. Writers Award, 1946.

DIETZ, Harry Frederick, Entomologist, Pest Control Rsch. Section, Du Pont Expt. Station, Wilmington, Del. ENTOMOLOGY.

DIETZ, Nicholas, Jr., Assoc. Prof. of Biol. Chem. and Nutrition, Creighton Univ., Med. Schl., Omaha



2. Nebr. MEDICAL BIOCHEMISTRY AND NUTRITION. b. Dec. 17, 1900, Brooklyn, N. Y. s. Nicholas and Emma (Weidt) D. Edn.: A.B., Columbia Coll., 1924; A.M., Columbia Univ.; Ph.D., ibid. Exp.: Asst. in Chem., Columbia Univ., 1925-29; Instr. in Chem., Univ. of Pittsburgh, 1929-33; Asst. Prof. Biol. Chem. and Nutrition, Creighton Univ., Med. Schl., 1933-42; W. W. II, U. S. Army, 1942-46, N. Africa and European Theaters, Maj., 1946; Assoc. Prof.,

Biol. Chem. and Nutrition, Creighton Univ., Med. Schl., 1946—. Fellow: A.A.A.S.; Amer. Geog. Soc. Mem.: A.C.S.; M.A.A.; Hist. Sci. Soc.; Amer. Pub. Health Assn.; Sigma Xi; Phi Lambda Upsilon. Ph.D. Dissertation: A Potentiometric Study of Acid-Base Titration Systems in the Very Strongly Acid Solvent Formic Acid. War Record: (see above). Hobbies: Hist.; Hist. of Sci.; Photography; Geog. Listed in: A.M.S.; Chem. Who's Who; Midwest Who's Who; Cath. Who's Who; Who's Who in Nebr.; Internatl. Blue Book. Special Int.: Vitamin A; Plasma Substitutes.

DIEUAIDE, Francis R., Scientific Dir., Life Ins. Med. Rsch. Fund, 2 East 103rd St. and Clinical Prof. of Med., Columbia Univ., N. Y., N. Y. INTERNAL MEDICINE.

DIGGS, Sterling Henry, Rsch. Consultant, Rouss Physical Lab., Univ. of Va., Charlottesville, Va. PETROLEUM CHEMISTRY.

DIJKMAN, Marinus Johannes, Assoc. Prof. of Applied Tropical Botany, Univ. of Miami, Coral Gables



46, Fla. SELECTION AND BREEDING OF TROPICAL CROPS. b. Djombang, Java, Indonesia, Feb. 12, 1907. s. Dijkman Bernardus and Melanie, Virginie, Marie (Spruyt) D. Edn.: Ph.D., Univ. of Utrecht, Holland, 1934. m. Nelly Ochse, Aug. 2, 1938. c. Dick Jaap. Exp.: Salesman of Pharmaceutics in Amsterdam, Holland and Soerabaya, Java, Indonesia, with Firma Brocades and Stehman and Brocades and Itallie, 1934-35; Secy., West Java Expt. Station, Buitenzorg, Indonesia,

1935-37; Selectionist, ibid., 1937-40; Hd. Agril. Ext. Service for South and West Sumatra and Riouw Archipelago in Tandjoeng Karang, Sumatra, 1940-47; Asst. Prof., Univ. of Miami, Coral Gables, Fla., 1947-53; Assoc. Prof., ibid., 1953—. Mem.: Amer. Assn. for Advance. of Sci.; Amer. Bot. Soc.;

Fla. Acad. of Sci.; Fla. State Hort. Soc.; Tri Beta. Contrb. to: Sci.; Amer. Jour. of Botany; La Hacienda; Econ. Botany; Proceedings Fla. State Horticulture Soc. Special Int.: Indonesia, State of New South Wales, Australia.

DIKE, Paul Harrison, Asst. Dir. of Rsch., Leeds and Northrup Co., Philadelphia, Pa. PHYSICS.

DILL, David Bruce, Scientific Dir., Med Div., Army Chem. Center, Edgewood Arsenal, Md. PHYSIOLOGY.

DILL, Homer Ray, Dir., Museum of Natural History, State Univ. of Iowa City, Iowa City, Iowa. MUSEUM METHODS.

DILLER, Irene, ZOOLOGY.

DILLER, Jesse D., Assoc. Pathologist, U. S. D. A., Beltsville, Md. BOTANICAL SCIENCE, AGRICULTURE.

DIMAS-ARUTI, F. M., 1603 16th St., N. W., Washington, D. C. DENTISTRY.

DIMITROFF, George Z., Asst. Prof. of Astron., Dartmouth Coll., Hanover, N. H. ASTROPHYSICS.

DIMMICK, Graham Bennett, Univ. of Ky., Lexington, Ky. PSYCHOLOGY.

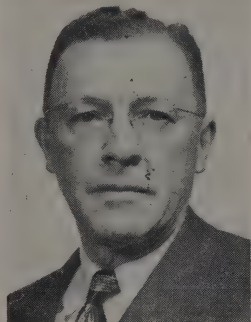
DIMOCK, Arthur Watson, Assoc. Prof. of Plant Pathol., Cornell Univ., Ithaca, N. Y. DISEASES OF ORNAMENTAL PLANTS.

DIMOCK, William Wallace, Prof. of Veterinary Sci. Univ. of Ky. and Hd., Dept., of Animal Pathol., Ky., Agri. Expt. Station, Lexington, Ky. VETERINARY SCIENCE.

DIMOND, Albert Eugene, Assoc. Plant Pathologist, Conn. Agri. Expt. Station, New Haven, Conn. PLANT PATHOLOGY.

DINES, Lloyd L., Prof. Emer. of Math., Carnegie Inst. of Tech., Pittsburgh, Pa.; 212 Lunt Bldg., Northwestern Univ., Evanston, Ill. MATHEMATICAL ANALYSIS.

DINSMORE, Ray Putnam, Vice-Pres., Rsch. and Development, The Goodyear Tire and Rubber Co., 1144 E. Market St., Akron 16, Ohio. CHEMICAL ENGINEERING; RESEARCH—RUBBER.



b. Tewksbury, Mass., Apr. 24, 1893. s. Hiram and Susan (Tove) D. Edn.: B.S., Mass. Inst. of Tech., 1914. Hon. Deg.: D. Engrng., Case Schl. of Applied Sci., 1940. m. Violet Cowie on Sept. 24, 1919. c. Ruth Harrison Ayers; Putnam. Exp.: Technical Staff, The Goodyear Tire and Rubber Co., Ohio, 1914-16; Asst. Chemist, ibid., Canada, 1916-19; Chf. Chemist, ibid., Calif., 1919-21;

Chf. Chemist, Rsch. Dir., ibid., Ohio, 1921-32; Asst. Factory Mgr., ibid., 1932-39; Mgr. Development Dept., ibid., 1940-43; Vice-Pres., ibid., 1943—; Asst. Deputy Rubber Dir., 1942-43. Mem.: Fellow, Amer. Inst. Chemists; Fellow, Royal Soc. Arts; Fellow, Inst. Rubber Industry; Fellow, A.A.A.S.; Amer. Chem. Soc.; Amer. Inst. Chem. Engrs.; Soc. Automotive Engrs.; Alpha Chi Sigma. Contrb. to: Chem. Met. Eng.; Ind. Engrng. Chem.; I.R.J.; Rubber Age; Trans. I. R. I.; Colloid Chem.; Mines Mag.; S.A.E. Jour.; etc. Gen. Int.: Colwyn Medal award by Inst. Rubber Industry, London, 1948; Trustee, Midwest Rsch. Inst.; Counselor, The Ohio State Univ. Rsch. Foundation. Special Int.: Rubber Tech.; Polymer Chem.; Organic Synthesis.

DINWIDDIE, Stanley Womack, Sr. Tech. Investigator, Patent Div., Textile Fibers Dept., E. I. du Pont de Nemours and Co., Inc., Exptl. Sta., Wilmington, Del. CHEMISTRY. b. W. Orange, N. J., Aug.

16, 1912. s. William Walter and Pauline (Wright) D. Edn.: B.S., Univ. of Va., 1933. m. Marian Hubbard, Nov. 22, 1939. Exp.: Asst., Analytical Chem., Univ. of Va., 1933-34; Licentiate, 1933-35; Rsch. Chemist, E. I. du Pont de Nemours and Co., Inc., Waynesboro, Va., 1936-50; Tech. Investigator, ibid., Wilmington, Del., 1950-53; Sr. Tech. Investigator, ibid., 1953—. Mem.: Amer. Chem. Soc.; A.A.A.S.; Alpha Chi Sigma; Soc. of the Cincinnati. War Record: 1st Lt., Inf., 1942; Mediterranean Theatre, 1943-45; Major, Signal Corps, 1945. Special Int.: Addition of Acetic Acid to Acetylene; Water Treatment; Cellulose Chem., Acetate Fibers; Indexing of Scientific Information.

DIPPELL, Ruth, GENETICIST.

DIRKS, Charles Orville, Prof. of Entomol., Univ. of Maine, Orono, Maine. ENTOMOLOGY.

DISERENS, Charles Murdoch, Assoc. Prof. of Psychol., Univ. of Cincinnati, Ohio. PSYCHOLOGY.

DISTAD, Merrill Francis, Chf., Rsch. Branch of Ordnance Electronics Div., Natl. Bureau of Standards, Washington 25, D. C. PHYSICS; ELECTRONICS. b. Oct. 11, 1910, Williston, N. Dak.



s. Oliver E. and Clara Amanda (Prescott) D. Edn.: B.A., Concordia Coll., 1931; M.A., Univ. of Minn., 1934; Ph.D., ibid., 1938. m. Ethel Louise Burbeck, Aug. 10, 1940. c.: Edward Oliver; Marilyn Frances. Exp.: Techng. Asst., Phys. Dept., Univ. of Minn., 1931-37; Instr., Va. Jr. Coll., Virginia, Minn., 1938-39; Radio Engr. and Physicist, Naval Rsch. Lab., 1939-50; Chief Scientist, Chesapeake Bay Annex, ibid., 1943-46; Physicist, Ordnance Electronics Div., Natl. Bureau of Standards, 1950—; Chf., Rsch. Branch, ibid., 1952—. Mem.: Amer. Phys. Soc.; Inst. of Radio Engrs.; Phys. Soc. of London; Amer. Inst. Elec. Engrs.; Philos. Soc. of Wash.; Rsch. Soc. of Amer.; Pi Kappa Delta; Gamma Alpha; Sigma Xi. Special Int.: Electrical Properties of Insulating Crystals; Military Application of Electronic Systems.

DITTMAR, Harry Robert, Asst. Dir. of Sales, Polychem. Dept., E. I. du Pont de Nemours and

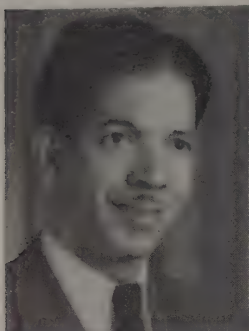


Co., Wilmington, Del. CHEMISTRY. b. Fond du Lac, Wis., Feb. 3, 1903. s. J. W. A. and Martha (Kliemchen) D. Edn.: B.S., Univ. of Wis., 1925 M.S., ibid., 1926; Ph.D., ibid., 1928. m. Helen Osterbind, Aug. 24, 1931. c.: Bruce Ivor. Exp.: Instr., Chem. Dept., Univ. of Wis., Madison, Wis., 1928-30; Rsch. Chem., Ammonia Dept., E. I. du Pont de Nemours and Co., Wilmington, Del., 1930-38; Group Leader, ibid., 1938-43; Asst. Chem. Dir., ibid., 1943-44;

Mgr. Tech. Service, ibid., 1944-46; Asst. Dir. of Sales, ibid., 1946-49; Asst. Dir. of Sales, Polychems. Dept., ibid., 1949—. Mem.: Amer. Chem. Soc.; A.A.A.S.; Phi Beta Kappa; Sigma Xi; Phi Lambda Upsilon; Gamma Alpha; Alpha Chi Sigma. Contrb. to: Indus. and Engrng. Chem.; Electrochem. Soc.; Amer. Chem. Soc.; Jour. of Bacteriol.; Jour. of Phys. Chem.; Jour. of Biol. Chem. Special Int.: Phys. Chem.; Plastics.

DITTO, Raymond Clyde, Prof. of Physics, Alma Coll., Alma, Mich. PHYSICS.

DIUGUID, Lincoln Isaiah, Dir. Du-Good Chem. Lab., 1215 So. Jefferson Ave., St. Louis 4, Mo. **ORGANIC CHEMISTRY.**



b. Lynchburg, Va., Feb. 6, 1917. s. Lewis W. and Bettie (McCoy) C. Edn.: B.S., W. Va. State Coll., 1938; M.S., Cornell Univ., 1939; Ph.D., ibid., 1945. Exp.: Prof. of Chem., Stowe Tchrs. Coll., 1948—; Dir. of Du-Good Chem. Lab., 1947—; Consultant, A. M. & N. Coll., Pine Bluff, Ark., 1949—; Rsch. Assoc., Cornell Univ., 1946-47; Rsch. Asst., ibid., 1945-46; Rsch. Fellow, ibid., 1943-45; Hd. of Chem. Dept., A. M. & N. Coll., 1939-43; Analytical Chemist, Pine Bluff Arsenal, 1942-43. Mem.: Sigma Xi; Phi Kappa Phi; Amer. Chem. Soc.; Microchem. Soc.; Amer. Fed. of Scientists; Omega Phi. Contrb. to: Amer. Chem. Soc.; Jour. Org. Chem.; Jour. Anal. Chem. Ph.D. Dissertation: Benzothiazole Derivatives for Antimalarial Studies. Travel: Canada. Hobbies: Tennis; Golf; Basketball; Horseback Riding. Listed in: A.M.S.; Chem. Who's Who; Who's Who in Colored Amer. Special Int.: Organic Rsch. Chem.; Benzothiazole Chem.

DIX, Edgar Hutton, Jr., Asst. Dir. of Rsch., Aluminum Rsch. Labs., Box 772, New Kensington, Pa.



METALLURGY. b. Baltimore, Md., Aug. 11, 1892. s. Edgar H. and Margaret (Chesley) D. Edn.: M.E., Cornell, 1914; M.M.E., ibid., 1916. m. Mary Opie Tabb of Martinsburg, W. Va., 1919. d. Horace and Lillie Tabb. Exp.: Instr., Mat. Test. Lab., Cornell, 1914-16; Metallographer, Morse Chain Co., Ithaca, N. Y., 1916; Assistant to M. Mech., Baltimore Copper Smelting & Rolling Co., 1916-18; Chief, Test. Dept., Gen. Lab., Bur. of Aircraft Prod., 1918-19; Asst. Engr. of Tests, 1919-20; Chief Metals S. A., 1920-23; Aluminum Co. of Amer., 1923—. Hon. Pos.: Chmn., Subcom., Aircraft Structural Mat., Natl. Adv. Com. for Aeronautics; Met. Adv. Com., Natl. Bur. of Standards. Mem.: Amer. Assn. Adv. of Sci.; Amer. Soc. for Testing Materials; Amer. Soc. for Metals; Amer. Inst. of Min. and Metallurgical Engrs.; Soc. of Auto. Engr.; Inst. of Metals, Eng.; Sigma Xi; Univ. Club. Author: Corrosion of Light Metals; Chapt. in Corr. of Metals, Amer. Soc. Metals, 1946, pp. 131-176; Thermal Treatments, Chapt. in Physical Metallurgy of Aluminum Alloys. Contrb. to: Periodicals. Hobbies: Golf; Gardening. Listed in: A.M.S.; Who's Who in Aviation; Who's Who in Engrng.; Who's Who in Commerce and Indust. Special Int.: Physical and Chem. Metallurgy of Aluminum.

DIXON, Frank James, Jr., Prof. and Chmn., Dept. of Pathol., Schl. of Med., Univ. of Pittsburgh, Pittsburgh, 13, Pa. **PATHOLOGY.** b. St. Paul, Minn., Mar. 9, 1920. s. Frank James and Rose (Kuhfeld) D. Edn.: B.S., Univ. of Minn., 1939; M.D., Med. Schl. of the Univ. of Minn., 1943. m. Marion Edwards, Mar., 1946. c.: Janet Wynn; Frank Edwards. Exp.: Rsch. Asst., Dept. of Pathol., Harvard Med. Schl., 1946-48; Instr., Dept. of Pathol., Wash. Univ. Med. Schl., 1948-50; Asst. Prof., ibid., 1950-51; Prof. and Chmn., Dept. of Pathol., Univ. of Pittsburgh Schl. of Med., Pittsburgh, Pa., 1951—. Mem.: Diplomate, Amer. Bd. of Pathol.; Amer. Assn. Pathologists and Bacteriologists; N. Y. Acad. Sci.; Amer. Assn. Immunologists; Soc. for Exptl. Biol. and Med.; Amer. Soc.

for Exptl. Pathol.; Amer. Assn. for Cancer Rsch.; Nu Sigma Nu; Alpha Omega Alpha; Sigma Xi. Author: Tumors of the Male Genital System, Atlas of Tumor Pathol., 1952. Contrb. to: Jour. Immunol.; Jour. Exptl. Med.; Jour. Lab. and Clin. Med.; Proc. Soc. for Exptl. Biol. and Med.; Sci. Amer. Jour. Med. Sci. War Record: U. S. Navy, 1943-46. Special Int.: Immunology; Radiobiol.; Cancer.

DIXON, Helen, Chmn., Sci. Dept. and Coordinator of Visual Edn., Tuley H. S., 1313 N. Claremont, Chicago, Ill. **PLANT ECOLOGY, BIOLOGY.**

DJERASSI, Carl, Wayne Univ., Detroit, Mich. **ORGANIC CHEMISTRY.**

DOAK, Clifton C., Hd., Dept. of Biol., Tex. A. and M. Coll., College Station, Tex. **PLANT MORPHOLOGY.**

DOAN, Charles Austin, Dean, Coll. of Med., Hamilton Hall, Ohio State Univ., Columbus, Ohio. **HEMATOLOGY.**

DOANE, S. E., Pine Orchard, Conn. **ELECTRICAL ENGINEERING.**

DOBBIN, Carroll Edward, Sr. Geologist, U. S. Geol. Survey, 154 New Customhouse, Denver, Colo. **PETROLEUM GEOLOGY.**

DOBBIN, Robert Raphael, Acoustical Engr., Radio Engrng. Dept., Stromberg Carlson Co., 100 Carlson Rd., Rochester, N. Y. **PHYSICS, ENGINEERING.**

DOBBINS, Raymond Anson, Prof. of Biol., Ohio Northern Univ., Ada, Ohio. **BOTANY.**

DOBBINS, William Earl, Assoc. Prof. of Sanitary Engrng., New York Univ., Coll. of Engrng., N. Y.



53, N. Y. **HYDRAULIC AND SANITARY ENGINEERING.** b. Mar. 1, 1913, Woburn, Mass. s. Wm. James and Fanny (Bustard) D. Edn.: S.B., 1934; S.M., 1935; Sc.D., 1941. m. I. T. m. Norma Nilsen, Dec. 20, 1952. Exp.: Rsch. Assoc., M. I. T., 1935-36, 1939-40; Robert Coll., Istanbul, Turkey, Instr., 1936-39; Charles T. Main, Inc., Boston, Mass., Engr., 1941; Stone and Webster Engrng. Corp., Boston, Mass., Engr., 1942; U. S. Engr., Iranian Operations, Engr., 1942-43; Fay, Spofford and Thorndike, Boston, Mass., Engr., 1946-50; Assoc. Prof., Sanitary Engrng., N. Y. Univ., Coll. of Engrng., 1950—. Mem.: Amer. Soc. of Civil Engr.; Boston Soc. Civil Engr.; Amer. Water Works Assn.; Amer. Soc. for Engrng. Edn.; Chi Epsilon; Sigma Xi. Contrb. to: Trans. Amer. Soc. of Civil Engr. Sc.D. Dissertation: A Study of the Effect of Turbulence on Sedimentation. War Record: U. S. N., 1943-46. Lt. (j.g.), C.E.C., U. S. N. R. Travel: Europe; Asia; Africa. Hobbies: Flying; Fishing; Hunting. Listed in: A.M.S. Special Int.: Effect of Turbulence on Sedimentation; Treatment of Radioactive Liquid Wastes.

DOBROVOLNY, Charles George, Sr. Scientist, U. S. Public Health Service, Natl. Microbiol. Inst., Natl. Inst. of Health, Bethesda, Md. **TROPICAL DISEASES, CHEMOTHERAPY, SCHISTOSOMIASIS, PARASITOLOGY.** b. Budapest, Hungary, July 19, 1902. s. Frank and Christina (Zeich) D. Edn.: B.A., Univ. of Mont., 1928; M.S., Kans. State Coll., 1933; Ph.D., Univ. of Mich., 1938. m. Marjorie Prickett, July 17, 1931. c. John Charles. Exp.: Instr., H.S., Filer, Idaho, 1928-29; Instr. in Zool., Kans. State Coll., Manhattan, Kans., 1929-35; Instr., Univ. of Mich., Ann Arbor, Mich., 1935-40; Assoc. Prof. of Histol. and Parasitol., Univ. of N. H., Durham, N. H., 1930-37; Chf. of Project Testing New Anti-Malarial Drugs under Field Conditions in Guatemala, Pan Amer. Sanitary

Bur. and Health Service of Guatemala, 1948-50; Schistosomiasis Consultant in Brazil, in Cooperation with World Health Organization and Natl. Health Dept. of Brazil, 1951—. Mem.: Amer. Microscopical Soc.; Amer. Soc. of Tropical Diseases; Fellow, A.A.A.S.; Am. Soc. of Zool. Am. Soc. of Parasitol.; Phi Kappa Phi Sigma; Sigma Xi; U. S. Public Health Assn.; Mich. Acad. of Sci. Contbr. to: Sci.; Am. Jour. of Tropical Med. and Hygiene; Jour. of Parasitol.; Parasitol.; Trans. of Amer. Microscopical Soc.; Trans. of Kans. Acad. of Sci.; Trans. Mich. Acad. of Sci. Special Int.: Rsch. in Parasitol., Diseases of Man and Domestic Animals, Malaria Chemotherapy, Nematol.; Embryol. and Schistosomiasis.

DOBROVOLNY, Ernest, Geologist, U. S. Geol. Survey, 408 Insurance Bldg., Denver, Colo. **ENGINEERING, GEOLOGY.**

DOBSON, George, Mem. of Technical Staff, Bell Telephone Labs., 463 West St., N. Y. **TELEPHONE ENGINEERING.**

DOBZHANSKY, Theodosius, Prof. of Zool., Columbia Univ., New York 27, N. Y. **BIOLOGY, GENETICS.** b. Nemirov, Russia, January 25, 1900. s. Gregory and Sophia (Voinarsky) D. Edn.: Diploma, Univ. of Kiev, 1921. Hon. Degrees: D.Sc., Univ. of Sao Paulo, Brazil, 1943; D.Sc., Coll. of Wooster, 1945. m. Nathalie Sivertzev, Aug. 8, 1924. c.: Sophia Dobzhansky. Exp.: Instr. Zoology, Institute of Agronomy, Kiev, 1921-24; Instr. Genetics, Univ. of Leningrad, 1924-27; Fellow, Rockefeller Foundation, Columbia Univ. and Calif. Inst. Tech., 1927-29; Asst. Prof. and Prof. of Genetics, Calif. Inst. Tech., 1929-40; Prof. of Zool., Columbia Univ., 1940—. Hon. Pos.: Ex-Pres. of Genetics Soc. of Amer.; Amer. Soc. of Naturalists; Soc. for the Study of Evolution. Mem.: Natl. Acad. of Sci.; Amer. Philosophical Soc., Royal Danish Acad. of Sci.; Brazilian Acad. of Sciences. Author: Genetics and the Origin of Species, 1937. Special Int.: **BIOLOGY, GENETICS.**

DOCHEZ, Alphonse Raymond, Presbyterian Hosp., Columbia Univ., 620 W. 168th St., N. Y. 32, N. Y.

DOCKERAy, Floyd Carlton, Prof. of Psychol., Ohio State Univ., Columbus, Ohio. **PSYCHOLOGY.**

DODD, Charles M., Dept. of Ceramic Engrng., Iowa State Coll., Ames, Iowa. **CERAMICS.**

DODD, David Rollin, Prof. of Agron. and Assoc. Rsch., Ohio State Univ. and Ohio Agri. Expt. Station, Columbus, Ohio. **AGRONOMY.**

DODD, Dorothy Montgomery, Rsch. Worker in Instrumental Analysis, Chem. Labs., Bell Telephone Labs., 243 Lenox Ave., South Orange, N. J. **DIELECTRICS, INFRA-RED ANALYSIS.**

DODD, Eileen Kramer, Prof. of Psychol., Mary Washington Coll., Box 1205, Coll. Station, Fredericksburg, Va. **PSYCHOLOGY.** b. Coplay, Pa., Dec. 22, 1899. d. Peter Zehmer and Jane (Meyers) Kramer. Edn.: Ph.B., Muhlenberg Coll., 1922; M.A., N. Y. Univ., 1924; Ph.D., *ibid.*, 1927. m. James Harvey Dodd, Aug. 29, 1930. Exp.: Dean of the Anewalt Schl., Cedar Crest Coll., Allentown, Pa., 1921-26; Prof. of Psychol., Mary Wash. Coll. of the Univ. of Va., Fredericksburg, Va., 1926—. Mem.: A.A.A.S.; A.A.U.W.; Amer. Psychol. Assn.; Internatl. Council of Women Psychologists; Va. Acad. of Sci.; Pi Lambda Theta; Alpha Phi Sigma. Special Int.: Child Psychol.; Testing-Intelligence, Aptitude, Personality; Theories of Personality Development.

DODD, Laurence Ellsworth, Assoc. Prof. of Physics, Univ. of Calif. at Los Angeles, 405 Hilgard Ave., Los Angeles, Calif. **PHYSICS, OPTICS.**

DODD, Stuart C., Prof., Thomson Hall, Univ. of Wash., 4711 E. 36th St., Seattle, Wash. **SOCIOLOGY.**

DODDS, B. L., Dir., Div. Edn. and Applied Psychol., Purdue Univ., Lafayette, Ind. **SECONDARY EDUCATION.**

DODDS, Gideon Stanhope, Prof. of Histology and Embryology, W. Va. Univ. Schl. of Med., Morgantown, W. Va. **HISTOLOGY, EMBRYOLOGY.**

DODDS, Harold Willis, Pres., Princeton Univ., Princeton, N. J. **POLITICAL SCIENCE.**

DODGE, B. F., Prof. of Chem. Engrng., Yale Univ., New Haven, Conn. **CHEMICAL ENGINEERING.**

DODGE, Bernard Ogilvie, Plant Pathologist Emeritus, Rsch. Consultant, N. Y. Botanical Garden, Bronx Park, N. Y. 58, N. Y. **MYCOLOGY; PLANT PATHOLOGY; GENETICS OF THE FUNGI.** b. Mauston, Wis., Apr. 18, 1872. s. Elbridge Gerry and Mary Ann (Nourse) D. Edn.: Grad. Milwaukee Normal, 1901; Ph.B., Univ. of Wis., 1909; Ph.D., Columbia Univ., 1912. m. Jennie Salome Perry, June 14, 1906. Exp.: Prin., Greenwood, Wis., H. S., 1897-1901; Prin., Algoma H. S., 1902-08; Asst. and Instr. in Botany, Columbia Univ., 1909-19; Plant Pathologist, U. S. Dept. of Agri., 1919-28; Plant Pathologist, N. Y. Botanical Garden, 1928-47. Mem.: Hon. Mem., British Mycol. Soc.; Natl. Acad. Sci.; Amer. Acad. Sci. and Arts; Torrey Bot. Club; Mycol. Soc.; Amer. Botanical Soc.; Amer. Genetics Soc. Contbr. to: Cytologia; Bull. Torrey Bot. Club; Amer. Jour. Heredity; Amer. Jour. Botany; Mycologia. Special Int.: Genetics of Fungi, especially of the Red Bread Molds; Plant Diseases.

DODGE, Carroll William, Prof. of Botany, Washington Univ. and Mycologist, Mo. Botanical Garden, 2315 Tower Grove Ave., St. Louis, Mo. **MYCOLOGY.**

DODGE, Homer Levi, Pres., Norwich Univ., Northfield, N. J. **PHYSICS.**

DODGE, Stanley Dalton, Assoc. Prof. of Geography, Univ. Mich., Ann Arbor, Mich. **GEOGRAPHY.**

DODGE, Theodore Ayrault, Consulting Mining Geol., 635 N. 3rd Ave., Tucson, Ariz. **ECONOMICAL GEOLOGY.** b. Chicago, Ill., Jan. 17, 1911. s. R. E. Neil and Katherine E. (Staley) D. Edn.: A.B., Harvard, 1932; A.M., Wisconsin, 1933; Ph.D., Harvard, 1936. m. Isabelle Stebbins, June 15, 1935. c.: Eleanor; Janet; Richard Neil; Thomas Marshall. Exp.: Cerro de Pasco Corp., Peru, 1935-38; Various Mining and Oil Cos., 1938-41; Geologist, Anaconda Copper Mining Co., 1941-44; Acting Chf. Geol., Cananea Cons. Copper Co., 1945—; Consulting Mining Geol., Tucson, Ariz., 1946—. Fellow: Mineralogical Soc. of Amer., Fellow; Geol. Soc. of Amer.; Amer. Geog. Soc.; A.A.A.S.; Phi Beta Kappa; Sigma Xi. Contbr. to: Amer. Mineralogist; Bull. of Geol. Soc. of Amer.; Jour. of Geol.; Engrng. and Mining Jour. Special Int.: Mine Exploration.

DODSON, Helen Walter, Assoc. Prof. of Astron. and Math., Goucher Coll., Baltimore, Md. **SOLAR RESEARCH.**

DOERFLER, Leo G., **SPEECH AND HEARING.**

DOERING, W., Prof., Yale Univ., New Haven, Conn. **CHEMISTRY.**

DOGETT, Leonard Allison, Visiting Prof., Bucknell Univ., 357 E. Prospect Ave., State Coll., Pa. **ELECTRICAL ENGINEERING.** b. Boston, Mass., Nov. 10, 1888. s. Frederick Fobes and Mary Chipman (DeWolf) D. Edn.: A.B., Harvard Univ., 1908; M.E.E., *ibid.*, 1910; E.E., Pa. State Coll., 1930. m. Elizabeth Armstrong Creelman of Kileira, Ireland, Dec. 23, 1920. c.: Alice D.; Frederick Fobes, II; Margaret Clyde. Exp.: Instr. at Harvard Univ., 1910-13; Prof., U. S. Naval Acad. Post. Grad. Schl., 1913-23; Prof., The Pa. State Coll., 1923-49, Now Emer. Prof.; Interim Prof., Univ. of Fla., 1949-49; Visiting Prof., Bucknell Univ., 1949-52. Hon. Pos.: Chmn., Edn. Com., Amer. Inst. Elec. Engrs.; Mem., Natl. Coun. A.A. U.P.; Chmn., Student Br. Com., Amer. Inst. Elec. Engrs. Mem.: Amer. Inst. of Elec. Engrs.; Amer. Soc. Engrng. Edn.; Amer. Assn. Univ. Profs.; Sigma Xi; Eta Kappa Nu; Tau Beta Pi; Kappa Delta Rho. Author: Alternating Current Analysis in 1933; Outline of Public Utilities in 1938. Contbr. to: Amer. Inst. Elec. Engrs.; Amer. Soc. Engrng. Edn. War Record: U. S. Naval Acad., 1913-23. Travel: England and Europe. Gen. Int.: Mem. of Boro Coun. Hobbies: Travel; Navigation; Postage Stamps. Listed in: Who's Who in Engrng.; Who's Who in

Pa.; Who's Who in the East; A.M.S.; Who's Who in Amer. Edn. Special Int.: Design of Elec. Mach.

DOHANIAN, Senekerim M., 42 Cedar St., Somerville, Mass. ENTOMOLOGY.

DOHRENWEND, C. O., Rensselaer Poly. Inst., Troy, N. Y. SOIL AND ROCK MECHANICS.

DOISY, Edward A., Prof. of Biochem. and Dir. of Dept. of Biochem., St. Louis Univ. Schl. of Med., 1402 S. Grand Blvd., St. Louis 4, Mo. BIOCHEMISTRY. b. Hume, Ill., Nov. 13, 1893. s. Edward Perez and Ada (Allen) D. Edn.: A.B., Univ. of Ill., 1914; M.S., ibid., 1916; Ph.D., Harvard Univ., 1920. Hon. Deg.: Sc.D., Washington Univ., 1940; Sc.D., Yale Univ., 1940; Sc.D., Univ. of Chicago, 1941; Sc.D., Central Coll., 1942; Docteur Honoris Causa, Univ. of Paris, 1945. m. Alice Ackert, 1918. c.: Edward Adelbert, Jr.; Robert A.; Philip P.; Richard J. Exp.: Asst. in Biochem.,



Harvard Med. Schl., Boston, Mass., 1915-17; Instr., Assoc. and Assoc. Prof. in Biochem., Washington Univ. Schl. of Med., St. Louis, Mo., 1919-23; Prof. of Biochem., St. Louis Univ. Schl. of Med., St. Louis, Mo., 1923—. Mem.: Amer. Soc. of Biological Chemists; Amer. Chem. Soc.; Assn. for the Study of Internal Secretions; A.A.A.S.; Soc. for Exptl. Biol. and Med.; Amer. Assn. for Cancer Rsch.; Natl. Acad. of Sci.; Amer. Philos. Soc.; Pontifical Acad. of Sci.; Amer. Acad. of Arts and Sci.; Phi Beta Kappa; Sigma Xi; Alpha Omega Alpha. Author: Sex and Internal Secretions, with Edgar Allen and Charles H. Danforth, 1939. War Record: Lt., Sanitary Corps, U. S. Army, 1917-19. Gen. Int.: Awarded the gold medal of the St. Louis Med. Soc., 1935; the Philip A. Conne medal of the Chemists Club of N. Y., 1935; St. Louis Civic Award, 1939; Willard Gibbs medal, 1941; Amer. Pharmaceutical Manufacturers Award, 1942; Squibb Award, 1944; shared the Nobel Prize in Physiology and Med., for 1943 with Dr. Henrik Dam. Special Int.: Metabolism; Insulin, Blood Buffers; Isolation and Chem. Characterization of Theelin, Theelol and Dihydrotheelin; Ovarian Hormones and Estrogenic Substances; Gonadotropic and Thyrotropic Principles.

DOLAN, Thomas James, Hd., Dept. of Theoretical and Applied Mechanics, 321B Talbot Lab., Univ. of Ill., Urbana, Ill. METALS, FATIGUE AND PROPERTIES OF; PHOTOELASTICITY; STRESS ANALYSIS, EXPERIMENTAL METHODS; PHYSICAL METALLURGY, MACHINE DESIGN. b. Chicago, Ill., Dec. 29, 1906. s. Thomas Charles and Elizabeth Bertha (Ringler) D. Edn.: B.S., Univ. of Ill., 1929; M.S., ibid., 1932. m. Virginia B. Fisher, 1929. c.: Cynthia Bess; Thomas James, Jr. Exp.: Instr., Univ. of Ill., Urbana, Ill., 1929-37; Asst. Prof., ibid.,



1937-41; Assoc. Prof. of Mechanics, ibid., 1941-45; Rsch. Prof., ibid., 1945-52; Hd. of Theoretical and Applied Mechanics Dept., ibid., 1952—. Hon. Pos.: Chmn., Central Ill. Sect., A.S.M.E., 1949; Pres., Soc. for Exptl. Stress Analysis; Chmn., A.S.T.M. Subcom. on Fatigue, 1949—. Mem.: Amer. Soc. for Testing Materials; Soc. for Exptl. Stress Analysis; Amer. Soc. of Mech. Engrs.; Sigma Xi; Phi Eta Sigma; Chi Epsilon; Tau Beta Pi; Bronze Tablet; Theta Tau. Contrb. to: A.S.T.M. Bull. and Proc.; A.S.M. Metal Progress; Rsch.

Revs.; A.S.M.E. Trans.; S.E.S.A. Proc.; Materials and Methods. War Record: Capt. Army of U. S. Ordnance Dept., 1942-45. Gen. Int.: Appointed Delegate to World Metallurgical Congress, 1951; Invited by Swedish Natl. Comm. for Mechanics to Participate in Special Conf. on Fatigue of Metals held in Stockholm in 1951. R. L. Templin Award from ASTM for Outstanding Paper on Development of New and Useful Methods of Testing Engrng. Materials. Special Int.: Rsch. on Railway Track, R. R. Equipment; Fatigue of Metals; Photoelastic Stress Analysis; Expansion Joints for Concrete Pavements; Properties of Low Alloy Steels, Special Aluminum Alloys for Airplane Propellers; Bolted Joints and Machine Frames; Rsch. in Properties of Materials including Fatigue and Exptl. Methods of Stress Analysis.

DOISY, Edward Albert, Jr., Asst. Prof. of Internal Med., St. Louis Univ., 402 S. Grand Blvd., St. Louis 4, Mo. BIOCHEMISTRY. b. St. Louis, Mo., Mar. 15, 1920. s. Edward Adelbert and Alice (Ackert) D. Edn.: B.S., Univ. of Ill., 1941; M.D., Harvard Med. Schl., 1944. m. Barbara Van Dyke, June 21, 1942. c.: Edward A., III; John Richard; Robert Van Dyke. Exp.: Intern, Mass. Gen. Hosp., 1945; Asst. in Med., St. Louis Univ., St. Louis, Mo., 1947-48; Instr., ibid., 1948-50; Sr. Instr., ibid., 1950-51; Asst. Prof., ibid., 1951—. Hon. Pos.: Editor-in-Chg., Med. Bull. of St. Louis Univ., 1951—. Mem.: Sigma Xi; Amer. Soc. Biol. Chemists; Beta Theta Pi; Phi Eta Sigma. Contrb. to: Jour. Biol. Chem.; Yale Jour. Biol. Med.; Proc. Soc. Exptl. Biol. and Med. Special Int.: Chlordane Toxicology; Niacin-Tryptophane Interrelationships; Metabolism of Radioactive Estrogens, Progesterone and Androgens, and Cortical Hormones and Acetylase.

DOLE, Malcolm, Prof. of Chem., Northwestern Univ., Evanston, Ill. PHYSICAL CHEMISTRY.

DOLECEK, Richard Leroy, Physicist, Electricity Div., Naval Rsch. Lab., 102 Dolph Dr., S. E., Washington, D. C. PHYSICS.

DOLL, Charles George, Asst. Prof. of Geol., Univ. of Vt., Burlington, Vt. STRUCTURAL GEOLOGY.

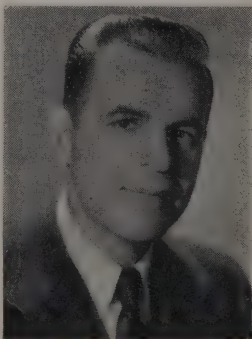
DOLL, Henri-Georges, Chmn., Bd. of Dirs. and Dir. of Rsch., Schlumberger Well Surveying Corp., 2720 Leeland, Houston, Tex. GEOPHYSICAL PROSPECTING.

DOLLARD, John, Yale Univ., New Haven, Conn., PSYCHOLOGY.

DOLLEY, William Lee, Jr., Prof. of Biol., Univ. of Buffalo, Buffalo, N. Y. ZOOLOGY.

DOLMAGE, Victor, Consulting Geologist, 1318 Marine Bldg., Vancouver, B. C., Can. GEOLOGY.

DOMM, Lincoln Valentine, Prof. and Chmn. Dept. of Anatomy, Stritch Schl. of Med., Loyola Univ., Chicago 12, Ill. ANATOMY; ZOOLOGY. b. Ayton, Ontario, Can., Oct. 22, 1896. s. William Henry and Catherine (Feick) D. Edn.: A.B., North Central Coll., 1921; Ph.D., Univ. of Chicago, 1926. m. Hazel Marie Stauffacher, Sept. 17, 1925. c.: William Alan. Exp.: Asst. in Biol., North Central Coll., Naperville, Ill., 1920-21; Fellow in Zool., Univ. of Chicago, Chicago, Ill., 1922-23; Asst. ibid., 1923-25; Rsch. Asst., ibid., 1925-30; Prof. of Biology, Central Y.M.C.A., Coll. of Liberal Arts, Chicago, Ill., 1928-34; Prof. and Chmn., ibid., 1934-40; Rsch. Assoc. in Zoology, Univ. of Chicago, Chicago, Ill., 1930-38; Rsch. Assoc. and Asst. Prof., ibid., 1938-46; Assoc. Prof., ibid., 1946-47; Assoc. Prof. of Anatomy, ibid., 1947-52; Prof. and Chmn. Dept. of Anatomy, Stritch Schl. of Med., Loyola Univ., 1952—. Hon. Pos.: Editorial Bd., Wilson Ornith. Bulletin, 1948—. Mem.: S.A.T.C.;



R.O.T.C.; A.A.A.S.; Amer. Soc. Naturalists; Amer. Soc. Zoologists; Amer. Assn. of Anatomists; Assn. for Study Internal Secretions; Soc. Exptl. Biol. and Med.; Ill. Acad.; Genetics Soc. of Amer.; Wilson Ornithol. Club; Inst. of Med. of Chicago; Gamma Alpha; Sigma Xi. Author Sex: and Internal Secretions, 1932. Contrb. to: Proc. Soc. Exp. Biol. and Med.; Biol. Bull.; Jour. Exp. Zool.; Amer. Jour. Physiol.; Proc. Soc. Biol.; Jour. Pharm. and Exp. Ther.; Poultry Sci., etc. Special Int.: Sex-inversion and intersexuality, Sexual precocity, Modification of plumage pattern by hormones and other agents, Factors influencing erythrocyte concentration, hormones and behavior, effects of hormones on tooth and bone growth and structure, internal secretions.

DOMOGALLA, Bernard Dir., Water Investigations and Chem. Treatment, Applied Biochemists and Associates, Butler, Wis. **CHEMISTRY, BIOLOGY AND BACTERIOLOGY OF WATERS.** b. Milwaukee, Wis., Aug. 20, 1896. s. Robert B. and Minnie (Hoffschild) D. Edn.: B.S., Univ. of Wis., 1922; M.S., *ibid.*, 1923; Ph.D., *ibid.*, 1925. Exp.: Chem. Supvr., Newport Chem. Co., Wis., 1919-21; Rsch. Fellowship, Univ. of Wis., 1922-25; Bio-Chemist, City of Madison, Wis., 1925-47; Rsch. Dir. on Water Investigations and Chem. Treatment, Applied Biochemists and Associates, Butler, Wis., 1947—. Mem.: Wis. Acad.; Amer. Chem. Soc.; Amer. Public Health Assn.; Amer. Water Works Assn.; A.A.A.S.; Phi Sigma; Sigma Xi; Gamma Alpha; Phi Kappa Tau. Contrb. to: Jour. Biol. Chem.; Jour. of Agron.; Amer. Fisheries Jour. Special Int.: Bio-Chem. Studies of a Variety of Waters; Applied Chem. Treatment of Lakes, Beaches, and Industrial Water Supplies; Treatment of Water-Borne Diseases.

DOMONSKE, Arthur Boquer, Retired, Rt. 1, Box 335, Willows, Calif. **MECHANICAL ENGINEERING.**

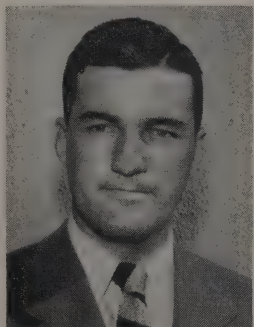
DONALDSON, John, Prof. of Political Econ., George Washington Univ., Washington, D. C. **INTERNATIONAL ECONOMICS.**

DONALDSON, John Calvert, Prof. of Anatomy, Schl. of Med., Univ. of Pittsburgh, Pittsburgh, Pa. **ENDOCRINOLOGY.**

DONLEAVY, John Joseph, Technical Dir., General Chem. Co., 40 Rector St., N. Y., N. Y. **CHEMISTRY.**

DONNER, Henry Frederick, Hd., Dept. of Geol. and Geography, Western Reserve Univ., Cleveland, Ohio. **GEOLOGY.**

DONOVAN, Thomas Joseph, Sr. Resident Surgeon, Peter Bent Brigham Hosp., Boston 15, Mass.



CARDIAC SURGERY. b. Houlton, July 25, 1922. s. Joseph Aloysius and Mary Alice D. Edn.: B.A., Bowdoin Coll., 1944; M.D., Harvard Med. Schl., 1946. m. Harriet Johnson. Exp.: Hd. of Surgical Rsch., Naval Med. Rsch. Inst., 1947-49; Asst. in Surgery, Harvard Med. Schl. and Surgical Rsch. Fellow, Peter Bent Brigham Hosp., Boston, Mass., 1949-50; Asst. Resident Surgeon, *ibid.*, 1950—. Mem.: Amer. Assn. of Military Surgeons; Amer. Med. Assn.; A.A.A.S.; Delta Kappa Epsilon; Nu Sigma Nu. Contrb. to: Jour. of Thoracic Surgery; Surgery Gynecology and Obstetrics; Annals of Surgery; Blood; The Jour. of Hematology; The Amer. Jour. of Physiol.; Trans. of Surgical Forum of the Amer. Coll. of Surgeons. Gen. Int.: First to use the Lucite Ball-Valve Within the Heart and First to Successfully and Permanently Occlude Main Pulmonary Artery. Special Int.: Cardiovascular Physiol. and Surgery in Man and Animals.

DOOLEY, Sister Mary Denise, Prof. of Chem., Coll. of Notre Dame of Md., Baltimore, Md. **CHEMISTRY.**

DOOLEY, Thomas Price, Hd., Dept. of Natural Sci., Prairie View Coll., Prairie View, Tex. **ZOOLOGY, BOTANY.**

DOOLITTLE, Arthur K., 11 W. 8th Ave., So., Charleston, W. Va. **CHEMISTRY.**

DOOLITTLE, Jesse Seymour, Prof. of Mech. Engrng., N. C. State Coll., Raleigh, N. C. **HEAT—POWER PART OF MECHANICAL ENGINEERING.** b. Bethany, Conn., Sept. 20, 1903. s. Walter W. and Alice May (Russell) D. Edn.: B.S., Tufts Coll., 1925; M.S., Pa. State Coll., 1937. m. Grace M. Ballou, Sept. 7, 1927. Exp.: Student Engr., Gen. Elect. Co., Lynn, Mass., 1925-27; Instr., Mech. Engrng., Case Inst. of Tech., 1927-31; Instr., Asst. Prof., Assoc. Prof., Mech. Engrng., Pa. State Coll., 1931-47; Prof., Mech. Engrng., N. C. State Coll., 1947—. Mem.: Sigma Xi; Pi Tau Sigma; Tau Beta Pi; A.S.M.E.; A.S.E.E.; A.A.U.P.; Pi Kappa Phi. Author: Co-author, Engrng. Thermodynamics, 1948. Contrb. to: Transactions A.S.M.E.; Refrigerating Engrng. Listed in: A.M.S.; Who's Who in the South and Southwest; Who Knows—and What. Special Int.: Thermodynamics.

DOOLITTLE, Nettie-Alice, Asst. Prof. of Edn., Univ. of Mo., Columbia, Mo. **STATISTICS AND EDUCATIONAL MEASUREMENT.** b. Columbia, Mo. d. Almon and Mary E. (Lingafelter) D. Edn.: B.S., Univ. of Mo., 1924; A.M., *ibid.*, 1925; Ed.D., *ibid.*, 1942. Exp.: Dir., Rsch. in H. S., Kans. City, Kans., 1925-26; Asst. Prof. of Edn., Univ. of Mo.; Student Counselor, Schl. of Edn., 1926—. Mem.: Mo. S.T.A.; N.E.A.; Pi Lambda Theta; Delta Kappa Gamma. Rschs. of Gen. Int.: Study of Grad. of Schl. of Edn., Univ. of Mo., 1905-25; Bull., Schl. of Edn., 1925. Spec. Int.: Secondary Edn.; Measurement and Testing.

DOOLITTLE, Sears Polydore, Sr. Pathologist, Div. of Fruit and Vegetable Crops and Diseases, Bureau of Plant Indus., U. S. D. A., Beltsville, Md. **PLANT PATHOLOGY.**

DOPPELT, Jerome Edward, Asst. Dir., Test Div., The Psychol. Corp., 522 Fifth Ave., N. Y. 18, N. Y. **PSYCHOLOGY MEASUREMENT AND TEST CONSTRUCTION.** b. Aug. 12, 1917, N. Y. C. s. Usher and Sadie (Katz) D. Edn.: B.S., City Coll. of N. Y., 1936; M.S., *ibid.*, 1937; Ph.D., Columbia Univ., 1949. m. Ruth Cooper of N. Y. C., June 29, 1947. d. Mr. and Mrs. M. L. Cooper. c.: Arthur. Exp.: N. Y. State Employment Service, Interviewer, 1937-39; Grad. Record Office of Carnegie Foundation for Adv. of Tchng., Asst. Tech. Dir., 1939-44; U. S. Army, Los Alamos Sci. Lab., 1945-46; Psychol. Corp., Asst. Dir., Test Div., 1946—. Mem.: Phi Beta Kappa; Sigma Xi; Amer. Psychol. Assn.; Amer. Statistical Assn.; Psychometric Soc.; Eastern Psychol. Assn. Ph.D. Dissertation: The Organization of Mental Abilities in the Age Range 13-17. War Record: Spec. Engr., 1945-46, U. S. Army, Atomic Bomb Lab., Los Alamos, N. Mex. Listed in: A.M.S. Special Int.: Psychol. Test Construction; Statistics and Measurement in Psychology and Edn.; Machine Tabulation Techniques.

DORAN, William L., Rsch. Prof. of Botany, Univ. of Mass., Amherst, Mass. **BOTANY.**

DORE, Walter Harrington, Chemist in Exptl. Station and Lectr. in Plant Nutrition, Univ. of Calif., 2447 Russell St., Berkeley, Calif. **CARBOHYDRATE STRUCTURE.**

DORETY, Sister Helen Angela, Prof. Emer. and Hd., Dept. of Botany, Coll. of St. Elizabeth, Convent, N. J. **BOTANY.**

DORF, Erling, Prof. of Geol., Princeton Univ., Princeton, N. J. **PALEOBOTANY STRATIGRAPHY.**

DORFMAN, Ralph I., Rsch. Prof. Biochem., Boston Univ., Assoc. Dir., Worcester Foundation for Exptl. Biol., 195 Spring St., Shrewsbury, Mass. **BIOCHEMISTRY**. b. Chicago, Ill., June 30, 1911.



s. Aron and Anna (Schwartzman) D. Edn.: B.S., Univ. of Ill., 1932; Ph.D., Univ. of Chicago, 1934. m. Adeline, Sept. 5, 1933. c.: Gerald Allen; Ronald Arthur. Exp.: Rsch. Fellowship in Physiol. Chem., Univ. of Chicago, Chicago, Ill., 1932-33; Rsch. Asst. ibid., 1933-35; Instr. in Pharmacol., La. State Univ., Baton Rouge, La., 1935-36; Instr. in Physiol. Chem., Yale Univ., New Haven, Conn., 1936-39; Asst. Prof., ibid., 1939-41; Asst. Prof. of Biochem., Western Reserve Univ., Cleveland, Ohio, 1941-50; Assoc. Prof., ibid., 1950-51; Assoc. dir. of Labs., The Worcester Foundation for Exptl. Biol., 1951—; Rsch. Prof. of Biochem., Boston Univ., 1951—. Mem.: Fellow of N. Y. Acad. of Sci.; Fellow of Amer. Acad. of Arts and Sci.; Fellow, A.A.A.S.; Sigma Xi; Phi Lambda Epsilon; Amer. Chem. Soc.; Amer. Soc. for Cancer Rsch.; Amer. Soc. of Biol. Chemists; The Endocrine Soc.; Soc. for Exptl. Biol. and Med.; Amer. Statistical Soc. Author: Metabolism of Steroid Hormones, 1953. Contrb. to: Endocrinol.; Sci.; Jour. Biol. Chem.; Proc. Soc. Exptl. Biol. and Med.; Jour. Clin. Endocrinol. Special Int.: Metabolism of Steroid Hormones, Cancer Rsch., Nutrition and Hormone Action, Bioassay, Radioisotopes.

DORN, Harold F., Statistician, U. S. P. H. S., 15 Burning Tree Ct., Bethesda Branch, Washington, D. C. **VITAL STATISTICS**.

DORN, Herman William, Dir. of Rsch. Chem., 719 S. McClellan Ave., Decatur, Ill. **BIOCHEMISTRY; ORGANIC CHEMISTRY; FOODS AND DRUGS**. b. Sept. 14, 1911, N. Y. s. David and Frances (Schnapper) D. Edn.: Student, Worcester Poly. Inst., 1929-30; A.B. in Biol. and Chem., Clark Univ., 1935; M.A. in Biol. Chem., Clark Univ., 1936; Ph.D. in Organic Chem., Clark Univ., 1938; Post-Doctorate Fellow, State Univ. of Iowa, 1943. m. Mary Alice McDermott of Worcester, Mass., Apr. 2, 1934. d. Dr. Francis Edward and Frances Ethel (Prescott) McDermott. c.: Cynthia Gilbert; Prescott Mathew; Juliet Benson; Barrett Edward. Exp.: Instr., Pub. H. S., Worcester, Mass., 1933-39; Scientific Dir., Parker-Dorn, Inc., Worcester, Mass., 1937—; Supvr. of Chem. Production, Amino Products Co., Rossford, Ohio, 1938-42; Sr. Research Chemist, Internatl. Minerals and Chem. Corp., Rossford, Ohio, 1942-45; Lectr. in Chem. Engrng., Univ. of Toledo, 1945; Supvr. of Biochem., Owens-Ill. Glass Co., Toledo, Ohio, 1945-47; Dir. of Rsch., Irwin, Neisler & Co., Decatur, Ill., 1948-52; Food and Drug Rsch. Consultant, Dorn and Co., Decatur, Ill., 1952—; Director of Research, Frozen Food Institute and Pres., New York, New York, 1946—. Hon. Pos.: Chmn., Toledo Sect., Amer. Chem. Soc., 1945; Chmn., Toledo Amer. Soc. Hygiene Assn., 1946-47. Mem.: Amer. Chem. Soc.; Fellow, Amer. Inst. of Chem.; Fellow, N. Y. Acad. Sci.; Fellow, A.A.A.S.; Inst. Food Tech.; Assoc. Ed., "Food Technology"; Assoc., Vitamin Chemists; Trustee, Toledo Cancer Soc., Licensed Prof. Chem. in Engr., Ohio and Ill.; Soc. of Amer. Military Engrs.; Armed Forces Chem. Assn.; Assn. of Consulting Chemists and Chem. Engrs.; Sec., Toledo Bd. on Hazardous Materials and Processes; Chmn., Central Ill. Soc. of Professional Engrs., 1951. Contrb. to: Publications and Patents: Jour. Amer. Chem. Soc.; Sci.; Jour. Soc. Exptl. Biol. and Med., Chem. and Engr. News; Bull. Natl. Formulary Com. Ph.D. Dissertation: Derivatives of the Ethers of Hydroxy-hydroquinone. War Record: Commissioned in Chem. Warfare Serv., 1939-42; Maj., Chemical Corps, 1949—. Gen. Int.: Chem. Specialization in Digitalis Heart Principles, Cinchona Alkaloids, Proteins, Amino Acids, Vitamins, also Synthetic and Natural Vasopressors, Depressors, Ganglionic

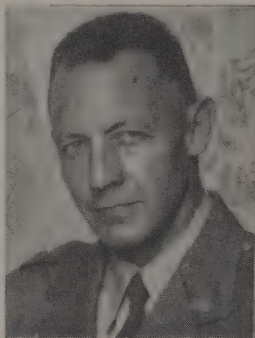
Blocking Agents, Analgesics, Quaternaries. Listed in: A.M.S.; Chem. Who's Who; Who Knows—and What? W.W.A. Special Int. Biological and Military Chem.—Foods and Drugs.

DOROUGH, Gus Downs, Jr., Asst. Prof. of Chem., Washington Univ., St. Louis, Mo. **ORGANIC CHEMISTRY**. b. Los Angeles, Calif., Mar. 5, 1922. s. Gus D. and Lois Jo (Downs) D. Edn.: B.S., Univ. of Calif., 1943; Ph.D., ibid., 1947. m. Maxine LeClere on Sept. 13, 1947. c.: Susan LeClere. Exp.: Rsch. Chemist, Manhattan Atomic Bomb Project, 1944-46; Pre-doctoral Fellow, Natl. Rsch. Council, 1946-47; Instr. in Chem., Washington Univ., St. Louis, Mo., 1947-49; Asst. Prof. of Chem., ibid., 1949—. Mem.: Sigma Xi; Phi Beta Kappa; Amer. Chem. Soc. Contrb. to: Jour. Amer. Chem. Soc. Special Int.: Fundamental Properties of Porphyrin Ring Compounds; Theoretical Organic Chem.

DORR, John Van Nostrand, II, Geologist, U. S. Geol. Survey, Washington, D. C. **ECONOMICS, GEOLOGY**.

DORSEY, Henry, Prof. and Hd., Agron. Dept., Univ. of Conn., Storrs, Conn. **AGRONOMY**.

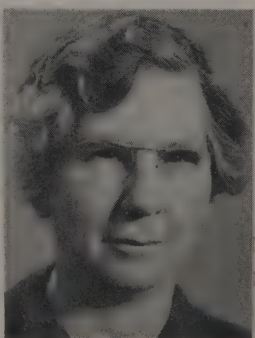
DORSEY, Herbert Grove, Jr., Major, U.S.A.F., 3708 33rd Pl., N. W., Washington 8, D. C. **ARCTIC**



METEOROLOGY AND LONG RANGE FORECASTING. b. East Orange, N. J., Sept. 15, 1912. s. Herbert Grove and Virginia (Rowlett) D. Edn.: S.B., Harvard 1938; M.S., M. I. T., 1949. m. Elizabeth Balandine, Oct., 1939. c.: Herbert G. Dorsey, III; William B.; Diana. Exp.: Meteorologist, Amer. Export Airline, N. Y., 1939; Meteorologist, East Base, U. S. Antarctic Expedition, 1939-41; Meteorologist, Extended Forecast Section, U. S. Weather Bureau, Washington, D. C., 1941-43;

Advanced Weather Officer, Weather Staff Officer, Rsch. and Development Officer, U.S.A.F., 1943—; Hon. Pos.: Chmn., Anchorage, Alaska, Section, Amer. Meteorological Soc., 1950-51. Mem.: Amer. Geographical Soc.; Amer. Meteorological Soc.; Amer. Geophys. Union; A.A.A.S.; Arctic Inst. of N. Amer.; British Glaciological Soc.; Sigma Xi. Author: Arctic Meteorology, 1951. Contrb. to: Jour. of Meteorology; The Geographical Rev.; Proc. Amer. Philos. Soc.; Amer. Jour. of Sci.; Bull. Amer. Meteorological Soc.; Bull. Natl. Rsch. Council; Bull. Geological Soc. of Amer. War Record: U.S.A.F., 1943—; Achievements of Gen. Int.: Sr. Champion Model Airrafter of D. C. and U.S.A., 1929; Devised Tide Gauge and obtained first continuous recordings for Antarctica, 1940-41; Discovered and pioneered route to highest elevation found on Greenland Ice Cap, 1944. Special Int.: Polar Geography and Glaciology; Extended and Long Range Forecasting; Arctic Meteorology.

DOSDALL, Louise T., Asst. Prof. of Plant Pathol., Univ. of Minn., St. Paul Campus, St. Paul 1, Minn.



MYCOLOGY—DISEASES OF ORNAMENTAL PLANTS. b. Waco, Tex., Dec. 11, 1893. d. Gottlieb and Elisa (Heins) D. Edn.: B.A., Univ. of Minn., 1916; M.A., ibid., 1917; Ph.D., ibid., 1922. Exp.: Tchng. Fellow, Macalester Coll., St. Paul, Minn., 1916-17; Asst. in Plant Pathol., Minn. Agril. Exp. Station, 1917-20; Instr. in Plant Pathol., Univ. of Minn., Madison, 1920-39; Asst. Prof. in Plant Pathol., ibid., 1939—. Mem.: Amer. Phytopathological Soc.; Mycological Soc. of

Amer.; Amer. Bot. Soc. of Amer.; Minn. Acad. of Sci.; Minn. Hist. Soc.; A.A.U.P.; Sigma Xi; Gamma Sigma Delta; Iota Sigma Pi; Sigma Delta Epsilon. Contrb. to: Phytopath.; Minn. Horticulturist; Bul. Amer. Iris Soc.; etc. Special Int.: Diseases of Ornamental Plants; Mycology.

DORSEY, Maxwell Jay, Prof. and Hd., Dept. of Pomology, Horticulture Field Lab. Bldg., Univ. of Ill., Urbana, Ill. **HORTICULTURE**.

DORSEY, Noah Ernest, Retired, 1628 Riggs Pl., N. W., Washington, D. C. **PHYSICS**.

DOSTAL, Bernard Francis, Prof. of Math., Univ. of Fla., Gainesville, Fla. **MATHEMATICS**.

DOTEN, Samuel Bradford, Retired, 129 Elm St., Reno, Nev. **ENTOMOLOGY**.

DOTTI, Louis, St. Luke's Hosp., New York, N. Y. **CLINICAL CHEMISTRY**.

DOTY, James Mahlon, Dir., Doty Technical Labs., 8 W. 9th St., P. O. Box 2689, Kansas City 13, Mo. **CEREAL CHEMISTRY**. b. Shenandoah, Iowa, Apr. 9, 1904. s. William Martine and Minnie (McCormick) D. Edn.: B.S., Univ. of Omaha, 1926. m. Florence Jensen, Oct. 29, 1928. c.: Petrea Lea; James William. Exp.: Omaha Flour Mills, Omaha, Nebr., 1926-27; Omaha Grain Exchange, Omaha, Nebr., 1927-40; Merck and Co., Inc., Rahway, N. J., 1940-44; Dir., Doty Technical Lab., Kansas City, Mo., 1944—Hon. Pos.: Nebr. Section, Amer. Chem. Soc., 1935-40; Secy., A.A.C.C., 1937-41; Vice Pres., ibid., 1941-42; Pres., 1942-43. Mem.: A.A.C.C.; Amer. Chem. Soc.; S.B.E.; A.A.A.S.; O.C.S.; A.O.A.C.; Optimist Internatl.; C. of C. Contrb. to: Cereal Chem. Gen. Int.: Pioneered in Early Vitamin Analytical Procedures. Special Int.: Cereal Chem. and Biochem.

DOTY, Hiram Smoots, Prof. and Hd., Depts. of Biol. and Geol., Simpson Coll., Indianola, Iowa. **ECOLOGY**.

DOTY, Paul, Dept. of Chem., Harvard Univ., Cambridge, Mass. **CHEMISTRY**.

DOUCETTE, Charles Felix, Entomologist, U. S. Entomol. Lab., Box 458, Sumner, Wash. **ENTOMOLOGY**.

DOUDOROFF, P., Environmental Health Center, 1014 Broadway, Cincinnati 2, Ohio, **AQUATIC BIOLOGY**.

DOUGHERTY, Joseph Mary, Dean, Schl. of Sci., Villanova Coll., Villanova, Pa. **BACTERIOLOGY**.

DOUGHERTY, W. E., 1625 Barr Ave., Pittsburgh 5, Pa. **CERAMICS**.

DOUGHT, Howard Waters, Prof. Emer. of Chem., Amherst Coll., 280 Amity St., Amherst, Mass. **ORGANIC CHEMISTRY**.

DOUGHTIE, Venton Levy, Prof. of Mech. Engrng., Univ. of Tex., Austin 12, Tex. **MECHANICAL ENGINEERING**. b. Apr. 22, 1897, Montgomery Co., Tex. s. Sim Taylor and Cora (Leslie) D. Edn.: B.S. in M.E., Univ. of Tex., 1920; M.S. in M.E., ibid., 1940 m. Norma Polliard of Swarthmore, Pa., June 6, 1922. d. Ross and Minerva Polliard. c.: Darlyne Raynel, Venton Levy, Jr. Exp.: Student Asst., Univ. of Tex., 1919-20; Tchr. Apprentice, Westinghouse Electric & Mfg. Co., S. Phila., Pa., 1920-21; Instr., Mech. Engrng., Johns Hopkins Univ., 1921-25; Personal Work, 1925-29; Adjunct Prof., Mech. Engrng., Univ. of Tex., 1929-30; Asst. Prof., Mech. Engrng., Tex. Tech. Coll., 1930-33; Assoc. Prof., ibid., 1933-35; Prof., ibid., 1935-38; Assoc. Prof., 1938-39; Prof. Mech. Engrng., Univ. of Tex., 1939—. Fellow, Amer. Soc. Mech. Engrs. Mem.: Amer. Soc. for Engrng. Edn.: A.A.A.S.; Tex. Acad. of Sci.; Registered Prof. Engr.; Chi Phi; Sigma Xi; Tau Beta Pi; Pi Tau Sigma; Knight Templar. Author: Fundamentals of Engrng. Probs., 1938; Design of Machine Members, 1943; Rev., 1951; Elements of Mechanism, 1947; Mechanism, Mechanics and Machine Members Section of Kent's Mechanical Engrs. Handbook, 1950. Contrb. to: Jour. of Engrng.

Edn.; The Petroleum Engrng.; Jour. of Drawing; Machine Design; Univ. of Tex. Bulletins. War Record: U. S. Navy, World War I. Hobbies: Fishing; Hunting; Gardening. Listed in: Who's Who in Engrng.; A.M.S.; Who's Who in Amer.; Who's Who in the S. and S. W. Special Int.: Machine Design.

DOUGLAS, Andrew E., Dir., Lab. Tree-ring Rsch., Univ. of Ariz., Tucson, Ariz.

DOUGLAS, Bodie Eugene, Asst. Prof. of Chem., Univ. of Pittsburgh, Pittsburgh 13, Pa. **INORGANIC CHEMISTRY**. b. New Orleans, La., Dec. 31, 1924. s. Harvey Bodie and Lennie Mae (Cochran) D. Edn.: B.S., Tulane Univ., 1944; M.S., ibid., 1947; Ph.D., Univ. of Ill., 1949. m. Gladys Eleanor Backstrom, Nov. 1, 1945. c.: Judy Ann; Stephen Bruce; Sharon Lynn; Janice Lee. Exp.: Grad. Asst., Tulane Univ., 1946-47; Instr., ibid., summer 1947; Rsch. Fellow, Univ. of Ill., 1947-49; Rsch. Assoc., Pa. State Coll., 1949-50; Asst. Prof. of Chem., ibid., 1950-52; Asst. Prof. of Chem., Univ. of Pittsburgh, Pittsburgh, Pa., 1952—. Mem.: Amer. Chem. Soc.; Sigma Xi; Phi Lambda Upsilon; Alpha Chi Sigma. Contrb. to: Jour. Amer. Chem. Soc. War Record: U. S. Navy, 1943-46. Special Int.: Coordination Compounds.

DOUGLAS, Frederic Huntington, Asst. Prof. of Anthropol., Univ. of Denver, 1300 Logan St., Denver, Colo. **ANTHROPOLOGY**.

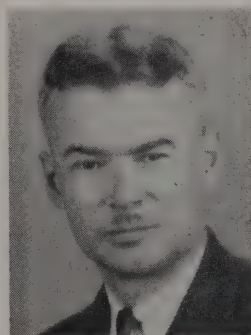
DOUGLAS, George Mellis, Consulting Engr., Box 521, Lakefield, Ont., Can. **MINERAL EXPLORATION**.

DOUGLAS, Gertrude Elizabeth, Asst. Prof. of Biol., N. Y. State Coll. for Tchrs., Albany, N. Y. **BOTANY**.

DOUGLAS, Gilbert. **STERILITY**.

DOUGLAS, Jesse, 2610 Glenwood Rd., Brooklyn 10, N. Y.

DOUGLAS, Thomas Basil, Gen. Physical Scientist, Natl. Bur. of Standards. 3031 Sedgwick St., N. W., Wash. 8, D. C. **CHEMICAL THERMODYNAMICS**. b. Elkins, W. Va., May 15, 1909. s. Henry T. and Cora (Skidmore) D. Edn.: S.B., Univ. of N. C., 1931; M.S., ibid., 1932; Ph.D., Ohio State Univ., 1938. m. Susan H. Pettengill of South Bend, Ind., Nov. 28, 1949. d. Samuel B. Pettengill. Exp.: Fellow and Asst., Univ. of N. C., 1931-33; Asst. in Chem., Ohio State Univ., 1933-36; DuPont Fellow in Chem., ibid., 1936-37; Comly Fellow in Surg. Rsch., ibid., 1939;



Instr. in Chem., Mont. State Coll., 1939-42; Asst. Prof. of Chem., ibid., 1942-46; Rsch. Assoc., Manhattan Proj. (Ohio State Univ.) 1943; Asst. Prof. of Chem., Western Reserve Univ., 1946-47; Gen. Physical Scientist (mem. Ednl. Staff, 1948-49); Natl. Bur. of Standards, 1947—. Mem.: Amer. Chem. Soc.; Sigma Xi Soc.; Phi Beta Kappa; Alpha Chi Sigma. Contrb. to: Jour. of the Amer. Chem. Soc.; Natl. Bur. of Standards Jour. of Rsch., etc. Ph.D. Dissertation: The Excitation and Deexcitation of Oxygen Gas by Hydrogen and Deuterium Oxides, as Investigated by the Velocity of Sound Method. Hobbies: Music; Outdoor Life. Listed in: Amer. Men of Sci.

DOUGLAS, Raymond Donald, Prof. of Mathematics, 18 Oak Avenue, Belmont, Mass. **MATHEMATICS**. b. Gorham, Maine, December 29, 1894. s. Edward and Josephine (Chick) D. Edn.: A.B., Univ. of Maine, 1915; M.A., ibid., 1916; Ph.D., Mass. Institute of Technology, 1931. Hon. Degree: Sc.D., Univ. of Me., 1943. m. Ollave Norton of Standish, Me., Feb. 2, 1918. d. Edgar and Elizabeth Norton. c.: Charlotte; Eleanor; Marjorie. Exp.: Prin. high

Schl., Mass., 1916-17; Submaster H. S., N. H., 1917-18; Instr., Asst. Prof., Assoc. Prof., Prof. Math., Mass. Inst. of Tech. since 1919. Hon. Pos.: Dir. Boston Center for Adult Edn., Adult Edn. Coun. of Greater Boston, Chmn. Bd. of Examiners in Math. Coll. Exam. Bd. Mem.: Amer. Math. Assn.; Amer. Math. Soc.; Amer. Engrng. Edn.; Phi Beta Kappa; Sigma Xi; Delta Tau Delta; Masons; Gridiron Club of Greater Boston. Author: Calculus and its applications, 1947; Elements of Nomography, 1947. Contrb. to: Amer. Math. Soc.; Mech. Engrng. Jour. Ph.D. Dissertation: Stirling Series Derived by Means of de la Valle Poussin Summation. War Record: U. S. Navy, World War I, World War II, Consultant, Chem. Warfare Service, State Coordinator, (Mass.), War Manpower Bd., (Mass.), Consultant Camouflage Sec., N.D.R.C., Citation Army Signal Corps. Commendation, N.D.R.C. Hobbies: Collection of calculating devices; sports. Listed in: Who's Who in Amer.; Who's Who in New England; Who's Who in Amer. Edn.; Amer. Young Men; Amer. Men of Sci. Special Int.: Nomographic Charts.

DOUGLASS, Andrew Elliott, Dir., Lab. Tree-Ring Rsch. and Prof. of Astron. and Dendrochronology, Univ. of Ariz., Tucson, Ariz. **DENDROCHRONOLOGY**.

DOUGLASS, James Robert, Entomologist in Chg. Twin Falls, Idaho Lab., U. S. Bureau of Entomol. and Plant Quarantine, Twin Falls, Idaho. **ENTOMOLOGY**.

DOULL, James Angus, Med. Dir. and Chf., Office Internatl. Health Relations, U. S. P. H. S., Washington, D. C. **EPIDEMIOLOGY**.

DOULL, John, Toxicity Lab., Univ. of Chicago, 930 E. 58th St., Chicago, Ill. **PHARMACOLOGY**.

DOVE, Frank James, Hd., Dept. of Engrng. and Dean of Men, Jackson Jr. Coll., 208 N. Wisner St., Jackson, Mich. **PHYSICS**.

DOVE, William Franklin, Chf., Food Acceptance Rsch., Qm. Food and Container Inst. for Armed Forces, 1849 W. Pershing Rd., Chicago, Ill. **BIOL-OGY, FOOD NUTRITION**.

DOW, Allan Wade, Pres., A. W. Dow, Inc., 801 Second Ave., N. Y., N. Y. **ASPHALT PAVING, CHEMISTRY**.

DOW, Peter S., Prof. and Chmn., Graphics and Engrng. Dept., Dartmouth Coll., Box 83, Hanover, N. H. **ENGINEERING**.

DOW, Richard Burt, Chief Scientist Guided Missiles, Bur. of Ordnance, Navy Dept., 4851 Arlington Boulevard, Arlington 3, Va. **GUIDED MISSILES RESEARCH, AND PHYSICS OF HIGH PRESSURE**. b. Willimantic, Conn., Sept. 3, 1904. s. Burt K. and Bessie L. (Wells) D. Edn.: A.B., Clark Univ., 1927; A.M., ibid., 1928; Ph.D., Harvard Univ., 1933. m. Evelyn T., June 1, 1944. Exp.: Instr., Worcester Polytechnic Inst., Worcester, Mass., 1928-32; Rsch. Assoc. in Geophysics, Harvard Univ., Cambridge, Mass., 1934-35; Asst. and Assoc. Prof., Pa. State Coll., St. Coll., Pa., 1935-41; Ballistician Aberdeen Proving Ground Md., 1941-46; Rsch. Physicist, Hd. Engr., Bur. Ordnance, Navy Dept., Washington, D. C., 1946—. Mem.: Sigma Xi; Alpha Epsilon; Upsilon; Sigma Pi Sigma; Amer. Fellow Phys. Soc.; Fellow, A.A.A.S.; Amer. Chem. Soc.; Philos. Soc.; Inst. Physics. Contrb. to: Jour. Bull. App. Phys.; Phil Mag.; Jour. Chem. Phys., Etc. Special Int.: Physical Properties of Matter at High Pressures, Viscosity and Lubrication, Internal Combustion, Interior Ballistics, Rockets and Guided Missiles.

DOWDY, Andrew H., 1325 Warnall Ave., Los Angeles, Calif. **RADIOLOGY**.

DOWDY, William Wallace, Prof. of Biol., Lincoln Univ., Jefferson City, Mo. **ECOLOGY**.

DOWELL, Spright, Pres., Mercer Univ., Macon, Ga.

DOWNES, Helen Rupert, Assoc. Prof. of Chem., Barnard Coll., Broadway and 119th St., N. Y., N. Y. **BIOCHEMISTRY**.

DOWNING, Harold Hardesty, Prof. of Math. and Astron., Univ. of Ky., Lexington, Ky. **ANALYTICAL MATHEMATICS**.

DOWNES, Ardrey Whidden, Hd. and Prof. Dept. of Physiol. and Pharmacol., Univ. of Alberta, Edmonton, Alta., Can. **PHYSIOLOGY**.

DOWNES, Charles Raymond, Consulting Chemical Engr., Chemists' Bldg., 50 E. 41st St., N. Y., N. Y. **CHEMICAL ENGINEERING**.

DOWNES, Cora Mitchell, Prof. of Bacteriol., Univ. of Kans., Lawrence, Kans. **BACTERIOLOGY**.

DOYLE, Thomas Carlson, Mathematician, Naval Rsch. Lab., Wash. 25, D. C. **MATHEMATICS**. b. Seattle, Wash., Oct. 1, 1908. s. Thomas A. and Emily (Ulrich) D. Edn.: B.S., Univ. of Wash., 1931; Ph.D., Princeton Univ., 1939. Exp.: Part-time Instr. of Math., Princeton Univ., 1935-39; Instr. of Math., Univ. of Wyo., 1939-40; Inst., Stanford Univ., 1940-45; Asst. Prof. of Math., Dartmouth Coll., 1945-51; Mathematician, Naval Rsch. Lab., Wash. D. C., 1951—. Mem.: Math. Assn. of Amer.; Amer. Math. Soc.; Sigma Xi. Contrb. to: Annals of Math.; Trans. of Amer. Math. Soc.; Amer. Math. Monthly; Duke Math. Jour. Ph.D. Dissertation: Tensor Decomposition with Applications to the Contact and Complex Groups. Travel: Japan; China; Philippines; Hawaii; Panama; Alaska. Hobbies: Sailing, Mountain Climbing. Listed in: A.M.S.

DOYLE, William Lawler, Rsch. Scientist, Rsch. Inst. of Temple Univ., 319 Overhill Rd., Wayne, Pa. **TORCH DEVELOPMENT, HIGH TEMPERATURE; EXPLOSIVES; PHOTOGRAPHY**. b. November 21, 1906, San Jose, Calif. s. Wm. Patrick and Mary Adelaide (Lawler) D. Edn.: B.S., Chem., Univ. of Calif., 1941; Phys. Chem., So. Calif., 1945-47. Exp.: Res. Chem., Engr., Amer. Potash and Chem. Corp., 1941-45; Res. Staff Mem., Calif. Inst. of Tech., Rocket High Explosives, 1945; Chem. Engr., Inyokern Naval Ord. Test Sta., 1946; Project Engr., Aerophys. Lab., N. Amer. Aviation, Inc., Rocket Res., 1946-49; Chief Engr., Rocket Test Lab., Ohio State Univ., 1949-51; Construction and Maintenance Engineer, Herrick L. Johnston (A.E.C. Subcontractor), 1951-52; Rsch. Scientist and Consultant, Rsch. Inst. of Temple Univ., 1952—. Dir., Casualty Relief Serv., Searles Valley Defense Council, 1943-45; A.A.A.S.; A.C.S. Author: Sci. Publications. Travel: U. S. Hobbies: Photography; Racing Engine and Sports. Listed in: Amer. Men of Sci. Special Int.: Rocket power plant rsch.; low and high temperature work; handling and rsch. problems associated with liquid hydrogen and other condensed gases at high line pressures.

DRAFFIN, Jasper Owen, Prof. of Theor. and App. Mech., 218 Talbot Lab., Univ. of Ill., Urbana, Ill. **MECHANICS AND STRENGTH OF MATERIALS**. b. Sept. 24, 1884, St. Thomas, Quebec, Canada. s. William Draffin and Margaret (Murphy). Ancestry: Scotch-Irish and Irish. Edn.: B.S., Univ. of Vt., 1913; M.S., Univ. of Ill., 1916. m. Florence Laura Sherburne, Montpelier, Vt., 1920. d. L. Olin and Clara Sherburne. Exp.: McIntosh & Crandall, Burlington, Vt., 1913-14; Rsch. Fellow, Engr. Exp. Sta., Univ. of Ill., 1914-16; Instr., Mech., Ohio State Univ., 1916-19; Instr., Theo. and App. Mech., Univ. of Ill., 1919-21; Assoc., ibid., 1921-23; Asst. Prof., ibid., 1923-31; Assoc. Prof., ibid., 1931-35; Prof., 1935—. Vt. Hwy. Dept., Bridge Design and Insp., summers, 1916-17, 1919-25; Concrete Ship Invest., U. S. Shipping Bd., summer, 1918. Mem.: Amer. Soc. of C. E.; Amer. Soc. for Testing Materials; West. Soc. of Engrs.; Amer. Soc. for Engr. Edn.; Hist. of Sci. Soc.; Phi Beta Kappa; Sigma Xi. Author: Strength of Materials, 1928; Sect. on Crystalline Structure of Metals in Moore's Materials of Engineering, 1930, 1947; Section on Mechanics of Materials and Testing Materials in Eshbach's Handbook of Engineering Fundamentals, 1936, and in Kent's Mech. Engineers Handbook, 1938; The Story of Man's Quest for Water, 1939; Statics and Strength of Materials (with W. L. Collins), 1950. Contrb. to: Tech. and Professional Publications on Engrng. Edn., Hist. of Engrng., Testing Materials. Special Int.: Testing Materials; Hist. of Engrng.

DRAGSTEDT, Carl A., Northwestern Univ., Chicago, Ill. **PHARMACOLOGY**.

DRAGSTEDT, Lester Reynold, Prof. of Surgery and Chairman of the Dept. of Surgery, Univ. of Chicago, Dept. of Surgery, Univ. of Chicago, 950 East 59th Street, Chicago 37, Ill. **SURGERY**. b. Anaconda, Mont., October 3, 1893. s. John A. and Caroline (Selene) D. Edn.: B.S., Univ. of Chicago, 1915; M.S., *ibid.*, 1916; Ph.D., *ibid.*, 1920. m. Gladys Shoosmith of Guthrie Center, Ia., 1922. d. Borden Shoosmith. c.: Mrs. Charlotte Jeffrey; Carol Stauffer; Lester, and John Albert. Exp.: Asst. in the Dept. of Physiol. at the Univ. of Chicago in 1916; Instr. in Pharm. at the State Univ. of Ia., 1916-17; and Asst. Prof. of Physiol. in the same Inst., 1917-19; Asst. Prof. of Physiol. at the Univ. of Chicago, 1920-23; Prof. of Physiol. and Pharm. and Hd. of the Dept. of Physiol. and Pharm. at Northwestern Univ. Med. Schl., 1923-25; Assoc. Prof. of Surgery at the Univ. of Chicago, 1925; Prof., 1930; Chmn. Dept. of Surgery, 1948; Attending Surgeon at the Albert Merritt Billings Hosp. in Chicago since 1927. Mem.: Phi Beta Kappa; Sigma Xi; Alpha Omega Alpha, etc. Author: Several Books and Some 165 papers in various Med. and Surg. Jours. Ph.D. Dissertation: The Pathogenesis of Acute Intestinal Obstruction. War Record: Pvt. and 2nd Lt., U.S.A., World War I. Listed in: Who's Who in Amer.; A.M.S. Special Int.: Gen. Surgery Physiol. The Physiol. of the G. I. Tract with Special Int. in the Problems of Surgical Treatment of the Diseases of These Organs.

DRAKE, Bryant Stillman, Retired, 233 Molino Ave., Mill Valley, Calif. **CHEMICAL ENGINEERING**.

DRAKE, Carl John, Prof. and Hd., Dept. of Zool. and Entomol., Iowa State Coll., Ames, Iowa. **ENTOMOLOGY**.

DRAKE, Charles Ralph, Internist, Radiologist, Pathologist, 600 Physicians and Surgeons Bldg., Minneapolis, Minn. **INTERNAL MEDICINE, RADIUM THERAPY, PATHOLOGY**. b. Rushford, Minn., Mar. 3, 1881. s. Charles and Jane Drake. Edn.: M.D., Univ. of Minn., 1909. Hon. Deg.: F.A.C.P.; C.A.P. m. Ruth C., 1913. c.: Jane; Robert Theodore; Marilyn. Exp.: Interne, City and County Hosp., St. Paul, Minn., 1910; Instr., Pathol. and Bacteriol., Univ. of Minn., Minneapolis, Minn., 1910-12; Instr., Med., *ibid.*, 1913-49; Pathologist, Swedish Hosp., Minneapolis, Minn., 1913-44; Consulting Pathologist, Deaconess Hosp., Minneapolis, Minn., 1915-44; Internist, Radiologist, Pathologist, Minneapolis, Minn. Hon. Pos.: Bd. of Edn., Minneapolis, Minn., 1933-45; Pres., Minn. Schl. Bd. Assn. Mem.: A.M.A.; Minn. S.M.S.; Amer. Coll. Physicians; Coll. of Amer. Pathol.; A.O.A.; Sigmaz Xi; Commonwealth; Acacia. Gen. Int.: Mem., Minneapolis Lib. Bd.; Mem. Minneapolis Bd. of Estimate; Mem., Bd. Trustees, Art Inst. Special Int.: Cancer and Cancer Therapy.

DRAKE, Quaesita Cromwell, Prof. of Chem., Univ. of Del., Newark, Del. **CHEMISTRY**.

DRAKE, William E., Prof. of Edn., 312 Jesse Hall, Univ. of Mo., Columbia, Mo. **HISTORY AND PHILOSOPHY OF EDUCATION, COMPARATIVE EDUCATION**. b. Sept. 25, 1903, Asheville, N. C. s. John Robert and Arlene T. (Ingle) D. Edn.: A.B., Univ. of N. C., 1924; M.A., *ibid.*, 1928; Ph.D., *ibid.*, 1930. m. Zelma Mae Paxton, of Charlotte, N. C., 1926. d. Mr. and Mrs. C. F. Paxton. c.: William E., Jr.; Dennis C.; Carole Gene. Exp.: Prin., Murphy Schl., Univ. of N. C., 1924-26; Supt., Columbia Schl., Columbia, N. C., 1926-28; Tchng. Fellow, Univ. of N. C., 1928-30; Asst.



Prof., Pa. State Coll., 1930-39; Assoc. Prof., Univ. of Mo., 1939-44; Prof. of Edn., 1944-45; Prof., Shrivensham, Amer. Univ., Eng., on leave to U. S. Army for European Theater of Operations, 1945-46; Prof. and Hd., Dept. of Hist. and Philos. of

Edn., Univ. of Mo., 1944—. Hon. Pos.: Pres., Pa. Fed. of Tchrs., 1936-39; Natl. Sec.-Treas., Philos. of Edn. Soc., 1949—. Pres. Kiwanis Club, 1952. Mem.: Soc. for Adv. of Edn.; Amer. Assn. of Univ. Profs.; Natl. Soc. Coll. Tchrs. of Edn.; Amer. Assn. for the Adv. of Sci.; Phi Delta Kappa; Alpha Pi Zeta; Kiwanis; Amer. Bd. of Arbitration. Ph.D. Dissertation: Higher Edn. in N. C. before 1860. Achievements: Winner Alphonso Smith Rsch. Prize, Univ. of N. C., 1930. Co-author: Sociol. Foundations of Edn., 1942; Significant Aspects of Amer. Life and Postwar Edn., 1944. Recreations and Hobbies: Hunting; Fishing; Tennis; Gardening; Hiking.

DRANT, Patricia, 813 Med. Arts Bldg., Philadelphia, Pa. **DERMATOLOGY**.

DRAPER, Hal D(aniel), Sr., Prof. of Chemistry and Chmn. Division, Sci. and Math., Sacramento State Coll., Sacramento 18, Calif. **PHYSICAL CHEMISTRY**. b. Aug. 17, 1893, Eddy, N. Mex. s. Edwin Fentom and Harriet Elizabeth (Shields) D. Edn.: A.B., Univ. of Calif., Berkeley (highest honors in Chem.), 1917; Ph.D., *ibid.*, 1922. m. Madeline Waite Shaw of Berkeley, Calif., Feb. 6, 1918. d. Geo. C. and Jessie B. Shaw. c.: Mary Lou (Draper) Axtell; Hal D., Jr.; Roy Douglas. Exp.: Jr. Chem., Bur. of Mines, War Gas Investigations, Wash., D. C., 1918; Instr. in Chem., Rice Inst., Houston, Tex., 1918-20; Tchng. Fellow in Chem., Univ. of Calif., 1920-22; Instr. to Assoc. Prof. of Chem., Fresno State Coll., Fresno, Calif., 1922-35; Proprietor, Custom Assay Office and Chem. Lab., Nevada City, Calif., 1935-42; Assoc. Prof. of Chem., Chico State Coll., Chico, Calif., 1942-45; Instr. of Chem., Sacramento Jr. Coll., Sacramento, Calif., 1946-47; Prof. of Chem., Div. Sci. and Math., Sacramento State Coll., 1948—. Mem.: Phi Beta Kappa; Sigma Xi; Phi Lambda Upsilon; Phi Delta Kappa; Calif. Acad. of Sci. Author: A Scheme of Analysis for the Common Cation Constituents, 1931; 2nd. Ed., 1933. Contrb. to: Sci. Jours. Ph.D. Dissertation: The Catalytic Oxidation of Carbon Monoxide IV; The Pore Volume of the Catalysts Manganese Dioxide, Copper Oxide and Mixtures of These Oxides. Hobbies: Math.; Philos.; Semantics. Listed in: Who's Who in Chem.; A.M.S. Special Int.: Philosophy of Sci.

DRAPER, Olive May, Prof. of Math., Taylor Univ., Upland, Ind. b. Aug., 1887, O'Brien County, Ia. d. Merrit Simon and Rosa Belle (Wight) D. Edn.: A.B., Taylor Univ., 1913; A.M., Univ. of Mich., 1924; Univ. of Wis., Summer, 1926; Columbia Univ., Summer, 1927; Univ. of Ia., Summers, 1928-31; Ind. Univ., Summers, 1935, 1937. Exp.: Prof. of Chem., Taylor Univ., 1914-25; Prof. of Math., 1925—; Acting Dean, 1943-44. Mem.: Ind. Acad. of Sci.; A.A.A.S.; A.A.U.P.; M.A.A.; Central Assn. of Sci. and Math. Tchrs. Travel: N. Amer.; Canada. Listed in: A.M.S.; Who Knows—and What.

DRECHSEL, Erhart Karl, Rsch. Chem., Amer. Cyanamid Co., Stamford, Conn. **ORGANIC CHEMISTRY**. b. Thalheim, Saxony, Germany, Nov. 15, 1919. s. Karl and Frieda E. (Scherzer) D. Edn.: A.B., Drew Univ., 1941; M.S., Syracuse Univ., 1945. m. Harriet King of Willimantic, Conn., Dec. 22, 1943. d. Walter R. King. c.: Carl Lowell. Exp.: Analytical Chem., E. F. Drew Co., Boonton, N. J., 1941-42; Development Chem., Insulation Prod. Co., Willimantic, Conn., 1942-43; Tchng. Fellow, Syracuse Univ., Syracuse, N. Y., 1943-45; Sci. Tch., Adult Edn., Stamford, Conn., 1948-51; Rsch. Chem., Amer. Cyanamid Co., Stamford, Conn., 1951—. Mem.: Amer. Chem. Soc.; Amer. Assn. for the Adv. of Sci.; Sigma Xi. Contrb. to: U. S. Pat. 2,516,836; 2,550,652; 2,580,468. Travel: Germany. Gen. Int.: Became U. S. Citizen Feb. 8, 1945. Hobbies: Golf; Boating; Bridge. Listed in: A.M.S. Special Int.: Polymers and Resins.

DRECHSLER, Charles, Div. of Fruit and Vegetable Crops and Diseases, Plant Indus. Station, Beltsville, Md. **MYCOLOGY, PATHOLOGY**.

DREIER, Theodore, Assoc. Prof. of Physics and Math., Black Mountain Coll., Black Mountain, N. C. **MATHEMATICS**.

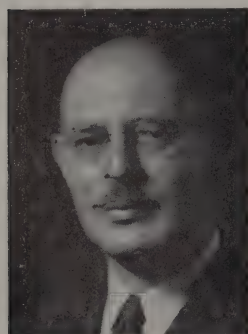
DREESE, Mitchell, Dean of the Coll. of Gen. Studies, George Washington Univ., Washington, D. C.



PSYCHOLOGY, COUNSELING AND GUIDANCE. b. Harrisburg, Pa., Jan. 28, 1901. s. Ira and Katherine M. m. Dorothy Coble of Mercersburg, Pa., June 12, 1925. c.: Mitchell Joe. Edn.: A.B., 1926; M.A., 1927; Ph.D., 1929; Tehrs. Coll., Columbia, Univ. Exp.: Tehr., Elem. Schl., Cambria County, Pa., 1919-22; Dir. of Boys Work, Hudson Guild, 1923-26; Tehr., Hist., Lyndhurst H. S., 1926-28; Dir. Personnel, Grinnell, 1929-31; Asst. Prof., Ednl. Psychol., Geo.

Wash. Univ., 1931-33, Assoc. Prof., 1933-38, Prof., 1938—; Exec. Officer, Dept. of Psychol., 1934-39; Dean of Summer Sessions, 1939-51; Dir. of Vets. Edn., 1945-49. Mem.: Fellow, Amer. Psychol. Assn.; Sec., Div. of Counseling, 1948—; Diplomat in Counseling and Guid. of the Amer. Bd. of Examiners in Professional Psychol.; Sou. Soc. for Philos. and Psychol.; Phi Delta Kappa; Amer. Assn. Univ. Prof.; Natl. Edn. Assn.; A.E.R.A.; Voc. Guid. Assn.; A.C.P.A. Ph.D. Dissertation: A Personnel Study of Messengers of the Western Union Telegraph Co. Special Int.: Personnel, Military, Counseling and Guidance Psychol. War Record: Maj., A. C., AUS.

DREIKURS, Rudolf, M.D., Prof. of Psychiatry, Chicago Med. Schl., Lectr. Edn., Northwest Univ., Schl. of Edn., 25 E. Wash. St., Chicago 2, Ill. **PSYCHIATRY; EDUCATION; GROUP DYNAMICS.**



b. Vienna, Austria, Feb. 8, 1897. s. Sigmund and Fanny (Cohn) D. Edn.: M.D., Univ. of Vienna, 1923. m. Sadie Ellis of Chicago, June 25, 1943. d. Jacob and Lena Ellis. c.: Eric; Eva. Exp.: Prof. of Psychiatry, Chicago Med. Schl., 1942; Dir., Child Guid., Abraham Lincoln Centre, 1938—; Consultant Psychiatrist, Hull House, 1940-43; Med. Dir., Community Child Guid. Centers of Chicago, 1948

—; Visiting Prof., Univ. of Rio de Janeiro, 1946; Northwestern Univ. Schl. of Edn., 1947-48. Hon. Pos.: Hon. Pres., Sociedade de Psicologia Individual, Rio de Janeiro; Correspondent Mem. Verein für Neurologie und Psychiatrie, Vienna, Austria. Mem.: Amer. Psychiatric Assn.; City Club of Chicago. Author: Introduction to Individual Psychol., 1935; Challenge of Marriage, 1946; Challenge of Parenthood, 1948. Travel: Brazil; Europe. Hobbies: Photography; Stamp Collecting; Chamber Music. Listed in: Who's Who in Amer. Special Int.: Child Psychiatry; Child Guidance; Psychodynamics; Psychotherapy; Group Psychotherapy and Group Dynamics; Soc. Psychiatry.

DRESDEN, Arnold, Prof. of Math., Swarthmore Coll., Swarthmore, Pa. **MATHEMATICS.**

DRESSSEL, Paul L., Director of Counseling, Chmn., Board of Examiners, Mich. State Coll., East Lansing, Mich. **EVALUATION AND COUNSELING.** b. Youngstown, O., Nov. 29, 1910. s. David Calvin and Aura Olive (Jacobs) D. Edn.: A.B., Wittenberg Coll., 1931; A.M., Mich. State Coll., 1934; Ph.D., Univ. of Mich., 1939. m. Wilma Frances Sackett of Munith, Mich., Sept. 18, 1933. d. George and Ettie Sackett. c.: Carol Ann; Linda Kathleen; Jeana Lynn. Exp.: Math. Tehr., Selma H. S., Selma, Ohio, 1931-32; Asst. in Math. Dept., Mich. State Coll., 1932-34; Instr. in Math., Mich. State Coll., 1934-41; Gen. Edn. Bd. Fellow, 1941-42; Asst. Prof.

of Math. and Exec. Sec. of Orientation Comm., 1942; Dir. of Counseling, Chmn., Bd. of Examiners, E. Lansing, Mich., 1942—; Dir., Cooperative Evaluation Study, Amer. Coun. of Edn., 1949-52. Mem.: Sigma Xi; Pi Mu Epsilon; Phi Delta Kappa; Amer. Assn. of Univ. Profs.; Institute of Math. Statistics; Amer. Coll. Personnel Association; Psychometric Soc.; Fellow, Amer. Psychological Assn.; Amer. Ednl. Rsch. Assn. Contr. to: Psychol. Annals of Math.; Ednl. and Psychological Measurement. Author: An Evaluation of the G. E. D. Tests; Comprehensive Examinations in a Program of Gen. Edn. Ph.D. Dissertation: Statistical Semivariants with Emphasis Upon Their Relationship to Algebraic Semivariants. Listed in: A.M.S. Special Int.: Evaluation, Counseling; Evaluation in Gen. Edn.

DREISBACH, Robert R., Lab. Dir., The Dow Chem. Co., M'dland, Mich. **PLASTICS; ORGANIC CHEMISTRY; PHYSICAL PROPERTIES OF ORGANIC COMPOUNDS WITH SPECIAL REFERENCE TO P-V-T RELATIONSHIPS OF SATURATED VAPOR.**



b. Naperville, Ind., Dec. 22, 1888. s. Reuben H. and Amelia C. (Rickert) D. Edn.: A.B., Adelbert Coll., of Western Res. Univ.; A.M., ibid. m. Mae H. Willard of Cleveland, Ohio, Oct. 9, 1913. c.: Marie Phillips; Grace Winifred (dec.). Exp.: Undergrad. Asst., Physics Lab., Western Res., 1910-12; Instr., Physics, ibid., 1912-13; 1888. s. Reuben H. and Amelia C. (Rickert) D. Edn.: A.B., Adelbert Coll., of Western Res. Univ.; A.M., ibid. m. Mae H. Willard of Cleveland, Ohio, Oct. 9, 1913. c.: Marie Phillips; Grace Winifred (dec.). Exp.: Undergrad. Asst., Physics Lab., Western Res., 1910-12; Instr., Physics, ibid., 1912-13; Plant Superintendent, ibid., 1915-20; Asst. to Prod. Mgr., Barrett Co., 1921-24; Asst. Supt. Lenning Co., Philadelphia, 1924-26; Plant Supt., Ciba Dyes, The Dow Chem. Co., 1927-32; Rsch. Chem., ibid., 1932-38; Asst. Dir., Plastics Rsch., ibid., 1938-49; Lab. Dir., ibid., 1949—. Hon. Pos.: Sec., Phil. Bot. Club; Chmn., Sect. of Zool.; Mich. Acad. of Sci., Arts, and Letters. Mem.: Amer. Chem. Soc.; Phila. Bot. Club; Mich. Acad.; Amer. Entomol. Soc.; Wash. Ent. Soc.; Amer. Zool. Soc.; Amer. Soc. of Plant Taxonomists; Ontario Ent. Soc.; Kans. Ent. Soc.; The Harvard Ent. Club; Phi Beta Kappa; Mason; Shriner. Author: Vapor Pressure-Temp. Data for Organic Compo.; 7 Papers on Phys. Chem. in Jour. of Ind. and Eng. Chem.; 19 Papers on Ent. Contr. to: Amer. Midland Naturalist; Mich. Acad.; Ent. News; Jour. N. Y. Ent. Soc.; Brooklyn Ent. Soc.; Entomologica Americana. War Record: Produced Chem. in both World Wars. Gen. Int.: 53 Patents on Chem. and Chem. Processes. Dev. Styrene and Helped on Synthetic Rubber. Hobbies: Dist. of Insects in Mich. (Over 15,000 Listed) Have Collection of Over 180,000; Working on a Catalogue and Reclassification of Spider Wasps of N. Amer.; 11,000 Herbarium Sheets; Fishing; Hunting; Bowling. Listed in: A.M.S.; Who's Who in Chem. in Amer.

DRESSER, Thorpe, Sr. Process Engr., Sinclair Rsch. Labs., Inc., 400 East Sibley Boulevard; Harvey, Ill. **PETROLEUM PROCESS DESIGN.** b. Garfield, Utah, Mar. 2, 1911. s. Clarence and Katherine (Thorpe) D. Edn.: B.S., Mo. Schl. of Mines, 1933; M.S., Rensselaer Polytechnic Inst., 1934; D.Ch.E., ibid., 1936. m. Emajean Purinton, June, 1941. c.: Thomas P.; Miriam C.; Jay Thorpe. Exp.: Jr. Engr., Sinclair Refining Company, Rsch. Dept., East Chicago, Ind., 1936-40; Jr. Process Engr., ibid., 1940-45; Sr. Process Engr., ibid., 1945—; Sinclair Rsch. Labs., Inc., 1948—. Mem.: Sigma Xi; Tau Beta Pi; Phi Kappa Phi; Triangle. Contr. to: Chemical Engr. Progress; Industrial and Engr. Chem. Special Int.: Distillation Calculations and Design, Petroleum Process Design, PVT Data, Non-Ideal Distillation.

DRESSLER, Philip, Swindell-Dressler Corp., Box 1883, Pittsburgh 30, Pa. **CERAMICS.**

DREW, T. B., Columbia Univ., New York, N. Y. **CHEMICAL ENGINEERING.**

DREXLER, Robert Virgil, Assoc. Prof. of Biol., Coe Coll., Cedar Rapids, Iowa. **BOTANY**.

DREYER, Nicholas Bernard, Hd. Dept. and Prof. of Pharmacol., Univ. of Vt., Burlington, Vt. **PHARMACOLOGY**.

DRIER, Roy Ward, Prof. of Metallurgy, Mich. Coll. of Mining and Technol., McNair Hall, Houghton, Mich. **METALLURGY**. b. June 6, 1897, Calumet, Mich. s. Adam Charles and Winifred (Ward) D. Edn.: Undergraduate, Mich. Coll. of Mining and Technol.; B.S., and E.M., *ibid.*, 1925; E.Met., *ibid.*, 1926; Graduate Work, *ibid.*; Univ. of Chicago; Univ. of Ill.; Univ. of Mich.; M.S., 1928; Ph.D., 1934. Exp.: Jr Estimating Electrical Engineer, Union Electric Light & Power Co., 1920-21; X-Ray Installation Engr., Dick X-Ray Co.; Safety Engr., Internatl. Harvester Co., 1927-28; Asst. Prof. of Metallurgy, Mich. Coll. of Mining and Technol., 1929-34; Assoc. Prof. of Metallurgy, *ibid.*; Bethlehem, 1941-43; 1943-45 Tech. Asst. to the Inspector of Naval Materials, Detroit, 1945, Returned to M. C. M. O. T. Prof. of Met. Engrg. Hon. Pos.: Mem., Student Relations Com. of the A.I.M. and M.E. Mem.: Tau Beta Pi; Ill. Iota; Theta Tau; Alpha Sigma Mu; A.I.M.&M.E.; A.S.M.; S.P.E.E.; Sigma Xi; Mu Pi Sigma; Calumet Men's Club; Army and Navy Club; Miscowabik Club; Naval Res. Officers' Assn.; Keweenaw Hist. Soc.; Amer. Legion. Contrb. to: A.I.M.&M.E. Transactions; Indust. and Engrng. Chem.; Physical Rev.; Philosophical Mag.; Wire and Wire Products; Antiquity; Lake Superior Mining Inst. Transactions; Mich. Coll. of Min. and Technol. Rsch. Bull.; Compton's Encyclopedia. Ph.D. Dissertation: Correlation of Unit Cell Orientation with Tensile Strength and Electrical Conductivity. War Record: Enlisted in U. S. Army in W. W. I.; Commissioned in U.S.N.R., 1934; Commissioned Lt. Comdr. in Ordnance Div. of U.S.N.R., 1934-41; Asst. Inspector of Naval Material, Bethlehem, Pa., 1941— (on leave from M.C.M.&T.). Travel: Canada; Mexico; Hawaiian Islands. Hobbies: Reading; Archeology; Parapsychology. Listed in: A.M.S.; Who's Who in Engrng.; Who's Who in the Western Hemisphere; Who's Who in Amer. Edn. Special Int.: Physical Metallurgy, Mineral Dressing.

DRINKARD, Alfred Washington, Jr., Asst. Dir., Va. Agri. Expt. Station, Blacksburg, Va. **HORTICULTURE**.

DRIVER, Ernest C(harles), Prof. of Zool., 119 Prospect St., Northampton, Mass. **BIOLOGY**. b. October 14, 1899, Croydon, England. s. Reverend Charles B. and Rose (Soule) D. Edn.: B.A., Iowa State Tchrs. Coll., 1924; M.A., Univ. of Ill., 1926; Ph.D., *ibid.*, 1930. m. Olive Elizabeth Wagner of Malden, Mass., 1929. ~ d. Samuel and Jeannette Leavitt Wagner. c.: Clive Ernest; Beverly Rose. Exp.: Tchng. Asst. in Zool., Univ. of Ill.; Rsch. Asst., Zool., *ibid.*; Asst. Prof., Zool., Smith Coll., 1929-36; Assoc. Prof., Zool., 1936-45; Prof., 1945—. Mem.: A.A.A.S.; Amer. Soc. Genetics; Amer. Soc. Herp. and Ichthyologists; Wildlife Soc.; A.A.U.P.; Sigma Xi; Kappa Delta Pi; Mason. Author: Name That Animal: A Guide to Identification of Common Land and Fresh-water Animals of the U. S., 1942, Revised 1950. Ph.D. Dissertation: Temperature and Gene Expression in *Drosophila*. Listed in: A.M.S.; Who's Who in N. Eng.; Who's Who in Amer. Special Int.: Edn. in Ecology.

DROGIN, Isaac, Dir. of Rsch., United Carbon Co., Inc., P. O. Box 1913, Charleston, W. Va. **RUBBER TECHNOLOGY**.

DROMMOND, Fred G., Instr. in Pharmacy, Univ. of Colo., Boulder, Colo. **PHARMACOLOGY, PHARMACEUTICAL CHEMISTRY**.

DRURY, Douglas Richard, Prof. and Hd., Dept. of Physiol., Univ. of Southern Calif., 3551 University Ave., Los Angeles, Calif. **PHYSIOLOGY**.

DRYDEN, Hugh Latimer, Dir., Natl. Advisory Comm. for Aeronautics, 1724 F. St., N. W., Washington 25, D. C. **AERODYNAMICS**. b. Pocomoke City, Md., July 2, 1898. s. Samuel Isaac and Nova Hill (Culver) D. Edn.: A.B., Johns Hopkins Univ., 1916; A.M., *ibid.*, 1918; Ph.D., *ibid.*, 1919. Hon.

Deg.: D.Sc., Polytechnic Inst of Brooklyn, 1949. m. Mary Libbie Travers, Jan. 29, 1920. c.: Hugh Latimer, Jr.; Mary Ruth; Nancy Travers. Exp.: Lab. Asst., Natl. Bur. of Standards, 1918-20; Chief, Aerodynamics Sect., *ibid.*, 1920-34; Chief Mech. and Sound Div., *ibid.*, 1934-46; Asst. and Assoc. Dir., *ibid.*, 1946-47; Dir., Natl. Advisory Comm. for Aeronautics, Wash., D. C., 1947—. Hon. Pos.: A.A.F. Scientific Advisory Group; Comm., Joint Chfs. of staff; Deputy Chmn. of the Scientific Advisory Bd. to the Chief of Staff, U. S. Air Force; Aeronautics Comm. of the Rsch. and Dev. Bd. of the Dept. of Natl. Defense; Naval Rsch. Advisory Comm. Mem.: Natl. Acad. of Sci.; Amer. Physical Soc.; Amer. Soc. of Mechanical Engrns.; Royal Aeronautical Soc.; Inst. of the Aeronautical Sci.; Council of the Internatl. Union of Theoretical and Applied Mechanics; Sigma Xi; Phi Beta Kappa; Cosmos Club; Bd. of Editors, Quarterly of Applied Math.; Editor, Jour. of Aeronautical Sci.; Philosophical Soc. of Wash.; A.A.A.S.; Wash. Acad. of Sci.; Amer. Soc. of Mech. Engrng. Contrb. to: Bur. of Standards Scientific Paper; Jour. Amer. Soc. of Heating and Ventilating Engrng.; NACA Technical Report; Internatl. Critical Tables; Industrial and Engrng.; Proc. Fifth Internatl. Congress of Applied Mech.; Theodore von Karman Anniversary Volume; Physics Today.

DRYDEN, Lincoln, Prof. of Geol., Bryn Mawr Coll., Bryn Mawr, Pa. **GEOLOGY**.

DUB, Alfredo, **SPEECH AND HEARING**.

DUBIN, Isadore Nathan, Chf., Hepatic Pathol. Section, Armed Forces Inst. of Pathol., Washington 25, D. C. **PATHOLOGY**. b. Montreal, Can., July 13, 1913. s. Moses L. and Sarah (Mettarlin) D. Edn.: B.Sc., McGill Univ., 1935; M.D.C.M., *ibid.*, 1939. m. Alberta Simkevitz, June 21, 1940. c.: Mary; Elizabeth; William. Exp.: Asst. in Pathol., Duke Univ., 1942-43; Instr. in Pathol., *ibid.*, 1943-44; Assoc. in Pathol., *ibid.*, 1944-45; Asst. Prof. of Pathol., Univ. of Tenn. Coll. of Med., Memphis, Tenn., 1945-48; Assoc. Prof. of Pathol., *ibid.*, 1948-49; Special Lectr., Univ. of Miss., 1948-49; Special Rsch. Fellow, Pathol. Section, Natl. Cancer Inst., Bethesda, Md., 1949-50; Chf., Hepatic Pathol. Section, Armed Forces Inst. of Pathol., Washington, D. C., 1951—. Mem.: Amer. Assn. of Pathologists and Bacteriologists, 1944; Amer. Soc. for Exptl. Pathol., 1947; Tissue Culture Assn., 1948; Fellow Amer. Coll. of Physicians, 1953; Internatl. Soc. of Geographical Pathol.; A.A.A.S.; Md. Soc. of Pathologists; Wash. Soc. of Pathologists. Contrb. to: Arch. Pathol.; Jour. Bacteriol.; Jour. of Immunol.; Jour. Nutrition; etc. War Record: Med. Officer, Major, Med. Corps, U. S. Army, went on active duty, Jan. 2, 1951. Special Int.: Pathol.; Malaria; Tissue Culture; Liver Disease.

DUBLIN, Louis I., Consultant, Health and Welfare, River Lane, Westport, Conn. **HUMAN BIOLOGY**. b. Kovno, Lithuania, Nov. 1, 1882. s. Max and Sarah (Rosenzweig) D. Edn.: B.S., City Coll. of N. Y., 1901; Ph.D., Columbia Univ., 1904. m. Augusta Salik, Apr. 5, 1908. c.: Mary Elizabeth; Thomas; Amos. Exp.: Instr. in Math., City Coll. of N. Y., 1901-08; Statistician, Metropolitan Life Ins. Co., N. Y., N. Y., 1911-31; Third Vice-Pres. and Statistician, *ibid.*, 1931—; Second Vice-Pres. and Statistician, *ibid.*, 1944-52. Hon. Pos.: Pres., Amer. Pub. Health Assn., 1931-32; Pres., Amer. Statistician Assn., 1924; Pres., Pop. Assn. of Amer., 1935-36; Chmn. Bd., Amer. Mus. Health, 1938-44; Amer. Vice-Pres., Int. Union for Sc. Study of Popn. Mem.: Phi Beta Kappa; Fellow, Amer. Public Health Assn.; Fellow, A.A.A.S.; Fellow, Amer. Statistician Assn. Author: Mortality Statistics of Insured Wage Earners and Their Families, 1919; Health and Wealth, 1928; A Family of Thirty Million, 1943; The Facts of Life from Birth to Death, 1951. Collaborator: (with Lee K. Frankel and Miles M. Dawson) Workingmen's Ins. in Europe, 1910; (with Lee K. Frankel) Principles of Life Ins., 1911; (with Alfred K. Lotka) The Money Value of a Man, 1930, rev. 1946; (with B. Bunzel) To Be or Not to Be—a Study of Suicide, 1933; (with Alfred K. Lotka) Length of Life: a Study of the Life Table, 1936, rev. 1949; (with Alfred J. Lotka) Twenty-five Years of Health Progress, 1937. Contrb. to: Jour. A.M.A.; Cincinnati Jour. Med.; The Amer. Scholar; Amer. Jour. Pub. Health; Pub. Health Nursing;

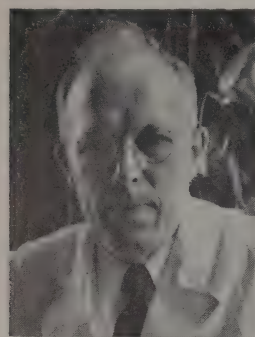
etc. Special Int.: Vital Statistics; Demography; Pub. Health and Med. Rsch.

DU BOIS, Eugene Floyd, Emeritus Prof. of Physiol., Cornell Med. Coll., 1300 York Ave., N. Y. 21, N. Y. **METABOLISM**. b. Staten Island, N. Y., June 4, 1882. s. Eugene and Anna G. (Brooks) D. Edn.: A.B., Harvard, 1903; M.D., Columbia Coll., 1906. Hon. Deg.: Sc.D., Univ. of Rochester. m. Rebeckah Rutter, June 4, 1910. c.: Eugene; Rebeckah; Arthur B. Exp.: Instr., Cornell Univ., Med. Coll., New York, N. Y., 1910; Asst. Prof. of Med., ibid., 1917; Prof. of Med., ibid., 1930-41; Prof. of Physiol., ibid., 1941-50; Emeritus Prof. of Physiol., ibid., 1950—; Physician, N. Y. Hosp., N. Y. C., 1932-41. Mem.: Assn. of Amer. Physicians; Amer. Physiol.; Natl. Acad. of Sci.; Amer. Phil. Soc. Author: Basal Metabolism in Health and Disease, 1925, 1927, 1936; Mechanism of Heat Loss and Temp. Regulation, 1937. War Record: Capt., M. C., U. S. Naval Reserve, 1927—, Retired List, 1949.

DuBOIS, H. B., Consolidated Feldspar Corp., 1403 Trenton Trust Bldg., Trenton 8, N. J. **CERAMICS**.

DU BOIS, W. E. Burghardt, Dir. of Special Rsch., Natl. Assn. for the Advancement of Colored People, 20 W. 40th St., N. Y. N. Y. **HISTORY AND SOCIOLOGY NEGRO RACE**.

DUBOS, Rene Jules, Bacteriologist, 446 E. 66th St., N. Y. C., N. Y. **PATHOLOGY AND BACTERIOLOGY**. b. St. Brice, France, Feb. 21, 1901. s. George Alexander and Adeline (De Bloedt) D. Edn.: B.S., Institut Natl. Agronomique, 1921; Ph.D., Rutgers Univ., 1927. Hon. Deg.: D.Sc., Rochester Univ., 1941; D.Sc., Harvard Univ., 1942; D.M., Univ. de Liege, 1947; D.Sc., Rutgers Univ., 1949; D.Sc., Paris Univ., 1950. m. Jean Letha Porter, Oct. 16, 1946. Exp.: Internat. Institute of Agri., Asst. Ed. on Staff, 1922-24; Rsch. Asst., Soil Microbiol. and Instr. in



Bacteriol., N. J. Expt. Sta., 1924-27; Asst. Rockefeller Inst. for Med. Rsch., 1928-30; Assoc., ibid., 1938-41; Assoc. Mem., ibid., 1941-42; Mem., ibid., 1942-44; George Fabyon Prof. of Comp. Pathol., ibid., 1944; Prof. of Tropical Med. at Harvard Med. Schl., Cambridge, Mass., 1944—, Hon. Pos.: Pres., Harvey Soc., 1951; Pres., Elec. Soc. of Amer. Bacteriol., 1951; Natl. Acad. of Sci. Mem.: Natl. Rsch. Coun.; Century Assn. of N. Y.; Natl. Acad. Sci. Author: The Bacterial Cell, 1945; Bacterial and Mycotic Infections of Man, 1948; Louis Pasteur-Free Lance of Sci., 1950; The White Plague-Tuberculosis, Man, and Soc., 1952. Contrb. to: Jour. of Exptl. Med. War Record: French Army, 1921-22. Special Int.: Microbiol., Infectious Diseases, Tuberculosis.

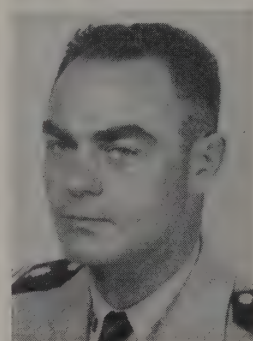
DuBRIDGE, Lee Alvin, Pres., Calif. Inst. of Tech., Pasadena, Calif. **PHOTOELECTRIC AND THERMIONIC EMISSION ELECTRONICS, NUCLEAR PHYSICS AND RADAR**. b. Terre Haute, Indiana, September 21, 1901. s. Frederick Alvin and Elizabeth Rebecca (Browne) DuB. Edn.: A.B., Cornell Coll., Iowa, 1922; A.M., Univ. of Wis., 1924; Ph.D., ibid., 1926. Hon. Deg.: Sc.D., Cornell Coll., Iowa, 1940; Sc.D., Brooklyn Poly. Inst., 1946; Sc.D., Wesleyan Univ., Conn., 1946; Sc.D., Univ. of British Columbia, Can., 1947; Sc.D., Washington Univ., Mo., 1948; LL.D., Univ. of Calif.,



Los Angeles, 1948. m. Doris May Koht of Reinbeck, Ia., Sept. 1, 1925. d. Mr. and Mrs. G. R. Koht (dec.).

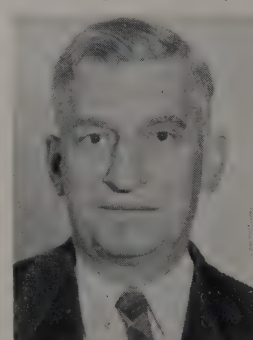
c.: Barbara Lee; Richard Alvin. Exp.: Instr. in Physics, Univ. of Wis., 1925-26; Fellow of the Natl. Rsch. Coun., Calif. Inst. of Tech., 1926-28; Asst. Prof. of Physics, Wash. Univ., St. Louis, Mo., 1928-33; Assoc. Prof. of Physics, ibid., 1933-34; Prof. of Physics and Chmn. of the Dept., Univ. of Rochester, N. Y., 1934-46; Dean of the Faculty of Arts and Sci., ibid., 1938-42; Pres., Calif. Inst. of Tech., Pasadena, Calif., 1946—. Mem.: Fellow, Amer. Physical Soc.; Fellow, A.A.A.S.; Assoc. Mem., A.A.U.P.; Mem., Amer. Assn. of Physics Teachers; Amer. Philosophical Soc.; Natl. Acad. of Sci.; Phi Beta Kappa; Sigma Xi; Tau Kappa Alpha; Tau Beta Pi; Sigma Pi Sigma; Pasadena Kiwanis; Pasadena Rotary. Author: Photoelectric Phenomena, with A. L. Hughes, 1932; New Theories of the Photoelectric Effect, 1934. Contrb. to: Phys. Rev.; Atlantic Monthly. Ph.D. Dissertation: Photoelectric Properties of Platinum. War Record: Dir., Radiation Lab., Mass. Inst. of Tech. under the Natl. Defense Rsch. Com., 1940-45. Travel: Europe. Gen. Int.: Recipient of the King's Medal (British) for service in the cause of freedom, 1946; Recipient of the Rsch. Corporation Award, 1947; Medal for Merit of the U. S. Govt., 1948. Religion: Protestant. Listed in: Who's Who in Amer.; Amer. Men of Sci.

DU CHANNOIS, Francis Robert, Lieut., M. S. C., U. S. N., Entomol., U. S. N. Preventive Medicine Unit No. 6, Navy No. 128, F. O., San Francisco, Calif. **ENTOMOLOGY, MEDICAL INSECT TOXICOLOGY**. b. Taylor Springs, New Mexico, July 8, 1920. s. Francis Joseph and Helen Josephine (Alldredge) D. Edn.: B.S., Colorado St. Coll., 1942; M.S., Iowa St. College, 1947. m. Esther Margaret Eckerdt, May 16, 1942. c.: Robert Patrick; Kathleen Ann, Jeannette Diane, Margaret Cecilia. Exp.: Bur. of Entomol. and Plant Quarantine, Div. of Fruit Insect Investigations, Spokane



and Yakima, Wash., 1942; Entomologist, Malariologist, U. S. Navy, 1942-46; Bur. of Entomol. and Plant Quarantine, Div. of Insects affecting Man and Animals, Alaska and Orlando Rsch. Lab., Territory of Alaska and Orlando, Fla., 1947-48; Iowa State Coll., Agric. Expt. Sta., Ames, Iowa, 1949-50; Entomologist, Julius Hyman Co., Denver, Colo., 1951; U. S. Navy, Entomologist at Schl. of Environmental Sanitation, U. S. Naval Hospital, Oakland, Calif., Preventive Med. Unit No. 6, Pearl Harbor, T. H., 1951—. Mem.: Amer. Assn. of Economic Entomologists; Entomological Soc. of Amer.; Hawaiian Entomological Soc.; Amer. Mosquito Control Assn.; Beta Beta Beta. Contrb. to: Jour. of Economic Entomol. War Record: W. W. II. Special Int.: Insect Toxicol.; Medical Entomology; Anthropod and Rodent Prevention and Control techniques; Environmental sanitation.

DUDLEY, Homer Walter, Mem., Technical Staff, Bell Telephone Labs., Inc., Murray Hill, N. J.



COMMUNICATIONS RESEARCH. b. Oranda, Va., Nov. 14, 1896. s. Rev. Walter Lee and Kate (Showalter) D. Edn.: B.S., Pa. State Coll., 1921; M.A., Columbia Univ., 1924. m. Leta M. Fairbairn, Aug. 4, 1924. c.: Martha Jean; Patsy Ann; Richard Walter. Exp.: Prin., Niles Valley, Pa., Public Schl., 1914-15; Prin., Beech Creek, Pa., H. S., 1915-16; Mem., Technical Staff, Bell Telephone Labs., Inc., Murray Hills, N. J., 1921—. Mem.: I.R.E.; A.I.E.E.; Acoustical Soc. Amer.; A.A.A.S.; Eta Kappa Nu; Sigma Tau; Phi Kappa

Phi. Contbr. to: Bell System Technical Jour.; Jour. Franklin Inst.; Proc. Natl. Acad. Sciences; Jour. Acoustical Soc. Amer.; Elec. Engrng.; etc. War Record; Med. Corps, 1917-18. Gen. Int.: Vocoder for Remaking Speech Automatically; Voder for Synthesis of Speech upon Fingering of Keyboard; Coaxial Cable System; 36 Patents. Special Int.: Transmission in Communication Circuits; Speech Analysis and Synthesis; Under Water Sound; Carrier Rsch.; Visible Speech Apparatus.

DUDLEY, John Edward, Jr., Entomologist, Bureau of Entomol. and Plant Quarantine, U. S. D. A. 424 University Dr., Madison, Wis. ENTOMOL-OGY.

DUECKER, W. W., Tex. Gulf Sulphur Co., 75 E. 45th St., New York, N. Y. CHEMICAL ENGI-NEERING RECOVERY SULPHUR COMPOUNDS.

DUERIG, William H., Prin. Staff Physicist, Applied Physics Lab., The Johns Hopkins Univ., Silver Spring, Md. SOLID STATE PHYSICS, IONIC CRYSTALS, SEMICONDUCTORS AND TRANSISTORS. b. N. Y. C., Sept. 10, 1921. s. Henry and Sophie (Keller) D. Edn.: B.S., N. Y. Univ., 1943; Ph.D., Univ. of Md., 1952. m. Virginia M. Lee, Apr. 26, 1944. c.: Barbara Lynn and William H. Exp.: Grad. Asst. in Physics, N. Y. Univ., N. Y. C., 1943-44; Physicist, Univ. of Calif. Radiation Lab., Berkeley, Calif., 1944-45; Prin. Staff Physicist, Applied Physics Lab., Johns Hopkins Univ., Silver Spring, Md., 1945—. Mem.: Amer. Phys. Soc.; Wash. Phil. Soc.; Sigma Xi; Sigma Pi Sigma. Contrb. to: Phys. Rev.; Rev. of Scientific Instru-ments. Special Int.: Mass Spectroscopy, Telemeter- ing, Color Centers in Alkali Halide Crystals, Semi- conductors and Transistors.

DUFF, G. L., Pathological Inst., McGill Univ., Montreal 2, Que., Can. PATHOLOGY AND BAC-TERIOLOGY.

DUFFORD, Ray Theodore, Prof. of Physics, Evans-ville Coll., Evansville, Ind. PHYSICS. b. Bonfield, Ill., Dec. 2, 1891. s. Theodore and Mary A. (Hitch- cock) D. Edn.: B.S., Northwestern Univ., 1918; M.S., *ibid.*, 1921; Ph.D., Univ. of Mo., 1931. m. Mamie Ericson, 1924. c.: Marian; Ellen and Cath- erine N. Exp.: Asst. in Phys., Northwestern Univ., Evanston, Ill., 1916-18; Instr., *ibid.*, 1918-21; Instr. in Physics, Univ. of Mo., Columbia, Mo., 1921-31; Asst. Prof., *ibid.*, 1931-44; Physicist, Radium Inst., Chicago, Ill., Summers, 1922, 23; Guest Rsch. Physicist, Nela Laboratories, Cleveland, Ohio, Sum- mers, 1927, 28; Visiting Prof. of Physics, New Mexico Highlands Univ., Summer, 1940; Prof. of Physics, and Chmn. Sci. Div., Mo. Valley Coll., 1944-52; Physicist, U. S. Navy Underwater Sound Lab., New London, Conn., Summer, 1952; Prof. of Phys. cs, Evansville Coll., Evansville, Ind., 1952—. Mem.: Phi Beta Kappa; Sigma Xi; Gamma Alpha; Phi Mu Alpha; Sigma Zeta. Contrb. to: Phys. Rev.; Jour. Phys. Chem.; Jour. Amer. Chem. Soc.; Jour. Opt. Soc. Amer.; and formerly Editor of Proc. of Mo. Acad. of Sci. Special Int.: Luminescence; Photovoltaic Effect; Raman Effect; and Underwater Sound.

DUFFY, Carl E., Prof. of Bacteriol. and Parasitol., Univ. of Ark., Schl. of



Detroit, Mich., 1943-45; Assoc. Prof. of Bacteriol.,

ibid., 1945-48; Special Investigator, Rockefeller Inst. for Med. Rsch., Princeton, N. J., 1944-45; Prof. and Hd. Dept. of Bacteriol. and Parasitol., Univ. of Ark., Schl. of Med., Little Rock, Ark., 1948—. Mem.: A.A.A.S.; Amer. Assn. of Pathol. and Bacteriol.; Amer. Public Health Assn.; Amer. Assn. of Immunol.; Soc. of Amer. Bacteriol.; Sigma Xi; Phi Beta Kappa. Contrb. to: Amer. Jour. of Diseases of Children; Jour. of Bacteriol.; Jour. of Exptl. Med.; Jour. of Infectious Diseases; Jour. of Pediatrics; Proc. of Soc. for Exptl. Biol. and Med.; Sci. Special Int.: Neurotropic Viruses.

DUFFY, Elizabeth, Prof. of Psychol., Womans Coll., Univ. of N. C., Greensboro, N. C. PSY-CHOLOGY.

DUGGAR, Benjamin Minge, Lederle Labs., Inc., Pearl River, N. Y.

DUKES, Henry Hugh, Prof. of Veterinary Physiol., N. Y. State Veterinary Coll., Cornell Univ., Ithaca, N. Y. VETERINARY PHYSIOLOGY.

DULEY, Frank Leslie, Sr. Soil Conservationist, U. S. Soil Conservation Service, Univ. of Nebr. Coll. of Agri., Lincoln, Nebr. SOIL CONSERVA- TION.

DUMAN, Rev. Maximilian George, Assoc. Prof. of Biol., St. Vincent Coll., Latrobe, Pa. BOTANY—



TAXONOMY OF PLANTS. b. Feb. 21, 1906, Nicktown, Pa. s. Henry and Mary (Par- rish) D. Edn.: A.B., St. Vincent Coll., 1932; M.S., Cath. Univ. of Amer., 1937; Ph.D., *ibid.*, 1941. Exp.: In- str. in Biol., St. Vincent Coll., 1937-39; Assoc. Prof., Biol., *ibid.*, 1941—; Visiting Instr. in Bot., Cath. Univ. of Amer., Summers, 1944—; Arctic Expedition to Northern Hudson Bay Region, 1938; Cath. Univ. Arctic Expedition to Labrador and Ungava, 1939; Project in North- eastern Can. on Bot. Interpretation of Aerial Photo- graphs, 1950, 51, 52. Mem.: A.A.A.S., Fellow; Bot. Soc. of Amer.; A.S.P.T.; Pa. Acad. of Sci.; Arctic Inst. of N. Amer.; K. of C. Contrb. to: Rhodora; Bull. of Torrey Bot. Soc. Ph.D. Dissertation: The Genus Carex in Eastern Arctic Canada. Travel: Labrador; Ungava; N. Hudson Bay Region; E. Canada. Gen. Int.: Discovered Carex dutillii O'Neill and Duman; Taraxacum dentifolium Hagl.; and Pertusaria atra Lynge, all in Eastern Arctic Cana- da. Hobbies: Plant Collecting; Photography. Listed in: A.M.S.; Who Knows—and What. Special Int.: Classification and Distribution of North- ern Carices. Botanical Interpretation of Aerial Photographs.

DuMEZ, Andrew Grover, Dean, Univ. of Md. Schl. of Pharmacy, 32 S. Greene St., Baltimore, Md. PHARMACEUTICAL CHEMISTRY.

DUNAVAN, David, Assoc. Prof. of Entomology and Zoology, Clemson Agri. Coll., Clemson, S. C. EN- TOMOLOGY, BEE- KEEPING, b. Lakefield,



Minn., July 15, 1895. s. Isaac and Mary Ann (Lafferty) D. Edn.: B.S., Oregon St. Coll., 1925; M.S., Iowa State Coll., 1928. m. Ione Grace Shaffer, Feb. 10, 1925. c.: Barbara Ione Haddle. Exp.: Field Asst., U. S. Bureau of Entomol., 1924-25; Grad. Asst., Iowa State Coll., Ames, Iowa, 1925-26; Asst. Prof., Clem- son Agri. Coll., Clem- son, S. C., 1926-46; Assoc. Prof., *ibid.*, 19-46—. Mem.: Entomol- ogical Soc. of Amer.;

Sigma Pi; Sigma Xi. Contbr. to: Jour. of Economic Entomology; Amer. Bee Jour. Special Int.: Bee-keeping; Insect Taxonomy.

DUNBAR, Carl Owen, Peabody Museum, Yale Univ., New Haven, Conn.

DUNBAR, Helen Flanders, Assoc. in Psychiatry, Coll. of Physicians and Surgeons, Columbia Univ., 3 E. 69th St., N. Y., N. Y. MEDICINE, PSYCHIATRY.

DUNBAR, Ralph Edwin, Dean, Schl. of Chem. Technology, N. D. Agri. Coll., Fargo, N. D. ORGANIC CHEMISTRY;



PLASTICS. b. August 22, 1895, Platte, S. D. s. Joseph Close and Mary Mattie (Brumbaugh) D. Edn.: B.S., Dak. Wesleyan Univ., 1921; M.A., Columbia Univ., 1926; Ph.D., Univ. of Wis., 1933. m. Vivienne Emma Ames, Madison, Wis., Sept. 2, 1938. d. Geo. Ames and Emma Little Ames. c.: Delores May; Donna Marie. Exp.: H. S. Prin. and Chem. Instr., Britton, S. D., 1921-25; Chmn., Dept. of Chem., Dak. Wesleyan Univ., 1925-36; Chem. Instr., Ia. State Coll.,

Ames, Iowa, 1936-37; Prof. of Chemistry, N. D. Agri. Coll., 1937-43; Dean, Schl. of Chem. Technol., ibid., 1943—; Pres., Faculty Men's Club; Sigma Xi; Fargo Philately Soc.; A.C.S.; N. D. Acad. of Sci.; Sigma Xi; Delta Sigma Rho; Pi Kappa Delta; Phi Kappa Phi; Pi Gamma Mu; Rotary Internatl.; Commons. Author: Visual Outline of Gen. Chem., 1939; Asst. Ed., An Outline of Organic Chem., 1941; Collab., The Work Book of Fundamental Organic Chem., 1941; Assoc. Ed., The Quadri-Service Manual of Organic Chem., 1938; Collab., Fundamental Organic Chem., 1942; Assoc. Ed., Encyclopedia of Chem. Reactions, 1946; How to Solve Problems in Organic Chem. (in Prep.). Contbr. to: Jour. of Chem. Edn.; Schl. and Soc.; Chem. Analyst; Gen. Sci. Quart.; Sci.; Schl. Sci. and Math.; The Lib. Jour.; Sci. Edn.; Industrial and Engrng. Chem.; Jour. of A. C. S.; Schl. Exec.; Jour. of Org. Chem.; Schl. Rev. Edn.; Jour. of Natl. Edn. Assn.; etc. Ph.D. Dissertation: Branched Chain Aldehydes in the Acetal Reaction. War Record: Co. 1, 20th Inf., U. S. Army, 10th Div., Apr., 1918-Feb., 1919. Travel: N. Amer. Gen. Int.: Rsch. Studies in Reaction Mechanisms, Catalysis, Ketene, Plastics and Dehydrogenation. Hobbies: Philately; Photography; Sports. Listed in: A.M.S.; Amer. Young Men; Who's Who in N. Dak.; Who's Who in the Northwest; Who's Who Among N. Amer. Authors; Biog. Encey. of the World; Who's Who in Amer.; Chem. Who's Who; Blue Book; Who's Who in the Midwest; Who's Who in the World.

DUNBAR, Ralph M., 3133 Connecticut Ave., N. W., Washington, D. C. EDUCATION.

DUNBROOK, R. F., Firestone Co., Akron, Ohio. RUBBER CHEMISTRY.

DUNBUAR, James Francis, Dir., N. Y. State Ranger Schl., Wanakena, N. Y. FORESTRY.

DUNCAN, Carl Dudley, Prof. of Entomol. and Bot., Chmn., Div. of Nat. Sci., San Jose State Coll., San Jose, Calif. ENTOMOLOGY; SCIENCE EDUCATION. b. Rowlett Station, Tex., Nov. 2, 1895. s. Calvin C. and Tennessee (Wood) D. Edn.: B.A., Stanford Univ., 1923; M.A., Stanford Univ., 1928; Ph.D., Stanford Univ., 1931. m. Neva Williams of Cupertino, Calif., Aug. 8, 1925. d. Fred G. and Helena Caldwell Williams. Exp.: Sci. Asst., Calif. Fish and Game Comm., Summer, 1920; Sci. Asst., U. S. Bur. Fisheries, Summer, 1922; Entomol. and Bot., San Jose State Coll., San Jose, Calif.; Asst., 1922-24; Instr., 1924-28; Asst. Prof., 1928-30; Assoc. Prof., 1930-34; Prof., 1934—; Hd. of Dept. of Nat. Sci., 1949—; Chmn., Div. of Nat.

Sci., 1950—; Staff Mem., West Coast Nature Schl., 1931—; Instr. in Nature Study, Bellingham State Nor. Schl., Wash., Summer, 1927. Hon. Pos.: Pres., Pacific Coast Entomological Soc., 1937-38, 1938-39, 1946; Elected Fellow of A.A.A.S., 1951; Chmn., Calif. Subcomm. on Conservation Edn., 1945-49. Mem.: Assn. Calif. State Coll. Instrs.; Natl. Edn. Assn.; Natl. Assn. of Biol. Tchrs.; Calif. Tchrs. Assn.; Calif. Sci. Tchrs. Assn.; Amer. Assn. of Biol. Tchrs.; C.S.E.A.; Natl. Conference on Undergraduate Edn., in Sanitary Sci., Battle Creek, Mich., 1951—; Amer. Entomological Soc.; Pacific Coast Entomological Soc.; Amer. Assn. Economic Entomologists; Western Soc. of Naturalists; Calif. Acad. of Scis.; Phi Beta Kappa; Sigma Xi; Beta Beta Beta; Phi Delta Kappa; Tau Delta Phi. Co-author: "Insects" in Western Nature Study Series, Gayle Pickwell ed., 1933. Pub. by Nat. Sci. Dept., San Jose State Coll.; The World of Insects (with Gayle Pickwell); Contribution to the Biol. of N. Amer. Vespine Wasps; Author of Bulls, in Calif. Sci. Guides for Elem. Schls.; Wild Flower Roads to Learning; Insects as Enemies and Benefactors of Man; Termites. Author of miscellaneous articles on Entomology and Conservation in Entomological Jours. and Calif. Jour. of Elem. Edn. Contbr. to: World Book Encyclopedia; (Articles written or Authenticated for the Current Revision); Entomological Subjects, Irrigation, Forest and Forest Conservation. Author: Article on Insects in Current Revision of Childcraft, Tech. Ed.; "Insect Stories" by Frederick Schackelford, Harr Wagner, 1940; Contbr. and Tech. Ed.: "Sci. in the Elem. Schl.," Published by Calif. State Dept. of Edn., 1945. Calif. Council on Elem. Science, 1952—; Sci. Consultant (1951-52) for New Calif. State Series in Sci. for Elem. Schls. (Scribner Wonderworld of Science); Member Calif. State Curriculum Comm. on Nursing Education, 1951—. War Record: U. S. Naval Hospital Corps, May, 1917-August, 1919, Final Rating, Pharmacists Mate 1st Class. Travel: U. S. Hobbies: Science Illustration; Biological Exploration in Deserts; Hypnosis; Folk Dancing. Listed in: A.M.S.; Naturalists Dir.; Who's Who on the Pacific Coast; Who's Who in the Western Hemisphere; Who Knows—and What. Special Int.: Sci. Edn.; Taxonomy of Hymenoptera; Insect Morphology.

DUNCAN, David Christie, Prof. and Acting Head, Dept. of Physics, Pa. State Coll., State College, Pa. PHYSICS. b. July 30, 1889, Churchville, N. Y. s. James Duncan and Margaret (Christie) D. Edn.: A.B., Univ. of Mich., 1911; M.A., ibid., 1913; Ph.D., ibid., 1924. m. Mildred Webb of Churchville, N. Y., Aug. 28, 1913. d. George and Mary Webb. c.: Gordon Webb; Donald Christie. Exp.: Instr. in Physics, Purdue Univ., 1911-18; Prof. of Physics, Pa. State Coll., 1918—; Acting Head, Dept. of Physics, ibid., 1950—. Mem.: Presbyterian Ch.; Amer. Phys. Soc.; A.A.A.S.; A.A.U.P.; A.S.E.E.; Amer. Assn. Phys. Tchrs.; Sigma Xi; Phi Kappa Phi; Chi Phi. Author: Physics Experiments in Collab. with E. S. Ferry, 1929. Ph.D. Dissertation: Excitation of Nitrogen by Electron Impacts. Listed in: Who's Who in Pa.; Who's Who in Sci.; Who's Who in Amer.

DUNCAN, James Francis, Prof. of Physics and Dean of Instruction, State Tchrs. Coll., Oshkosh, Wis. PHYSICS.

DUNCOMBE, George H., Jr., 150 E. Frambes Ave., Columbus 1, Ohio. CERAMICS.

DUNCOMBE, Raynor Lockwood, Assoc. Astronomer, U. S. Naval Observatory, Washington, D. C. ASTRONOMY.

DUNEGAN, John Clymer, Sr. Pathologist, Div. of Fruit and Vegetable Crops and Diseases, Plant Indus. Station, U. S. D. A., Beltsville, Md. PLANT PATHOLOGY.

DUNGAY, Neil Stanley, Prof. of Hygiene and Public Health, Carleton Coll., Northfield, Minn. EMBRYOLOGY.

DUNHAM, David Hanon, Assoc. Prof. of Biol., Purdue Univ., West Lafayette, Ind. BIOLOGY, BACTERIOLOGY.

DUNHAM, Wolcott Balestier, Rsch. Biol.; Dir., Gen. Rsch. Lab., Vet. Admin. Med. Tchng. Group, Kennedy Hospital, Memphis 15, Tenn. **MICROBIOLOGY**; **VIROLOGY**. b. June 15, 1900, Boston, Mass. s. Theodore and Josephine (Balestier) D., Prof. of Surgery, N. Y. Post-Graduate Med. Schl. and Hosp. Edn.: A.B., Columbia Coll., 1924; Coll. of Phys. and Surg., Columbia Univ., M.D., 1928. m. Isabel Bosworth of Ithaca, N. Y., Oct. 7, 1940. d. Mr. and Mrs. Francke Huntington Bosworth, Dean, Coll. of Architecture, Cornell Univ. c.: Wolcott Balestier, Jr.; Anne Huntington. Exp.: Asst. Bacteriol., N. Y. Post-Grad. Med. Schl. and Hosp., Columbia Univ., 1937-46; Rsch. Fellow, Columbia Div., Welfare Hosp. for Chronic Diseases, N. Y. C., 1939-40; Assoc. in Microbiol., The Squibb Inst. for Med. Rsch., N. Brunswick, N. J., 1942-46; Rsch. Biol., V. A. Med. Tchng. Group, Kennedy Hosp., Memphis, Tenn., 1946—; Dir., Gen. Rsch. Lab., 1949—. Mem.: N. J. Br., Soc. of Amer. Bacteriol., Pres., 1944-45; N. Y. Acad. of Sci.; Soc. for Expt. Biol. and Med.; Sigma Xi; A.F.C.R.; Fellow, N. Y. Acad. of Med.; Assoc., Amer. Coll. of Phys.; etc. Travel: N. Amer.; Europe. Hobbies: Mechanics; Ednl. Techniques; Philol.; Family. Listed in: A.M.S.; Who's Important in Med. Special Int.: Viruses; Spirochetes; Antibiotics.

DUNIFON, James Wayne, Electrical Engr. and Owner, Dunifon Engrng. Co., 3649 Waveland Ave., Chicago, Ill. **ELECTRICAL ENGINEERING**.

DUNKELBERGER, Tobias Henry, Prof. and Administrative Officer, Chemistry Department, Univ. of Pittsburg, Pittsburgh 13, Pa. b. Paxinos, Pa., November 4, 1909. s. Geo. A. and Hannah (Sober) D. Edn.: Sc.B., Dickinson Coll., 1930; Ph.D., Univ. of Pittsburgh, 1937. m.: Esther Simons of Pittsburgh, Pa., Aug. 31, 1941. d. Oscar and Mary Simons. c.: Judith Mae; Janet Lee. Exp.: Tchrr., Laceyville H. S., 1930-31; Grad. Asst., Univ. of Pitts., 1931-36; Asst. Prof. of Chem., N. Tex. Agri. Coll., 1936-37; Asst. Prof., Univ. of Idaho, 1937-38; Asst. Prof., Duquesne Univ., 1938-41; Asst. Prof. N. Y. State Coll. of Ceramics, 1941-44; Prof. and Hd. Dept., Duquesne Univ., 1944-52, Prof. and Administrative Officer, Chemistry Dept., Univ. of Pittsburgh, Pittsburgh, Pa., 1952—. Mem.: Phi Beta Kappa; Sigma Xi; Amer. Chem. Soc.; A.A.A.S.; A.A.U.P.; Pa. Acad. of Sci.; Phi Lambda Upsilon; Keramos. Author: Semi-micro Qualitative Analysis, 1937, 1940. Contrb. to: Chem. Abstracts, Jour. of Chem. Edn. Ph.D. Dissertation: Heats of Dilution, Relative Partial Molal Heat Contents and Heat Capacities of Cadmium Sulfate Solutions. Hobbies: Music. Listed in: A.M.S.; Who's Who in Amer.

DUNKER, Melvin Frederick William, Assoc. Prof. of Pharmaceutical Chem., Coll. of Pharmacy, Wayne Univ., Detroit, Mich. **PHARMACEUTICAL CHEMISTRY**.

DUNLAP, Albert Atkinson, Chf., Div. of Plant Pathol. and Physiol., Tex. Agri. Expt. Station, College Station, Tex. **PLANT PATHOLOGY**.

DUNLAP, Jack Wilbur, Pres., Dunlap and Assoc., Inc., 429 Atlantic St., Stamford, Conn. **PSYCHOLOGY AND STATISTICS**. b. White Eagle, Okla., Aug. 11, 1902. s. John William and Abigail Elma (Smythe) D. Edn.: B.S., Kans. State Coll., 1924; M.S., *ibid.*, 1926; Ph.D., Columbia, 1931. m. Hilda Frost, Dec. 25, 1923. c.: Jack William. Exp.: Dean of Men, Territorial Normal Schl., Honolulu, Hawaii, 1927-29; Dir. of Tchng., *ibid.*, 1929-30; Assoc. Prof. of Ednl. Psychol., Fordham Univ., New York City, 1931-37; Assoc. Prof. of Ednl. Psychol., Univ. of Rochester, Rochester, N. Y., 1937-46; Dir., Div. of Bio-Mech., Psychol. Corp., New York City, 1946-48; Pres., Dunlap and Assoc., Inc., Stamford, Conn., 1948—. Mem.: A.A.A.S.; Amer. Psychol. Assn.; Phi Kappa Phi; Phi Delta Kappa; Sigma Xi; Kappa Delta Pi; Psychometric Soc. Author: Handbook of Statistical Nomographs, Tables and Formulas (with A. K. Kurtz), 1932; The Computation of Descriptive Statistics, 1937; Workbook in Statistical Method, 1939. Contrb. to: Monographs and Articles in Many Psychol. Journals. Special Int.: Military and Industry Psychol., Statistics, Selection and Trng.

DUNLOP, Henry Adam, Dir. of Investigations, Internatl. Fisheries Commn., 2 Fisheries Hall, Univ. of Wash., Seattle, Wash. **FISHERIES BIOLOGY**.

DUNN, Clark Allan, Exec. Dir., Div. of Engrng. Rsch. and Expt. Sta., Okla. A. and M. Coll., Stillwater, Okla. **CIVIL ENGINEERING**. b. Stickney, S. D., Sept. 9, 1901. s. Wilfred and Elizabeth (Batchelder) D. Edn.: B.S., Univ. of Wis., 1923; C.E., Okla. A. and M. Coll., 1934; M.S., *ibid.*, 1937; Ph.D., Cornell Univ., 1941. m. Mary Eveland of Burke, S. D., Sept. 6, 1928. d. H. L. Eveland. c.: Kenneth; Gerald. Exp.: Instr. Man, Asst. Res. Engr., Res. Engr. on construction of four bridges across Mo. River, S. D., 1923-27; Bridge Designer and Construction Engr., Ark.



Highway Dept., 1927-29; Consultant to City of Perry, Okla.; Consultant to Okla. Conservation Bd., Advisor to Okla. Planning and Resources Bd.; Civilian Obs. Task Force Frigid, Fairbanks, Alaska; Okla. A. and M. Coll., 1929, as Civil Engrng. Instr.; Asst. Prof., Assoc. Prof., Prof. and Exec. Dir. of the Div. of Engr. Rsch. Mem.: N.S.P.E.; O.S.P.E.; A.S.C.E.; A.S.E.E.; Phi Kappa Phi; Sigma Tau; Chi Epsilon; Tau Kappa Epsilon; Lions; C. of C. Ph.D. Dissertation: Investigation of Columns with Elastic Lateral Support. Travel: Alaska. Listed in: Who's Who in the Southwest; A.M.S.; Who's Who in Engrng.; Who's Who in Edn.; Who Knows—and What.

DUNN, E. R., Haverford Coll., Haverford, Pa. **HERPETOLOGY**.

DUNN, Floyd E., Chmn., Div. of Neurol. and Psychiatry, Assoc. Prof. of Practise (Neurol. and Psychiatry), Kans. City Coll. of Osteopathy and Surgery, 926 E. Eleventh St., Kansas City 6, Mo. **NEUROLOGY AND PSYCHIATRY**. b. Wilkes-Barre, Pa., Apr. 25, 1910. s. Adrian A. and Frances A. (Culver) D. Edn.: Dr. of Osteopathy, Philadelphia Coll. of Osteopathy, 1936. m. Wilma Lauer, Aug. 15, 1933. c.: Kathryn Alice (dec.); Deborah Lee. Exp.: Chmn., Div. of Neurol. and Psychiatry, Kirksville Coll. of Osteopathy and Surgery, Kirksville, Mo., 1945-48; Chmn., Div. of Neurol. and Psychiatry, Kansas City Coll. of Osteopathy and Surgery, Kansas City, Mo., 1949—. Mem.: Amer. Osteopathic Assn.; A.A.A.S.; Amer. Assn. on Mental Deficiency; Amer. Coll. of Neuropsychiatrists; Phi Sigma Gamma; Exec. Secy., Natl. Osteopathic Inter-fraternity Council.



DUNN, Frank Lowell, Assoc. Prof. of Med. and Asst. Prof. of Clinical Physiol., Univ. of Nebr. Coll. of Med., 737 Medical Arts Bldg., Omaha, Nebr. **INTERNAL MEDICINE**.

DUNN, Halbert Louis, Chf., Vital Statistics Div., Bureau Census, 7631 Fort Foote Rd., Washington, D. C. **STATISTICS**.

DUNN, Hugh Kenneth, Mem. of Technical Staff, Bell Telephone Labs., 463 West St., N. Y., N. Y. **PHYSICS**.

DUNN, Joseph Avery, Technical Dir., Diamond Crystal Salt Co., Inc., St. Clair, Mich. **FOOD TECHNOLOGY**.

DUNN, Leslie Clarence, Columbia Univ., N. Y. 27, N. Y.

DUNN, Marin S., Prof. of Biol. and Dir., Biol. Labs., Philadelphia Coll. of Pharmacy and Sci., Philadelphia, Pa. **MYCOLOGY, PHARMACOGNOSY**.

DUNN, Stuart, Asst. Prof. of Botany and Plant Physiologist, Agri. Expt. Station, Univ. of N. H., Durham, N. H. **PLANT PHYSIOLOGY**.

DUNNAM, Erastus W., Entomologist, Bureau of Entomol. and Plant Quarantine, U. S. D. A., Washington, D. C. **ENTOMOLOGY**.

DUNNING, Ernest Leon, Assoc. Prof. of Engrng., Evansville Coll., Evansville, Ind. **MECHANICAL ENGINEERING**. b. Livingston County, Ky., November 13, 1920. s. Ernest and Beulah (Marrs) D. Edn.: B.S., Univ. of Rochester, 1946; M.S., Univ. of Ky., 1950. m. Juanita Sullivant of Joy, Ky., August 16, 1946. d. Mrs. Veda Sullivant. c.: Janet Kay; Janis Fay. Exp.: Tehr., Jr. H. S., Paducah, Ky., 1946; Instr. in Engrng. and Math., Pikeville Co., 1946-49; Asst. in Rsch., Univ. of Ky., 1949-50; Instr., Evansville Coll., 1950-51; Assoc. Prof., ibid., 1951—. Mem.: Sigma Xi; Ky. Acad. of Sci.; Amer. Soc. of Refrigerating Engrs.; Pi Tau Sigma; Amer. Soc. of Heating and Ventilating Engrs.; Dir., Livingston Co. Farm Bureau, 1942; Chmn., A.C.A. Community Comm., 1942. Contrb. to: Transactions of the Ky. Acad. of Sci. War Record; U. S. Navy. Hobby: Farming. Special Int.: Refrigeration and Air Conditioning.

DUNNING, Gordon M., Health Physicist, Atomic Energy Comm., Div. Biol. and Med., Wash., D. C. **PHYSICAL SCIENCE**. b. Sept. 11, 1910, Cortland, N. Y. s. William and Florence M. (Lester) D. Edn.: M.S., Syracuse Univ., 1941; Ed.D., ibid., 1948. m. Marjorie Maze, Aug. 28, 1936. d. Edward and Lucretia Maze, E. Rockaway, L. I. c.: Bruce Gordon and Richard Alan. Exp.: Tehr. Pub. Schls., N. Y. State, 1932-41; U. S. Army, 1942-46; Tehr., N. Y. State Agri. and Tech. Instr., 1947-48; Tehr., State Tehrs. Coll., Ind., 1948-51; Health Physicist, Washing., D. C., 1951—. Mem.: Phi



Delta Kappa; Sigma Pi Sigma; A.A.P.T.; N.E.A.; N.S.T.A.; N.A.R.S.T.; Mason. Author: Dunning Physics Text, 1951. Contrb. to: Schl. Sci. and Math.; Sci. Edn.; Sci. Tehr., etc. Ph.D. Dissertation: The Construction and Validation of a Test to Measure Certain Aspects of Critical Thinking in First Year Coll. Physics. Travel: Scotland; England; France; Luxemburg; Germany; Italy; Switzerland. Hobbies: Flying; Amateur Radio. Special Int.: Health Physics; Radiological Protection.

DUNNING, Henry Armitt Brown, Chmn. of Bd., Hynson, Westcott and Dunning, Inc., Charles and Chase Sts., Baltimore, Md. **PHARMACY**.

DUNNING, James Henry Fitzgerald, Pres., Hynson, Westcott and Dunning, Inc., Charles and Chase Sts., Baltimore, Md. **CHEMISTRY**.

DUNNING, John Ray, Dean of Engrng., Columbia Univ., N. Y. 27, N. Y. **PHYSICS**. b. Sept. 24, 1907, Shelby, Nebr. s. Albert Chester and Josephine (Thelen) D. Edn.: A.B., Nebr. Wesleyan Univ., 1929; Ph.D., Columbia Univ., 1934; Sc.D., Hon., Neb. Wesleyan Univ., 1945; LL.D., Adelphi Coll., 1951. m. Esther Blevins of Shelby, Nebr., Aug. 28, 1930. c.: John Ray; Ann Adele. Exp.: Columbia Univ., Cutting Traveling Fellow, 1935-36, Eng., Germany, France, Denmark, Italy; Ernest Kempton Adams Fellow, 1940-41; Asst. Prof. of Phys., 1946—; Official Investigator, Office of



Sci. Rsch. and Devl., 1941-46; Dir., Rsch., Div. I, SAM Labs., 1942-45; Dir., Div. of War Rsch., C. U., 1945-46; Sci. Dir., Atomic Energy and Office of Naval Rsch., C. U., 1946—; Dean of Faculty of Engrng., 1950—; Dir. Sci. Rsch., 1950—; Spec. Rep., Manhattan Dist., Operations Crossroads, Bikini, July, 1946; Natl. Acad. of Sci., 1948—; Natl. Lectr., Sigma Xi, 1948—; Exec. Council, A.A.A.S., 1949—; Bd. Dir., Oak Ridge Inst. of Nucl. Studies, 1950—; Bd. of Dir., Vitro Corp., 1950—; Bd. of Dir., Vitro Mnfg. Co., 1950—; Chmn., Mayor's Comm. on Atomic Energy, N. Y. Golden Jubilee Anniversary, 1948; Mayor's Comm., 1949—; Chmn., ASME-Natl. Res. Coun. on Nuclear Energy Glossary; Chmn., Sci. and Engr. Rsch., C. U., 1949—. Mem.: Fellow, A.P.S.; N. Y. Acad. of Sci., Fellow, Vice-Pres., 1951; Fellow, A.A.A.S. Author: Matter, Energy and Radiation-Syllabus, 1937; Matter, Energy and Radiation, 1941. Contrb. to: Sci. Jours. Ph.D. Dissertation: Interaction of Neutrons with Matter. War Record: Sci. Dir., W.R.D.; Awarded Medal of Merit, Presidential Citation, Mar., 1946. Listed in: A.M.S.; Who's Who; Internatl. Who's Who; Who's Who in the East.

DUNNING, William Bailey, Prof. Emer. of Dentistry, Columbia Univ., 89 Spring Lane, Englewood, N. J. **DENTISTRY**.

Du PORTE, E. M., Assoc. Prof. in Entomol., Macdonald Coll., Que., Can. **ENTOMOLOGY**.

DU PRIEST, John Randolph, Prof. of Mech. Engrng., Univ. of Minn., Minneapolis, Minn. **MECHANICAL ENGINEERING**.

DURAND, Eric, Assoc. Dir., Chicago Midway Lab., 6040 S. Greenwood Ave., Chicago 37, Ill. **PHYSICS AND ELECTRONICS**. b. Washington, D. C., Nov. 29, 1911. s. E. Dana and Mary (Bennett) D. Edn.: B.S., Harvard, 1933; Ph.D., Johns Hopkins, 1939. m. Camille Macek, Aug. 14, 1937. Exp.: Tehr., Wilson Jr. Coll., Chicago, Ill., 1938-39; Physicist, U. S. Public Health Service, Bethesda, Md., 1940-42; Hd., R-F Head Section, Radiation Lab., Mass. Inst. of Tech., Cambridge, Mass., 1942-46; Hd., Solar Spectroscopy Section of Rocket Sound Rsch. Branch, Naval Rsch. Lab., 1946-48; Hd., Atomics Branch, Radiation Div., Naval Rsch. Lab., 1948-52; Assoc. Dir., Chicago Midway Labs., Chicago, Ill., 1952—. Mem.: Amer. Phys. Soc.; Phi Beta Kappa; Gamma Alpha. Contrb. to: Phys. Rev.; Jour. of Chem. Phys.; Jour. of Herpidity. Special Int.: U. V. Spectroscopy and Microscopy; High Energy Particle Accelerators; Microwave Receivers; Nuclear Radiation Detectors; Air-Borne Electronics.

DURBIN, Frank M., Prof. of Physics, Okla. A. and M. Coll., Stillwater, Okla. **NUCLEAR PHYSICS**.

DURFEE, Grace R., Dir., Applied Rsch. Labs., Inc., Dayton, N. J. **MEDICAL BIOLOGY**.

DURFEE, Walter Hetherington, Dean and Prof. of Math., Hobart Coll., Geneva, N. Y. **MATHEMATICS**.

DURHAM, Henry Welles, Retired Col., U. S. Army, Civil Engr., Halfway House, Sandwich, Mass. **MUNICIPAL ENGINEERING, HIGHWAYS, PAVING, WATER-WORKS, SEWERS, CONSTRUCTION PANAMA AND CAPE COD CANALS**. b. Chicago, Ill., Sept. 15, 1874. s. Caleb Wheeler and Clarissa Safford (Welles) D. Edn.: C. E., Schl. of Mines, Columbia Coll., 1895. m. Josephine Trowbridge, Oct. 1, 1903. c.: Elisabeth. Exp.: Asst. Survey, Rapid Transit Commn. and U. S. Geol. Survey, 1895-98; Nicaragua Canal Surveys, 1898-1900; Asst. Engr. in Chg. of Construction, N. Y. Subway, 1900-04; Resident Engr. in Chg. of Design and Construction of all Municipal Im-



provements in City of Panama for U. S. Isthmian Canal Commn., 1904-07; Resident Engr. in Chg. of Surveys and Construction of Cape Cod Canal, 1907-12; Chf. Engr. of Highways Manhattan Borough, 1912-15; Co-Engr. Bergen Co., N. J., 1916; Corps of Engrs., U. S. Army, 1916-19, discharged Oct. 17, 1919; Studies and Plans for Sanitation in Peru, 1920-22; Designs, N. Y., Mass. and N. C., 1923-24; Engaged in sanitation and paving for Govt. of Nicaragua, 1925-30; Highway Studies in Guatemala, 1931-32; Municipal Improvements in Barranquilla, Colombia, 1933-34; Mine Valuation in El Salvador, 1935; Paving Engr., N. Y. World's Fair, 1939; Building First Highway in Paraguay, 1939-42; Civil Engr., Rsch., Military Intelligence Div., U. S. Army, 1943—, Mem.: Amer. Soc. C. E.; Boston Soc. C. E.; Permanent Internatl. Assn. Rd. Congresses; A.A.A.S.; Amer. Rd. Builders Assn.; Amer. Public Works Assn.; Municipal Engrs. of N. Y.; Internatl. Engrng. Congress, San Francisco, 1915; Soc. Amer. Military Engrs.; Reserve Officers' Assn. of U. S. Military Order W. W.; N. Y. Soc. Military and Naval Officers of W. W.; Sociedad de Ingenieros del Peru; Fellow, Amer. Geog. Soc.; Officer du Merite Agricole; Beta Theta Pi. Author: Street Paving and Maintenance in European Cities, 1915. Contrb. to: The Military Engr. War. Record: Major, Corps of Engrs. in Command 41st Engrng. Bn. and in Chg. Highways Lines of Communications in France. Gen. Int.: Panama City Water Works, Sewers, Paving and Roads; First Cape Cod Canal Surveys and Construction; Paved 25% of Manhattan St., N. Y. City; Built First Modern Highway in Paraguay. Special Int.: Chg. Report Writing Engr., Rsch. Office, Corps. of Engrs., Based on Lib. and Other Records of Probable Foreign Theaters of War.

DURLAND, Merrill A., Dean, Schl. of Engrng. and Arch., and Director Engrng. Experiment Station, Kans. State Coll., Manhattan, Kans. **ENGINEERING**. b. Centralia, Kans., January 6, 1897. s. T. M. and Jennie (Merrill) D. Edn.: B.S., Kans. State Coll., 1918; M.E., Kan. State Coll., 1922; M.S., ibid., 1923. m. Lorna Boyce of Minneapolis, Kan., Dec. 22, 1920. d. F. D. and Lois Ward Boyce. c.: Audrey Jean; Mary Lee. Exp.: Westinghouse E. and M. Co., 1917-18; Instr., Applied Mech. and Machine Design, 1919-21; Asst. Prof., 1921-25; Assoc. Prof., 1925-28; Prof., 1928 to date; Asst. Dean, 1926-49; Dean of Engrng. and Arch. and Dir. Engrng. Exp. Sta., 1949—, all at Kan. State Coll. Mem.: A.S.M.E.; A.S.E.E.; Kan. Engrng. Soc.; Phi Delta Theta; Pi Tau Sigma; Sigma Tau; Phi Kappa Phi; Rotary; Mason; Shriner. War Record: Sgt., World War I. Hobbies: Golf; Philately. Listed in: Who's Who in Engrng.; A.M.S. Special Int.: Machine Design.

DURRELL, L. W., Dean, Dept. of Botany, Plant Pathol., Colo. A. and M. Coll., Fort Collins, Colo. **PLANT PATHOLOGY**.

DURST, Lincoln Kearney, Instr. in Math. Rice Institute, Houston 1, Tex. **NUMBER THEORY**. b. Santa Monica, Calif., Aug. 5, 1924. s. Walter C. and Mary (Kearney) D. Edn.: B.A., Univ. of Calif., 1945; B.S., Calif. Inst. of Tech., 1946; Ph.D., ibid., 1952. Exp.: Murray Scholar, Tchng. Fellow, Calif. Inst. of Tech., Pasadena, Calif., 1946-51; Visiting Lectr., Univ. of Southern Calif., Los Angeles, Calif., Summer, 1951; Instr., Rice Inst., Houston, Tex., 1951—. Mem.: Amer. Math. Soc.; Math. Assn. of Amer.; A.A.A.S.; Phi Beta Kappa; Sigma Xi; Phi Eta Sigma. Contrb. to: Proc. Natl. Acad. Sci. Special Int.: Number Theory.

DUSCHAK, Lionel Herman, Prof. of Metallurgy, Univ. of Calif., Berkeley, Calif. **METALLURGY**.

DUSHAM, Edward Henry, Prof. and Hd., Dept. of Zool. and Entomol., Pa. State Coll., State College, Pa. **EMBRYOLOGY**.

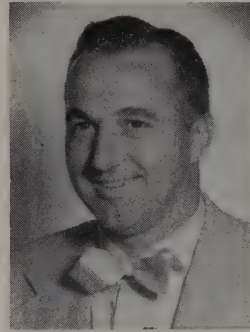
DUSHMAN, Saul, Asst. Dir. of Rsch. Lab., General Electric Co., Schenectady, N. Y. **PHYSICS, CHEMISTRY**.

DUSTMAN, Robert Barclay, Hd., Dept. of Agri. Biochem., W. Va. Univ., Morgantown, W. Va. **PLANT CHEMISTRY**.

DUTCHER, Raymond Adams, Hd., Dept. of Agril. and Biol. Chem., Pa. State Coll., State College, Pa. **BIOCHEMISTRY, NUTRITION**.

DUTILLY, Artheme, Box 213, McMahon Hall, Catholic Univ. of Amer., Washington, D. C. **AGRICULTURE**.

DUVALL, Wilbur I., Physicist Chf., Mineral Mining Rsch. Section, U. S. Bureau of Mines, Coll. Park, Md. **PHYSICS**. b.



Gaithersburg, Md., Jan. 3, 1915. s. James E. and Maggie V. (Briggs) D. Edn.: B.S., Univ. of Md., 1936; M.S., ibid., 1938. m. Angela Aiello, 1945. c.: Donna Marie; Bonnie Jean and Paula Ann. Exp.: Math. Tchr., Richard Montgomery H. S., Rockville, Md., 1936-37; Fellow, Univ. of Md., Coll. Park, Md., 1937-38; Lab. Instr., Amherst Coll., Amherst, Mass., 1938-39; Physicist, Mineral Mining Rsch. Section, U. S. Bureau of Mines, Coll. Park, Md., 1939—.

Mem.: A.A.A.S.; A.G.U.; Sigma Xi; Sigma Pi Sigma. Special Int.: Experimental Stress Analysis and Rock Mechanics; Specifically the Measurement of Dynamic Strain Resulting from the Detonation of Explosives in Rock and Photo-Elastic Model Studies of Mine Structures.

du VIGNEAUD, Vincent, Cornell Univ., Med. Coll., N. Y. 21, N. Y.

DUWEZ, Pol Edgard, Section Chf., Jet Propulsion Lab., Calif. Inst. of Tech., Pasadena, Calif. **MATHEMATICS**.

DWYER, Paul Sumner, Prof. of Math. and Consultant in Statistical Research Laboratory, Univ. of Mich., 403 Lenawee Drive, Ann Arbor, Mich. **STATISTICS**. b. December 8, 1901, Chester, Pa. s. Edmund B. and Anna Belle (Tracy) D. Edn.: A.B., Allegheny Coll., 1921; M.A., Pa. State Coll., 1923; Ph.D., Univ. of Mich., 1936. m. Florence Bayless Brown, June 29, 1932. d. Charles A. and Mary Bell (Baker) Brown. c.: John Michael and David James. Exp.: Instr. of Math., Pa. State Coll., 1921-26; Asst. Prof., Assoc. Prof., Prof. of Math., Antioch Coll., 1926-36; Rsch. Asst., Univ. of Mich., 1936-41; Asst. Prof. of Math., ibid., 1937-42; Rsch. Assoc., ibid., 1941-45; Assoc. Prof. of Math., ibid., 1942-46; Consultant in Statistical Rsch. Lab., 1947—; Prof. of Math., 1946—. Mem.: A.A.A.S.; Amer. Math. Soc.; Amer. Statistical Assn.; Inst. of Math. Statistics; Math. Assn. Amer.; Psychometric Soc.; Biometric Soc.; Econometric Society; Sec. Treas. Inst. of Math. Statistics, 1944-49; Pres. elect Inst. of Math. Statistics, 1950, Pres., ibid., 1951; Phi Beta Kappa; Sigma Xi; Phi Kappa Phi; Sigma Pi Sigma; Alpha Chi Rho. Contrb. to: Annals of Math. Statistics; Jour. of Amer. Stat. Assn., Psychometrika, etc. Ph.D. Dissertation: Combined Expansions of Products of Symmetric Power Sums and of Sums of Symmetric Power Products with Applications to Sampling. Travel: Europe. Hobbies: Gardening. Listed in: A.M.S.; Who's Who in the Central States; Who's Who. Special Int.: Mathematical Statistics; Computational Methods; Statistical Methods.

DYE, Harry Wilmer, Plant Pathologist, Niagara Sprayer and Chemical Co., Inc., Middleport, N. Y. **PATHOLOGY**.

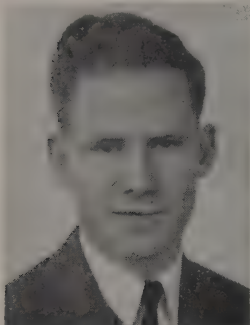
DYE, Leaman Andrew, Assoc. Prof. of Math., The Citadel, Charleston, S. C. **MATHEMATICS**.

DYE, Marie, Dean, Div. of Home Econ. and Prof. of Nutrition, Mich. State Coll., East Lansing, Mich. **NUTRITION**.

DYER, Elizabeth, Asst. Prof. of Chem., Univ. of Del., Newark, Del. **CHEMISTRY**.

DYER, Helen Marie, Rsch. Biochemist, Natl. Cancer Inst., Bethesda, Md. **CANCER AND BIOCHEMISTRY RESEARCH.**

DYER, Irwin Allen, Assoc. Prof. of Animal Husb., Univ. of Ga., Athens, Ga. **ANIMAL SCIENCE; NUTRITION.** b. Dahlonga,



Ga., Feb. 8, 1921. s. Marion and Carrie D. Edn.: B.S.A., Univ. of Ga., 1946; M.S.A., *ibid.*, 1947; Ph.D., Univ. of Ill., 1949. m. Allene Hodgson of Athens, Ga., Nov. 26, 1943. d. Dr. and Mrs. Harold Hodgson. c.: Barbara; Irwin; Patricia. Exp.: 1946-49, Asst., Animal Husb., Univ. of Ga. and Univ. of Ill.; 1949-51, Asst. Prof. of Animal Husbandry, Univ. of Ga.; 1951—, Assoc. Prof. of An. Husb., *ibid.* Mem.: Amer. Soc. of Animal Production; Sigma Xi;

Ga. Acad. of Sci. Contbr. to: Jour. of Animal Sci.;

Jour. of Bacteriol. Ph.D. Dissertation: Some Water Soluble Vitamin Deficiencies of a Corn-Soybean Oil Meal Ration for Weanling Pigs. War Record: U. S. Navy, 3 Yrs.; Attained Rank of Lt. Sr. Grade. Hobbies: Sports; Gardening. Listed in: Who's Who in the South and Southwest and Special Int.: Animal Nutrition.

DYKE, Ray Arthur, Meteorologist in Chg. Weather Bureau Office, Univ. of Nebr., Lincoln, Nebr. **PHYSICS.**

DYMOND, John Richardson, Prof. of Systematic Zool., Univ. of Toronto, Toronto, Ont., Can. **SYSTEMATIC AND DISTRIBUTIONAL ZOOLOGY.**

DYSART, Paul Moore, 102 Valley Dr., Pittsburgh, Pa. **PHYSICS.**

DYSON, F. J., Cornell Univ., Ithaca, N. Y. **PHYSICS.**

D'ZMURA, Andrew Peter, Assoc. Prof. of Med., Univ. of Pittsburgh, Pittsburgh, Pa. **CARDIOLOGY.**

EADIE, George Chapp, Prof. and Chmn., Dept. of Physiol. and Pharmacol., Duke Univ. Schl. of Med., Durham, N. C. **PHYSIOLOGY**.

EAGLE, Harry, Chf., Sect. on Exptl. Therapeutics, Natl. Microbiol. Inst., Natl. Insts. of Health, Bethesda 14, Md. **BACTERIOLOGY; CHEMOTHERAPY**. b. July 13, 1905, N. Y. C. s. Louis and Sadie (Kushnoy) E. Edn.: A.B., Johns Hopkins Univ., 1923; M.D., ibid., 1927. Hon. Deg.: M.S., Yale Univ., 1948. m. Hope Whaley, Aug. 31, 1928. c.: Kay Whaley. Exp.: Interne, Johns Hopkins Hosp., 1927-28; Rsch. Fellow, ibid., Med. Schl., 1928-29; Asst. Med., ibid., 1929-30; Instr. Med., ibid., 1930-32; Rsch. Fellow, Harvard, Schl. of Med., 1932-33; Assoc. in Bacteriol., Univ. of Pa., Schl. of Med., 1933-35; Asst. Prof., ibid., 1935-36; Comns. Officer, Public Health Service, 1936—; Dir. of Venereal Disease, Rsch. Lab., Johns Hopkins Hosp., 1936-46; Dir., Lab. Exptl. Therapeutics, ibid., 1946-48; Sci. Dir., Natl. Cancer Inst., 1947-49; Adj. Clin. Prof. of Med., Geo. Washington Univ. Med. Schl., 1948—; Chf., Sect. on Exptl. Therapeutics, Natl. Microbiol. Inst., Natl. Insts. of Health, Bethesda, Md., 1949—. Mem.: Soc. of Amer. Bacteriol.; Soc. for Exptl. Pathol.; Soc. for Clin. Investigation; Assn. Amer. Physicians; Soc. Pharmacol.; Soc. of Exptl. Biol. and Med. Author: Lab. Diagnosis of Syphilis, 1937. Contr. to: Jour. of Bacteriol.; Amer. Jour. of Med.; Jour. of Pharmacol., and others. Special Int.: Chemotherapeutic Agents, with Particular Reference to Arsenicals; Antibiotics and Their Mode of Action; Treatment of Syphilis and Trypanosomiasis; Growth Requirements of Bacteria.

EAGLE, J. Eugene, 3202 McShane Way, Baltimore 22, Md. **CERAMICS**.

EAGLES, Blythe Alfred, Dean, Faculty of Agri., Univ. of British Columbia, 3616 Sperling Ave., New Westminster, B. C., Canada. **BIOCHEMISTRY, DAIRYING**. b. April 23, 1902, North Westminster, B. C. s. John E. and Amelia Jane (Johnston) E. Edn.: A.B., Univ. of B. C., 1922, 1st Class Honours in Chem. and Biol.; M.A., Univ. of Toronto, 1924; Ph.D., ibid., 1926. m. Violet Evelyn Dunbar of Vancouver, B. C., June 25, 1930. d. Mr. and Mrs. John Dunbar. Exp.: Asst. Prof., Dairying, Univ. of B. C., 1929-30; Assoc. Prof., Dairying, 1930-32; Rsch. Chem., Powell River Pulp and Paper Co., Powell River, B. C., 1932-33; Rsch. Asst., Dept. Dairying, Univ. of B. C., 1933; Asst. Prof., Dept. Dairying, Univ. of B. C., 1933; Assoc. Prof. and Act. Hd., Dept., 1934-36; Prof. and Hd. Dept., 1936-49; Dean, Agri., 1949—. Mem.: Biochem. Soc.; Agri. Can. Ind.; Chem. Inst. of Can.; B. C. Acad. of Sci.; Inst. of Food Technol.; Sigma Tau Upsilon; Phi Gamma Delta; Fellow, Royal Soc. of Canada. Ph.D. Dissertation: Organic Sulphur Compounds of Biol. Significance—Glutathione and Ergothioneine. Listed in: A.M.S.

EAMES, Arthur Johnson, Prof. Emeritus, Dept. of Botany, Cornell Univ., Ithaca, N. Y. **PLANT MORPHOLOGY**. b. Oct. 10, 1881, Framingham, Mass. s. Charles A. and Rozella M. (Johnson) E. Edn.: A.B., Harvard Univ., 1908; A.M., ibid., 1910; Ph.D., ibid., 1912. m. Rita H. Ballard, June 3, 1916. c.: David B. Exp.: Asst. Bot., Harvard, 1906-12; Instr. Bot., Cornell Univ., 1912-13; Asst. Prof., ibid., 1914-20; Prof., ibid., 1920-49; Prof. Emeritus, 1949—. Mem.: Phi Beta Kappa; Sigma Xi; A.A.A.S. Author: Flora Cayuga Lake Basin (with K. M. Wiegand), 1925; Introd. Plant Anat. (with L. H. MacDaniels), 1926; Morphol. Vascular Plants, 1935. Contr. to: Annals of Botany; Amer. Jour. of Botany; New Phytol.; Phytomorphol.; Sci. Special Int.: Morphol. and Anatomy of Vascular Plants.

EARDLEY, Armand J., Univ. of Utah, Salt Lake City, Utah. **GEOLOGY**.

EARL, Rollo Othwell, Prof. of Biol., Queen's Univ., Kingston, Ont., Can. **CYTOGENETICS**.

EARLE, Imogene Philips, Assoc. Biochemist in Animal Nutrition, U. S. D. A., Bureau of Animal Indus., Agril. Rsch. Center, Beltsville, Md. **BIOCHEMISTRY**.

EARLE, Samuel Broadus, Dean, Schl. of Engrng., Clemson Agril. Coll., Clemson, S. C. **MECHANICAL ENGINEERING**.

EARLE, Thomas Theron, Prof. of Biol., Newcomb Coll., Tulane Univ., New Orleans, La. **MORPHOLOGICAL BOTANY**.

EARLE, Walter Clarence, Chf., Out Patient Div., Branch No. 5, Veterans Admin., 1930 Greystone Rd., Atlanta, Ga. **PUBLIC HEALTH, MEDICAL ADMINISTRATION**.

EASLICK, Kenneth Alexander, Prof. of Dentistry, Prof. of Pub. Health Dentistry, Univ. of Mich., Ann Arbor, Mich. **PUBLIC HEALTH DENTISTRY; DENTISTRY FOR CHILDREN**. b. Sept. 12, 1893, Ridgeway, Mich. s. Schuyler Colfax and Rosa (Pilbeam) E. Edn.: A.B., Univ. of Mich., 1917; D.D.S., ibid., 1928; A.M., ibid., 1936. m. Mercie Marie Van Aken of Detroit, Mich., Apr. 3, 1920. d. Abraham B. and Harriet Withee Van Aken. c.: David Kenneth. Exp.: Instr. in Clin. Dentistry, Univ. of Mich., 1928; Dir., Children's Clinic, 1930; Instr. in Operative Dentistry, 1934;



Asst. Prof., ibid., 1937; Asst. Prof. of Public Health Dentistry, Schl. Pub. Health, 1941; Assoc. Prof., ibid., 1942; Prof., ibid., 1945; Licensed Spec. in Dentistry for Children, Mich., 1941; Diplomate, Amer. Bd. of Pedodontics, 1948; Chmn., Dental Health Sect., A.P.H.A., 1944; Chmn., Children's Dentistry and Oral Hygiene Sect., A.D.A., 1942-47; A.A.A.S. Fellow; Amer. C. of Dentists, Fellow; A.P.H.A., Fellow; Amer. Soc. Dent. for Children; Internatl. Assn. for Dental Rsch.; A.A.P.H.D.; Amer. Acad. Pedodontics; Fed. Dentaire Internationale; La Sociedad Odontologica Cubana; Sociedad Cubana de Odontol. Infantil; La Sociedad Odontologica de El Salvador; Phi Kappa Phi; Omicron Kappa Upsilon; Delta Omega; Delta Sigma Delta; Amer. Legion; Univ. of Mich. Club. Author: Dental Caries; Mechanism and Present Control Technics as Evaluated at Univ. of Mich. Workshop, 1948. Contr. to: Science and Dental Jour. War Record; U. S. Army Ambulance Service, S. S. U. 591, 1918-19. Listed in: A.M.S.; W. W. in Midwest; W. W. A. E. W. in Central States; Who's Important in Med.; W. W. Among Phys. and Surgeons. Special Int.: Treatment of Infected and Traumatized Teeth in Children.

EAST, Bion R., Assoc. Dean of Dentistry, Faculty of Med., Columbia Univ., 630 W. 168th St., N. Y., N. Y. **DENTISTRY**.

EASTER, George J., Electro Refractories and Abrasives Corp., Willett Rd., Buffalo 19, N. Y. **CERAMICS**.

EASTHAM, Melville, Chf. Engr., General Radio Co., Cambridge, Mass. **ELECTRICAL ENGINEERING**.

EASTWOOD, Alice, Curator, Herbarium and Botany Dept., Calif. Acad. Sci., San Francisco, Calif. **BOTANY, TAXONOMY**.

EASTWOOD, L. W., Kaiser Aluminum Co., Spokane, Wash. **FOUNDRY TECHNOLOGY**.

EATON, Frank M., Sr. Plant Physiologist, U. S. D. A., Tex. Agri. Expt. Station, College Station, Tex. **PLANT PHYSIOLOGY**.

EATON, Herbert Nelson, Chf., Hydraulic Lab. Section, Natl. Bureau of Standards, 3 E. Inverness Driveway, Chevy Chase, Md. **HYDRAULIC ENGINEERING**.

EATON, James Tucker, Mgr. of Rsch., E. F. Houghton and Co., 303 W. Lehigh Ave., Philadelphia, Pa. **ORGANIC CHEMISTRY**.

EATON, Merrill Thomas, Prof. of Edn. and Dir., Bureau of Measurement, Ind. Univ., Bloomington, Ind. **EDUCATIONAL MEASUREMENTS**.

EATON, Monroe Davis, Harvard Med. Schl., 25 Shattuck St., Boston, Mass. BACTERIOLOGY.

EATON, Orson Northrop, Assoc. Animal Husbandman, U. S. D. A., Beltsville, Md. GENETICS.

EATON, Scott Verne, Asst. Prof. of Botany, Univ. of Chicago, Chicago, Ill. PLANT PHYSIOLOGY.

EATON, Vernet Eller, Prof. of Physics, Wesleyan Univ., Middletown, Conn. PHYSICS OF SURFACES.

EBAUGH, Franklin Gessford, Jr., Rsch. Fellow, Evans Memorial Hos. and Instr. in Med., Boston Univ. Schl. of Med., 65 E. Newton St., Boston 18, Mass. INTERNAL MEDICINE, HEMATOLOGY AND USE OF RADIOISOTOPES IN MEDICINE. b. Philadelphia, Pa., Dec. 25, 1921. s. Franklin G. and Dorothy (Reese) E. Edn.: A.B., Dartmouth Coll., 1944; M.D., Cornell Univ., 1946. m. Frances Aileen Newman, Dec. 20, 1945. c.: Sandra; Patricia; Franklin G., III; Douglas O. Exp.: Intern Med., N. Y. Hosp., 1946-47; Fellow in Physiol., Cornell Univ. Med. Schl., 1947-48; Asst. in Med., ibid., 1948-50; Asst. Resident in Med., N. Y. Hosp., 1948-50; Asst. in Med., Boston Univ. Schl. of Med., 1950—. Mem.: Harvey Soc.; Amer. Federation for Clinical Rsch.; Alpha Omega Alpha; Nu Sigma Nu; Phi Beta Kappa; Sigma Xi. Contrb. to: Amer. Jour. Physiol.; Jour. Applied Physiol.; Jour. Hematology; Proc. Soc. Exptl. Biol. and Med.; etc. Special Int.: Hematology—Use of Radioisotopes in Med.—Temperature Regulation (Physiology of)—Trace Metal Metabolism, Blood Preservation—Hemolytic Anemias—Therapy of the Leukemias and Lymphomas.

EBAUGH, William Clarence, Denison Univ., Granville, Ohio. CHEMISTRY.

EBBUTT, Frank, Geologist, Howe Sound Co., N. Y., N. Y. MINING GEOLOGY.

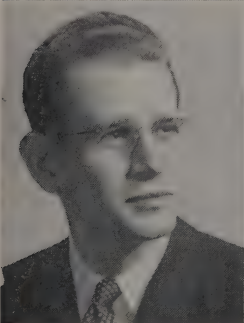
EBELING, Albert H., Lone Moose Farm, Jamaica, Vt.

EBELING, Walter, Assoc. Prof. of Entomol. and Assoc. Entomologist, Univ. of Calif., 10659 Rochester Ave., Los Angeles, Calif. ENTOMOLOGY.

EBERSON, Frederick, Chf. of Lab. Service, U. S. Veterans Admin. Hosp., Wilmington, Del. PATHOLOGY AND BACTERIOLOGY.

EBY, James Brian, Consulting Geologist, 1404 Esperson Bldg., Houston, Tex. GEOLOGY.

EBY, Lawrence Thornton, Rsch. Chemist, Chem. Div., Standard Oil Development Co., Linden, N. J. ORGANIC CHEMISTRY.



b. S. Bend, Ind., May 3, 1916. s. Ralph C. and Edna May (Thornton) E. Edn.: B.S., Univ. of Notre Dame, 1938; M.S., ibid., 1939; Ph.D., ibid., 1941. m. Claudine Isabelle Hart, June 8, 1941. c.: Jane Sue; Claudia Ann. Exp.: Rsch. Chemist, Standard Oil Development Co., Linden, N. J., 1941—. Mem.: Amer. Chem. Soc.; Amer. Inst. of Chemists; A.A.A.S.; Tech. Soc. Coun. of N. J.; N. Y. Rubber Group. Contrb. to: Jour. Amer. Chem. Soc.; Indus. Engrng. Chem.; Anal. Ed.; Anal. Chem.; Amer. Med. Assn. Arch. of Indus. Hygiene and Occupational Med. Gen. Int.: 14 U. S. Patents; Leader in Church and Church Schl. Special Int.: Organic Chem.; Petroleum Chem.; Rubber Chem.; Analytical Chem.; Carcinogenesis; Statistics.

EBY, Samuel L., 201 Greendale Ave., Cincinnati, Ohio. EDUCATION.

ECHLIN, Francis Asbury, Prof. of Clinical Neurosurgery, NYU-Post-Grad. Med. Schl., 555 Park Ave., New York 21, N. Y. NEUROLOGICAL SURGEON. b. Ottawa, Ontario, Can., June 12, 1906. s. Edmund B. and Margaret (MacCormack) E. Edn.: M.D., McGill Univ., 1931; Sc.D., Columbia Univ., 1938; M.Sc., McGill Univ., 1942. m. Mary Letitia Wilson, Jan. 3, 1938. c.: Letitia Vals; Diana Margaret; Johanna Lorraine. Exp.: Interne in Neurology, Royal Victoria Hospital, Can., 1931-32; Rsch. Fellow, Surgical Pathology, Johns Hopkins Hosp., Baltimore, Md., 1932; Resident in Surgery, Bellevue Hosp., N. Y., N. Y., 1933-35; Resident in Neurol., New York Neurological Inst., New York City, N. Y., 1935; Res. Fellow in Neurophysiol., Cambridge Univ., England, 1936—. Externe Queen's Square, National Hospital, 1936-37; Rsch. Fellow, Coll. de France, Paris, 1937; Interne, Montreal Neurological Inst., Montreal, Can., 1937-38; Fellow Neurosurgery and Neurophysiology, Montreal Neurological Inst., 1938; Interne, Montreal Neurological Inst., Montreal, Can., 1938-39; Fellow, ibid., 1939; Private Practice of Neurosurgery, New York City, N. Y., 1939-42; 1946—. Mem.: Harvey Cushing Soc.; Amer. Neurological Assn.; Amer. Acad. Neurol. Surgery; Amer. Coll. of Surgeons; Amer. EEG Soc.; Amer. Med. Assn.; Assoc. Rsch. in Nerv. and Mental Disease; N. Y. Acad. of Med.; Diplomate Amer. Bd. of Neurological Surgery; Kappa Alpha. Author: Injuries of the Brain and Spinal Cord, 1949. Contrb. to: Jour. of Physiol.; Archives Neurol. and Psychiat.; Archives of Surgery; Jour. of Neurosurgery; Surg.; etc. War Record: Major, AUS, Chief Neurosurgical Centers, 1942-45. Gen. Int.: Delta Upsilon Travelling Scholarship, 1932; Royal Soc. of Canada Rsch. Fellowship, 1936. Special Int.: Neurophysiology, Neurosurgery.

ECKART, Carl, Dir., Marine Physical Lab. and Prof. of Physics, Univ. of Calif., U. S. N. Electronics Lab., Box 992, La Jolla, Calif. MATHEMATICS, PHYSICS.

ECKER, Enrique E., Prof. of Immunol., Western Reserve Univ., Cleveland, Ohio. IMMUNOLOGY.

ECKERSON, Sophia Hennion, Francetown, N. H. BOTANY.

ECKHARDT, Engelhardt A., P. O. Box 2038, Pittsburgh, Pa. PHYSICS.

ECKHARDT, Robert C., Agronomist, U. S. D. A., Miss. Agri. Expt. Station, State College, Miss. AGRONOMY.

ECKSTEIN, Gustav, Jr., Assoc. Prof. of Physiol., Coll. of Med., Univ. of Cincinnati, Cincinnati, Ohio. PHYSIOLOGY.

EDDIE, Bernice U., Asst. Dir. and Asst. Prof. of Rsch. Med., Hooper Foundation Med. Center, 130 Frederick St., San Francisco, Calif.

EDDINS, Auther Hamner, Plant Pathologist in Chg., Potato Dis. Investigation Lab., Univ. of Fla. Expt. Station, Hastings, Fla. PLANT PATHOLOGY.

EDDS, Jess Hobart, Prof. of Psychol., Lincoln Memorial Univ., Harrogate, Tenn. PSYCHOLOGY.

EDDY, Bernice Elaine, Bacteriologist, Lab. Biologics Control, Natl. Inst. of Health, Bethesda, Md. BACTERIOLOGY.

EDDY, Clifford O., Dir. of Rsch., Niagara Sprayer and Chemical Co., Middleport, N. Y. ENTOMOLOGY.

EDDY, Milton Walker, Prof. of Biol., Dickinson Coll., 249 W. Louthier St., Carlisle, Pa. ZOOLOGY.

EDDY, Nathan B., Prin. Pharmacologist, U. S. P. H. S., Natl. Inst. of Health, 7055 Wilson Lane, Bethesda, Md. PHARMACOLOGY.

EDGAR, David S., Jr., Exec. Vice-Pres. and General Counsel, Natl. Canine Rsch. Foundation, 34 Albemarle Rd., Westbury, L. I., N. Y. GENETICS OF PATHOGENIC VIRUSES. b. Jersey City, N. J., Apr. 13, 1903. s. David Stewart and Agnes

(Macmillan) E. Edn.: LL.B., St. Lawrence Univ., 1924; A.B., N. Y. Univ., 1936. m. Martha J. Brush, July 7, 1926. c.: David S., III; Martha Jane. Exp.: Instr., 1925-27; Assoc. Prof., 1927-36; Prof., 1936-44; (Evolutionary Sociol Jurisprudence) St. Johns Univ., Schl. of Law; Extension Vice-Pres. and General Counsel, 1945; Founder (1945), Fellow (1946) Natl. Canine Rsch. Foundation. Mem.: N. Y. Acad. Sci.; A.A.U.P.; A.A.A.S.; Phi Delta Phi. Contrb. to: Amer. Kennel Gazette; Med. Record; etc. Special Int.: Philos. of Behavior Phenomenon as Biological, Organic and Evolutionary in Social and Natural Sci.

EDGAR, Rachel Hartman, Textile Chemist, Iowa State Coll., Ames, Iowa. **TEXTILE CHEMISTRY.**

EDGAR, Samuel Allen, Prof. and Poultry Pathol., Poultry Dept., Ala. Poly. Inst., Auburn, Ala. **PARASITES AND DISEASES PARTICULARLY OF DOMESTIC BIRDS.** b. Stafford, Kans., Feb. 6, 1916. s. J. D. and Zada Ann (Patton) E. Edn.: B.S., Sterling Coll., 1937; M.S., Kans. State Coll., 1939; Ph.D., Univ. of Wis., 1944. m. Phyllis Wells, Jan. 30, 1939. Exp.: Instr., Kans. State Coll., 1939-41; Grad. Rsch. Asst. in Zool. and Vet. Sci. Depts., Univ. of Wis., Madison, Wis., 1941-43; Army, 1943-47; Assoc. Animal Pathol., Ala. Poly. Inst., Auburn, Ala., 1947-48; S. A. Scientist (R) U.S.P.H.S., 1949-50; Prof. and Poultry Pathol., *ibid.*, 1950—. Mem.: A.A.A.S.; Sigma Xi; Gamma Sigma Delta; Phi Sigma; Amer. Soc. of Tropical Med. and Hyg.; Philippine Malaria Soc.; Natl. Geographic Soc. Contrb. to: Amer. Jour. of Vet. Rsch.; Kans. Poultry Sci. Assn.; Amer. Micro. Soc.; Amer. Soc. Parasitol.; Amer. Soc. Zool.; Acad. of Sci.; Poultry Sci.; Anat. Record; Amer. Jour. of Tropical Med. and Hyg.; Jour. of Parasitol.; Trans. Amer. Micro. Soc. Special Int.: Protozoan, Helminth, Ectoparasites and other Diseases of Chickens, Histogenesis of Esophagus of Birds, Filariasis and Malaria of Man.

EDGE, Elton R., Chmn., Dept. of Biol., San Bernardino Valley Coll., San Bernardino, Calif. **ZOOLOGY, ECOLOGY.**

EDGERTON, Claude Wilbur, Hd., Dept. of Botany, Bacteriol. and Plant Pathol., La. State Univ., Baton Rouge, La. **PLANT PATHOLOGY.**

EDGERTON, Harold A., Vice-Pres., Richardson, Bellows, Henry and Co., Inc., 1 West 57th St., N. Y. 19, N. Y. **INDUSTRIAL PSYCHOLOGY.** b. Russell, Kans., Jan. 18, 1904. s. T. A. and Lavina (Dixon) E. Edn.: B.S., Kans. State Tchrs. Coll., 1924; M.A., Ohio State Univ., 1926; Ph.D., *ibid.*, 1928. m. Wanda Mischbach, 1945. c.: Thomas H.; John D.; Mary L. Exp.: Rsch. Assoc. in Psychol., Ohio State Univ., Columbus, Ohio, 1928-30; Asst. Prof., *ibid.*, 1930-41; USES Occ. Rsch. Prog., 1935-37; Counselor, Ohio State Univ., 1937-41; Assoc. Prof., *ibid.*, 1941-46; Dir., Occupational Opportunities Surv., *ibid.*, 1941-46; Prof., *ibid.*, 1946-47; Vice-Pres., Richardson, Bellows, Henry and Co., Inc., 1947—; Consultant on Westinghouse Sci. Talent Search, 1942—. Mem.: A.A.A.S.; Amer. Psychol. Assn.; Psychometric Soc.; Sigma Xi; Pi Mu Epsilon; Phi Delta Kappa; Pi Kappa Delta; Alpha Psi Delta. Contrb. to: Ednl. Rsch. Bull.; Jour. of Applied Psychol.; Jour. of Ednl. Psychol.; Jour. Ednl. Rsch.; Jour. of Higher Edn.; etc. Special Int.: Personnel Evaluation, Equipment Design; Statistical Analysis; Trng. and Trng. Devices Evaluation.

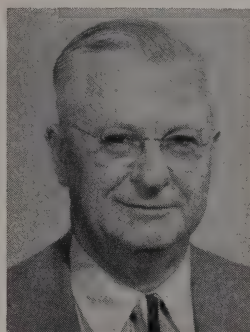
EDINGTON, William Edmund, Prof. and Hd., Dept. of Math. and Astron., DePauw Univ., Greencastle, Ind. **MATHEMATICS.**

EDISON, Theodore Miller, Pres., Calibron Products, Inc., 51 Lakeside Ave., West Orange, N. J. **PHYSICS.**

EDMOND, Joseph Bailey, Prof. of Hort., Miss. State Coll., Miss. b. Oct. 11, 1894, Yorkshire, Eng. s. John Edward and Elizabeth Ann E. Edn.: B.S., Mich. State Coll., 1923; M.S., Iowa State Coll., 1924; Ph.D., Univ. of Md., 1933. Exp.: Instr. in Horticulture, Mich. State Coll., 1924-29; Assoc. Prof. of Horticulture, Miss. State Coll., 1931-35; Assoc. Prof. of Hort., Clemson Coll., 1935-44; Assoc. Hort., Ga. Agri. Expt. Sta., 1945-46; Assoc. Hort., La. Agri. Expt. Sta., 1947-48; Prof., Hort., Miss. State

Coll., 1948—. Mem.: Sigma Xi; Phi Kappa Phi; Phi Sigma; Gamma Sigma Delta; Alpha Zeta; Pi Kappa Phi. Ph.D. Dissertation: Sex Expression in Cucumbers, Univ. of Md., 1933. War Record: Entered Serv., Sept., 1917, Served with Co. K, 125th Inf., 32nd Div., Oct., 1917-Feb., 1919. Special Int.: The Physiology and culture of vegetables.

EDMISTON, Robt. Wentz, Prof. of Edn., Dir. of Practical Arts Div., Miami Univ., Oxford, Ohio.



PSYCHOLOGICAL MEASUREMENT GUIDANCE. b. Oct. 21, 1894, Wapakoneta, Ohio. s. A. L. Edmiston and Alice (Wentz). A.B., Miami Univ., 1916; M.A., Ohio State Univ., 1921; Ph.D., *ibid.*, 1929. m. Helen Marie Fisher, Wapakoneta, Ohio, 1918. d. Mr. and Mrs. Edward Fisher. c.: Robt. Edward. Exp.: Sci. Instr., Wapakoneta, 1916-19; Prin. of Schls., Celina, 1919-22; Supv. of Sci., Central H. S., Lima, Ohio, 1922-28; Chmn. of Chem. Dept., Northwestern State

Coll., 1930-31; Visiting Prof., Geo. Peabody Coll. for Tchrs., 1931-32; Prof. of Education, Miami University, 1932 to date. Hon. Pos.: Grad. Fellow, Ohio State Univ., 1928-39. Mem.: Natl. Edn. Assn.; A.A.A.S.; A.A.U.P.; Amer. Edn. Rsch. Assn.; Natl. Soc. of Coll. Tchrs. of Edn.; Phi Kappa Tau; Phi Beta Kappa; Phi Delta Kappa; Epsilon Pi Tau; Mason. Contrb. to: Schl. and Soc.; Amer. Schl. Bd. Jour.; Jour. Edn. Psychol.; Peabody Jour. of Edn.; Jour. of Edn.; Rsch.; Sci. Edn. Author: Measures of Interests, Motor Capacity, and How-to-Study. Ph.D. Dissertation: Overlapping in Secondary Schl. Sci. War Record: Second Lieut., C. W. S., U. S. A.

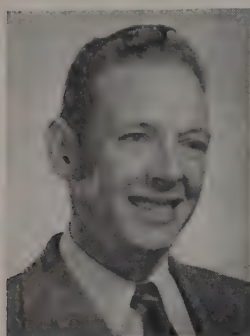
EDMUNDSON, Raymond Smith, Asst. Prof. of Geol., Univ. of Va., Charlottesville, Va. **GEOLOGY.**

EDSALL, John Tileston, Prof. of Biol. Chem., Univ. Lab. of Physical Chem., Harvard Univ., 25 Shattuck St., Boston 15, Mass. **PHYSICAL CHEMISTRY OF BIOCHEMICAL SYSTEMS WITH SPECIAL REFERENCES TO PROTEINS.** b. Philadelphia, Pa., Nov. 3, 1902. s. David Linn and Margaret Harding (Tileston) E. Edn.: A.B., Harvard Univ., 1923; M.D., Harvard Med. Schl., 1928. m. Margaret Dunham, May 1, 1929. c.: James Lawrence; David Tileston; Nicholas Cranford. Exp.: Tutor in Biochem. Sciences, Harvard Univ., 1928—; Chmn., Bd. of Tutors in Biochem. Sciences, *ibid.*, 1931—; Asst. Prof. of Biol. Chem., *ibid.*, 1932-38; Assoc. Prof., *ibid.*, 1938-51; Prof., *ibid.*, 1951—; Mem., Univ. Lab. of Physical Chem., *ibid.*, 1950—. Hon. Pos.: Chmn., Div. of Biol. Chem., Amer. Chem. Soc., 1948-49, 1950-51. Mem.: Natl. Acad. Sci.; Amer. Acad. Arts and Sci.; N. Y. Acad. Sci.; Amer. Chem. Soc.; Amer. Soc. Biol. Chemists; A.A.A.S.; Sigma Xi; U. S. Natl. Commn. for UNESCO, 1950—. Co-author: Proteins, Amino Acids and Peptides, 1943. Contrb. to: Jour. Amer. Chem. Soc.; Jour. Biol. Chem.; Jour. Chem. Physics; etc. War Record: Worked for Committee on Med. Rsch., Office of Scientific Development, on Development of Fractionation Products of Blood Plasma, 1941-45. Special Int.: Physical Chem. of Proteins, Amino Acids; Peptides; Double Refraction of Flow; Raman Spectra; Muscle Proteins; Blood Clotting.

EDWARDS, Dayton J., Asst. Dean and Assoc. Prof. of Physiol., Cornell Univ. Med. Coll., 1300 York Ave., N. Y., N. Y. **PHYSIOLOGY.**

EDWARDS, Hiram W., Dir. of Relations with Schls. and Assoc. Prof. of Physics, Univ. of Calif., 1178 Laurel St., Berkeley, Calif. **PHYSICS, ADMINISTRATION.**

EDWARDS, J. Gordon, Asst. Prof. in Entomol., San Jose State Coll., San Jose, Calif. **ENTOMOLOGY.**



ESPECIALIZING COLEOPTEROLGY. b. Wilmington, Ohio, Aug. 24, 1919. s. Gus Powell and Evadna (Spears) E. Edn.: B.S., Butler Univ., 1942; M.Sc., Ohio State Univ., 1946; Ph.D., *ibid.*, 1949. m. Alice Louise Althaus, Oct. 12, 1946. c. Jane Anne. Exp.: Lab. Asst. in Botany and Curator of Insects, Butler Univ., 1938-42; State Park Naturalist, Brown Co. State Park, Ind., summer, 1941; Grad. Asst. in Entomol. and Zool., Ohio State Univ., 1946-48; Ranger-Naturalist, Glacier Natl. Park, 1947, 1950-52; Ranger-Naturalist, Mt. Rainier Natl. Park, 1948; Instr. in Entomol. and Biol., San Jose State Coll., San Jose, Calif., 1949-52; Asst. Prof., *ibid.*, 1952—. Hon. Pos.: Vice-Pres. (Pres.-Elect), Pac. Coast Entomol. Soc.; Advisory Bd. of Coleopterists Bull. Mem.: Pacific Coast Entomol. Soc.; Amer. Soc. Professional Biol.; Soc. Systematic Zool.; Sigma Xi; Gamma Sigma Delta; Beta Beta Beta. Author: Coleoptera or Beetles East of the Great Plains, 1949; Bibliographical Supplement to Coleoptera or Beetles of the Great Plains, 1950. Contrb. to: Wasmann Jour. Biol.; The Coleopterists Bull.; Bull. Royal Inst. Sci. Natl. Belgique. War Record: U. S. Army Med. Service, 1942-45. Special Int.: Syneta of the World; Systematics of Insect Populations; Cupesidae of World.

EDWARDS, John Elza, Professor of Physics, Ohio Univ., Athens, Ohio. **PHYSICS.** b. Rio Grande,



Ohio, Jan. 23, 1908. s. Elza and Annie (Jones) E. Edn.: B.S., Ohio Univ., 1930; A.M., *ibid.*, 1932; Ph.D., Ohio State Univ., 1947. m. Bernice Stanley of Athens, Ohio, Aug. 15, 1936. d. Luster and Frances Stanley. Exp.: Instr. in Physics, Ohio Univ., 1932; Asst. Prof. of Physics, *ibid.*, 1943; Assoc. Prof., *ibid.*, 1947-51; Prof. of Physics, *ibid.*, 1951—. Hon. Pos.: Science Comm., Ohio Post War Planning Comm., 1945. Mem.: Amer. Phys. Soc.; Phi Beta Kappa; Kappa Delta Pi; Sigma Xi; Sigma Pi Sigma. Contrb. to: Phys. Rev.; Amer. Jour. of Physics; Jour. of Applied Physics. Ph.D. Dissertation: X-Rays Associated with Radioactive Sources. Listed in: A.M.S.; W. W. in the Mid-West. Special Int.: X-rays and Radioactivity.

EDWARDS, J. Graham, Assoc. Prof. of Anatomy, Med. Schl., Univ. of Buffalo, 24 High St., Buffalo, N. Y. **MICROSCOPIC ANATOMY.**

EDWARDS, Leroy Delos, Prof. of Pharmacol., Purdue Univ., West Lafayette, Ind. **PHARMACOLOGY.**

EDWARDS, Linden Forest, Prof. of Anatomy, Ohio State Univ., Columbus, Ohio. **HUMAN ANATOMY.**

EDWARDS, Ray Lee, Prof. of Physics and Hd. Dept., Miami Univ., Oxford, Ohio. **PHYSICS.**

EDWARDS, William Herbert, **MATHEMATICS.**

EGAN, Eula Pearl, Prof. of Psychol., Miss. State Coll. for Women, Columbus, Miss. **CHILD STUDY, EDUCATION PSYCHOLOGY, TESTS AND MEASUREMENTS.** b.



Mar. 9, 1894, Winfield, Ala. d. John C. and Mary Ella (Moss) E. Edn.: A.B., Judson Coll., 1916; M.A., Tehrs. Coll., Columbia Univ., 1924; Ph.D., Peabody Coll., 1931. Exp.: Elem. and H. S., Ala., 1916-23; Newton Inst., Jr. Coll., Dean of Women and Hd. of Eng. Dept., 1924-25; Hd., Dept. of Ednl. Psychol., S. T. C., Florence, Ala., 1925-48; Dean of Women, 1947-48; Prof. of Psychol., Miss. State Coll. for Women, Columbus, Miss., 1948—. Hon. Pos.: Pres., Ala. Div., Amer. Assn. of Univ. Women. Mem.: Sou. Soc. of Philos. and Psychol.; Kappa Delta Pi; Delta Kappa Gamma; Amer. Psychological Assn. Ph.D. Dissertation: The Effect of Fore-Exercises on Test Reliability.

EGGAN, Fred, Univ. of Chicago, Chicago, Ill. **ANTHROPOLOGY.**

EGGERS, Harold, Prof. Emer. of Pathol., Univ. of Nebr. Med. Coll., 303 S. 51st Ave., Omaha, Nebr. **PATHOLOGY.**

EGGERTH, Arnold H., Assoc. Prof., Long Island Coll. of Med., 335 Henry St., Brooklyn, N. Y. **BACTERIOLOGY.**

EGGLESTON, Cary, Assoc. Prof. of Med., Cornell Univ., 125 E. 74th St., N. Y., N. Y.

EGGLESTON, Harla Ray, Prof. and Hd., Dept. of Biol., Marietta Coll., Marietta, Ohio. **ZOOLOGY.**

EGGLESTON, Frank Egbert, Assoc. Prof. of Zool., Univ. of Mich., Ann Arbor, Mich. **LIMNOLOGY, INVERTEBRATE ZOOLOGY.**

EGLOFF, Gustav, Dir. of Rsch., Universal Oil Products Co., 30 Algonquin Road, Des Plaines, Ill. **HYDROCARBONS.** b. N. Y., N. Y., Nov. 10, 1886. s. August and Mary (Schiller) E. Edn.: A.B., Cornell Univ., 1912; M.A., Columbia Univ., 1913; Ph.D., *ibid.*, 1915. Hon. Deg.: D.Sc., Poly. Inst. of Brooklyn, 1938; D.Sc., Ill. Inst. of Tech., 1940; D.Sc., Philadelphia Coll. of Pharm. and Sci., 1944. m. Clara Mellor, Mar., 1915. Exp.: U. S. Bureau of Mines, 1915-16; Chf. Chemist, Aetna Chem. Co., 1916-17; Dir. of Rsch., Universal Oil Products Co., 1917—. Mem.: Fellow, Amer. Geographical Soc.; Fellow, Petroleum Inst. of Great Britain; Fellow, N. Y. Acad. of Sci.; Fellow, A.A.A.S.; Fellow, Amer. Inst. of Chemists; Fellow, Royal Soc. of Arts of Great Britain; Amer. Chem. Soc.; Amer. Inst. of Chem. Engrs.; Amer. Inst. of Chemists; Chem. Inst. of Can., Fellow; Fellow Royal Soc. of Edinburgh.



EHLERS, George Marion, Prof. of Geol. and Curator, Paleozoic Invertebrates, Univ. of Mich., Ann Arbor, Mich. **INVERTEBRATE PALEONTOLOGY.**

EHRENFRIED, Albert, Surgeon, 520 Beacon St., Boston, Mass. **SURGERY.**

EHRENKRANZ, Florence A., Assoc. Prof. of Household Equipment, Dept. of Home Econ., Iowa State Coll., Ames, Iowa. **HOME ECONOMICS.**

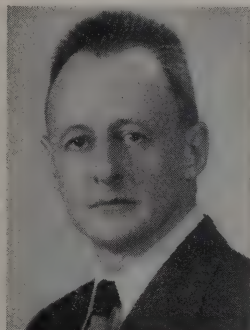
EGLY, Richard Samuel, Dir. of Chem. Rsch., Rsch. Dept., Commercial Solvents Corp., Terre Haute, Ind.



CHEMICAL ENGINEERING AND ORGANIC CHEMISTRY. b. Grabill, Ind., July 6, 1914. s. Albert and Anna (Stukey) E. Edn.: B.S., Purdue Univ., 1936; M.S., Univ. of Ill., 1938; Ph.D., ibid., 1940. m. Helen Bourke, July 2, 1949. c.: David Alan, Sarah Margaret. Exp.: Graduate Asst., Univ. of Ill., Urbana, Ill., 1936-40; Chem. Engr., Rsch. Dept., Commercial Solvents Corp., Terre Haute, Ind., 1940-43; Chief, Chem. Engr. Group, ibid., 1943-50;

Dir. of Chem. Rsch., ibid., 1950—. Mem.: Amer. Chem. Soc.; Amer. Inst. of Chem. Engrs.; Natl. Assn. of Corrosion Engr.; Soc. of Chem. Industry; Alpha Chi Sigma; Phi Lambda Upsilon; Tau Beta Pi; Omega Chi Epsilon; Sigma Xi. Contrb. to: Industrial and Engineering Chem.; Chem. Engineering Progress. Special Int.: Equipment and Processes for Nitrating Alkane Hydrocarbons, Preparation of Nitroparaffin Derivatives, High Pressure Techniques and Reactions and Application of Heat Transfer Principles to Laboratory and Pilot Plant Equipment.

EHRENSTEIN, Maximilian Richard, Prof. of Physiological Chem., Schl. of Med., Univ. of Pa., 806



Maloney Clinic, Univ. of Pa. Hosp., Philadelphia 4, Pa. **ORGANIC, PHYSIOLOGICAL AND MEDICINAL CHEMISTRY.** b. May 11, 1899, Munich, Germany. s. Richard and Amanda Alwine (Engels) E. Edn.: Realgymnasium, Goettingen, Final Exam., 1918; Ph.D., Univ. of Goettingen, 1921; State Bd. Exam. in Food Chem., Univ. of Munich, 1928; State Bd. Exam. for Apothecaries, Univ. of Berlin, 1931; Habilitation as Privatdozent in Med. Chem., ibid., 1931. m. Elsa Meyer of Ham-

burg, Germany, Apr. 5, 1925. d. Carl Christian Barthold Wilhelm and Johanna (Detje) Meyer. Exp.: Asst. in Chem., Univ. of Goettingen, 1921-23; Asst. in Organic Chem., Technische Hochschule Breslau, 1923-25; Rockefeller Foundation Fellow in Organic Chem., Univ. of Zurich, 1925-26; Rsch. Assoc. in Organic Chem., Univ. of Munich, 1926-29; Instr. in Analytical Chem., Organic Chem., Food Chem. and Pharmaceutical Chem., Univ. of Berlin, 1929-31; Privatdozent of Medicinal Chem., ibid., 1931-34; Rsch. Assoc. in Physiol. Chem., Med. Schl., Univ. of Va., 1934-37; Asst. Prof. of Chem., Assigned to Med., Med. Schl., Univ. of Pa., 1937-48; Assoc. Prof. of Physiol. Chem., Assigned to Med., ibid., 1948-49; Prof. of Physiol. Chem., Assigned to Rsch. Med., ibid., 1949—. Mem.: Swiss Chem. Soc.; A.C.S.; A.S.B.C.; Phila. Br. Amer. Pharmaceutical Assn.; Physiol. Soc. of Phila.; Phila. Organic Chem. Club; Phila. Biochem. Club; Endocrine Soc. of Phila. Contrb. to: Chem. and Med. Jours. Ph.D. Dissertation: On the Thermal Decomposition of Some Dicarboxylic Acids. Listed in: A.M.S. Special Int.: Alkaloid Chem. and Steroid Chem.

EHRET, William F., Prof. of Chem., N. Y. Univ., Wash. Sq., N. Y. 3, N. Y. b. July 18, 1902, N. Y. **N. Y. INORGANIC AND PHYSICAL CHEMISTRY.** s. William and Freda (Wagener) E. Edn.: B.S., Coll. of the City of N. Y., 1923; M.S., Columbia Univ., 1924; Ph.D., ibid., 1927. m. Dorothy de la Mare, Oradell, N. J., Oct. 30, 1926. d. Alpheus and May de la Mare. c.: Dorothy; Elisabeth. Exp.: Fellow in Chem., Coll. of City of N. Y., 1923; Asst. in Chem., Columbia Univ., 1923-26; Instr. in Chem.,

N. Y. Univ., 1926-28; Exchange Lectr., Univ. of Edinburgh, 1929-30; Asst. Prof. of Chem., N. Y. Univ., 1929-32; Assoc. Prof. of Chem., ibid., 1933-35; Prof. of Chem., ibid., 1936—; Visiting Prof. of Chem., Columbia Univ., 1943-44; Visiting Prof. of Chem., Univ. of Hawaii, 1950-51. Mem.: Phi Beta Kappa; Sigma Xi; Phi Lambda Upsilon; Alpha Beta Gamma. Author: Lab. Studies in Gen. Chem., 1932; Phys. Sci., 1942; Smith's Coll. Chem., 1946; Smith's Introd. Coll. Chem., 1950. Contrb. to: Jour. of Amer. Chemical Soc.; Jour. of Chem. Edn. Ph.D. Dissertation: Compound Formation in Ternary Systems of Salts with a Common Ion in Aqueous Solution. Travel: British Isles; Sweden; Germany; France; Hawaii. Listed in: A.M.S.

EICHELBERGER, William Snyder, retired, 11 Lake View Park, Rochester, N. Y. **ASTRONOMY.**

EIESLAND, John Arndt, Prof. Emer., W. Va. Univ., 316 Demail Ave., Morgantown, W. Va. **MATHEMATICS.**

EIGENBRODT, Harold John, Prof. of Zool., North Central Coll., Naperville, Ill.

EIGSTI, Orie Jacob, Assoc. Prof. of Botany, Northwestern Univ., Evanston, Ill. **BOTANY.**

EIKENBERRY, William Lewis, retired, 709 S. Congress St., Polo, Ill. **BOTANY, SCIENCE EDUCATION.**

EILENBERG, Samuel, Prof. of Math., Swain Hall, Ind. Univ., Bloomington, Ind. **MATHEMATICS.**

EILER, John J., Univ. of Calif. Coll. of Pharmacy, San Francisco, Calif. **BIOCHEMISTRY.**

EIMICKE, Victor W., Supvr., The City Coll. Audio-Visual Center and Audio-Visual Extension Service,



796 Bronx River Rd., Bronxville, N. Y. **BUSINESS AND INDUSTRIAL PSYCHOLOGIST.** b. N. Y., Feb. 4, 1923. s. Victor and Anna (Gille) E. Edn.: A.B., N. Y. Univ., 1945; M.A., ibid., 1946; Ph.D., ibid., 1951. m. Marilyn Hirschheim, July 25, 1945. Exp.: Statistical Analyst, Schieffelin and Co., 1945-46; Researcher of Veteran Population, N. Y. Univ. Testing and Advisement Unit, 1946; Vocational Appraiser, Testing and Advisement Unit, Brooklyn Coll., 1946-47; Instr., Dept. of Psychol., Brooklyn Coll., 1947-48; Part-time Instr., N. Y. Univ., Schl. of Edn., 1948-51; Part-time Assoc., Pace Coll., 1949—; Supvr. of Testing and Evaluation Unit, City Coll. Schl. of Business, 1947-49; Supvr., Audio-Visual Center and the Audio-Visual Extension Service, ibid., 1948—; Industrial Psychol. Consultant, 1947—. Hon. Pos.: Chmn., Rsch. Com., Natl. Assn. of Trng. Dirs., 1951; Chmn., Public Relations Com. of the Univ. Film Producers Assn., 1952-53. Mem.: Amer. Psychol. Assn.; Eastern Psychol. Assn.; N. Y. State Psychol. Assn.; Natl. Assn. of Trng. Dirs.; Amer. Soc. Trng. Dirs.; Univ. Film Producers Assn.; Internatl. Congress of Psychotechnology; Amer. Guidance Personnel Assn.; Phi Beta Kappa; Phi Delta Kappa; Kappa Delta Pi. Contrb. to: Business Screen; Jour. Psychol.; Natl. Business Edn. Quarterly; Jour. Marketing; Occupations; Printers Ink; Collegiate News and Views. Special Int.: Rsch. Specialist in Personnel Selection Systems; Evaluation-Sales Executives and Clerical Personnel; Personnel Organization-Trng. Programs; Utilization and Production of Trng. Films.

EINARSSON, Sturla, Prof. of Astron., Univ. of Calif., Berkeley, Calif. **ASTRONOMY.**

EINHORN, Max, Prof. Emer. Med., N. Y. Post Grad. Med. Schl., 20 E. 63rd St., N. Y., N. Y.

EINSTEIN, Albert, The Inst. for Advanced Study, Princeton, N. J.

EISELEY, Loren Corey, Chmn., Dept. of Anthropology, Univ. of Pa., Philadelphia, Pa. **ANTHROPOLOGY, HUMAN EVOLUTION.** b. Lincoln, Nebr., Sept. 3, 1907. s. Clyde Edwin and Daisy (Corey) E. Edn.: A.B., Univ. of Nebr., 1933; M.A., Univ. of Pa., 1935; Ph.D., *ibid.*, 1937. Soc. Sci. Rsch. Council Post-Doctoral Fellow, Columbia Univ. and Amer. Mus. of Natural Hist., 1940-41. m. Mabel Langdon, Aug. 29, 1938. Exp.: Asst. Prof. of Anthropol. and Sociol., Univ. of Kans., Lawrence, Kans., 1937-42; Assoc. Prof., *ibid.*, 1942-44; Prof. of Sociol. and Hd. Dept. of Sociol. and Anthropol., Oberlin Coll., Oberlin, Ohio, 1944-47; Prof. of Anthropol. and Chmn. Dept., Univ. of Pa., Philadelphia, Pa., 1947—; Curator of Early Man, Univ. of Pa. Museum, *ibid.*, 1948—; Visiting Prof. of Anthropology, summer school: Columbia Univ., 1940 and 1946; Univ. of Calif., 1949; Harvard Univ., 1952. Hon. Pos.: Pres., Amer. Inst. of Human Paleontol., 1949-52; Vice-Pres., Amer. Anthropol. Assn., 1948; Vice-Chmn., Div. of Psychol. and Anthropol., Natl. Rsch. Council, 1950-52. Mem.: Soc. for Study of Evolution; Amer. Assn. of Physical Anthropol.; A.A.A.S., (Fellow); Phila. Anthropol. Assn. (V.-Pres., 1947, Pres., 1948); Sigma Xi; Alpha Kappa Delta; Sigma Upsilon; Franklin Inn Club, Philadelphia. Contrb. to: Amer. Antiquity; Amer. Anthropol.; Amer. Jour. of Phys. Anthropol.; Sci.; Sci. Monthly; Scientific Amer.; Proc. of Amer. Phil. Soc.; Proc., Kans. Acad. of Sci., Harper's Magazine, Special Int.: Hist. of Biology; Human Evolution; Early Man in Amer.; Faunal and Floral Problems Relating to Human dating and the Rise of Man. Recipient of research grants from Wenner-Gren Foundation for Anthropology.

EISENBERG, Moses Joel, Chf. Dental Dept., Jewish Memorial Hosp., 45 Townsend St., Roxbury, Mass. **DENTISTRY, HISTOLOGY, FLUORESCENCE ANALYSIS.**

EISENHART, Luther Pfahler, 25 Alexander St., Princeton, N. J.

EISENMENGER, Walter S., Rsch. Prof. and Hd., Dept. of Chem., Mass. State Coll., Amherst, Mass. **SOIL CHEMISTRY.**

EISENSEN, Jon, **SPEECH AND HEARING.**

EKBLAW, Walter Elmer, Prof. of Geography, Clark Univ., Worcester, Mass. **GEOGRAPHY.**

EKELEY, John Bernard, Prof. Emer. Chem., Univ. of Colo., 703 11th St., Boulder, Colo. **CHEMISTRY.**

EKROTH, Clarence V., Tech. Dir., Ekroth Labs., Inc., 60 Freeman St., Brooklyn, N. Y. **CHEMISTRY.**

ELDER, Albert L., Dir. of Rsch., Corn Products Refining Co., Argo, Ill. **CHEMISTRY.**

ELDERING, Grace, Bacteriologist, Mich. Dept. of Health, 720 Fuller, N. E., Grand Rapids, Mich. **BACTERIOLOGY.**

ELDERFIELD, Robert Cooley, Univ. of Mich., Ann Arbor, Mich.

ELDRED, Byron E., "High Acres", Lime Rock, Conn. **COMMERCIAL INVENTIONS, ENGINEERING.**

ELDRIDGE, Seba, Prof. of Sociology, Univ. of Kans., Lawrence, Kans. **SOCIOLOGY.**

ELFTMAN, Herbert O., Asst. Prof. of Anatomy, Columbia Univ., 630 W. 168th St., N. Y., N. Y. **ANATOMY.**

ELIAS, N. M., Dir. of Rsch., Elias Labs., 251 W. 19th St., N. Y., N. Y. **CHEMISTRY.**

ELIEL, Ernest Ludwig, Assistant Prof., Department of Chemistry, Univ. of Notre Dame, Notre Dame, Ind. **ORGANIC CHEMISTRY.** b. Dec. 28, 1921, Cologne, Germany. s. Oskar and Luise (Tietz) E. Edn.: Univ. of Edinburgh, 1939-40; Univ. of Havana, 1941-46; D. Phys.-Chem. Sc., 1946; Univ. of Ill., 1946-48, Ph.D., 1948. m. Eva Schwarz of N. Y. C., Dec. 23, 1949. d. Simon and

Anna (Schoendorff) S. Exp.: Univ. of Notre Dame, Instr., 1948-50; Asst. Prof., 1950—. Mem.: Amer. Chem. Soc.; A.A.U.P. Frats.: Sigma Xi; Phi Lambda Upsilon; Phi Kappa Phi. Contrb. to: Jour. of the Amer. Chem. Soc. Ph.D. Dissertation: Studies on the Mechanism of Alkylation by Mannich Bases of the Indole Series. Travel: U. S.; Cuba; Great Britain; Western Europe. Hobbies: Music; Tennis; Bridge. Listed in: A.M.S. Special Int.: Organic Synthesis, Organic Reaction Mechanisms. (Photobromination, lithium aluminum hydride, conformational effects in cyclohexane.)

ELL, Carl Stephens, Pres., Northwestern Univ., 350 Huntington Ave., Boston, Mass. **ADMINISTRATION.**

ELLER, Walter Harrison, Assoc. Prof. of Physics, Western Ill. State Coll., Macomb, Ill., 308 Sherman Ave., Macomb, Ill. b. Peoria, Ill., July 21, 1888. s. William and Anna (Brecher) E. Edn.: B.S., Univ. of Chicago, 1920; M.S., Univ. of Mich., 1927; 12 Mos. Grad. Work, Summer Terms, Univ. of Chicago. m. Alice Larson of Rockford, Ill., Mar. 20, 1920. d. Gustaf and Augusta Larson. c.: Dorothy Ann; W. Harrison. Exp.: Country Schl., Ill., 1911; Grade Schl., Ill., 1913; H. S., Ill., 1915; S. T. C., River Falls, Wis., Math., 1916-18; Western Ill. State Coll., Macomb, Ill., 1920—. Mem.: A.A.A.S.; Amer. Assn. of Physics Tchr.; A.A.U.P.; Ill. Acad. of Sci.; Assn. of Ill. Coll. Physics Tchr.; Ill. Ednl. Assn. Contrb. to: Amer. Jour. of Physics. War Record: Musician Sgt., W. W. I. Hobby: Operate Amateur Radio. Listed in: A.M.S.

ELLICKSON, Raymond Thorwald, Asst. Prof. of Physics, Reed Coll., Portland, Ore. **PHYSICS.**

ELLINGSON, Sister Mary Aloyse, Prof. of Chem., Loretto Acad., 39th and Roanoke St., Kansas City Mo. **PROTOZOOLOGY, HORTICULTURE.**

ELLINGTON, E. V., Dir. Extension Service, State Coll. of Wash., Pullman, Wash. **DAIRY HUSBANDRY.**

ELLIOTT, Alfred Marlyn, Prof. of Biol., Univ. of Mich., Ann Arbor, Mich. **PROTOZOOLOGY.**

ELLIOTT, Frank Roy, Hd., Dept. of Biol., Valparaiso Univ., LaPorte Ave., R. F. D. 5, Valparaiso, Ind. **ZOOLOGY.**

ELLIOTT, Frederick Chesley, Dean and Prof. of Mouth and Facial Restorations, Univ. of Tex. Schl. of Dentistry, 1018 Blodgett Ave., Houston, Tex. **MAXILLOFACIAL PROSTHESIS.**

ELLIOTT, Harold Farley, Lectr., Stanford Univ., Stanford, Calif.; 570 Kingsley Ave., Palo Alto, Calif. **ELECTRICAL ENGINEERING.**

ELLIOTT, Kenneth Allan Caldwell, Asst. Prof. of Neurology and Biochem., Montreal Neurol. Inst., McGill Univ., Montreal, Que., Can. **BIOCHEMISTRY.**

ELLIOTT, Richard Maurice, Prof. and Chm., Dept. of Psychol., 112 Psychol. Bldg., Univ. of Minn., Minneapolis, Minn. **PSYCHOLOGY.**

ELLIOTT, Rush, Prof. of Anatomy and Dir., Summer Schl., Ohio Univ., Athens, Ohio. **COMPARATIVE ANATOMY.**

ELLIS, Alexander Caswell, Consulting in Adult Edn., Univ. of Tex., Austin, Tex. **ADULT EDUCATION.**

ELLIS, Brooks Fleming, Chm. and Curator, Micro-Paleontol., Amer. Museum and Chmn. and Prof., Dept. of Geol., N. Y. Univ.; 72 Clarendon Rd., Scarsdale, N. Y. **MICRO-PALEONTOLOGY.**

ELLIS, David O., Assoc. Prof. of Math., Univ. of Fla., Gainesville, Fla. **MATHEMATICS.** b. Springfield Mo., Nov. 9, 1925. s. Roy and Frances (Nations) E. Edn.: A.B., Univ. of Mo., 1946; M.A., *ibid.*, 1948; Ph.D., *ibid.*, 1950. m. Jane Reser of Conway, Mo., August 5, 1945. d. Mary and James L. Reser. c.: David Roy; Jan Frances. Exp.: 1944, Electrochem., Pratt Whitney Corp., Kans. City, Mo.; 1945; Tchng. Asst. in Chem., Univ. of

Mo.; 1946-48; Asst. Instr. of Math., *ibid.*; 1948-50, Instr., *ibid.*; 1950-51, Asst. Prof. of Math., Univ. of Fla., 1951-52; Sr. Mathematician, Advisory Board on Simulation, 1952—; Assoc. Prof. of Math., Univ. of Fla.; 1952—, Consult. to Advisory Bd. on Simulation. Mem.: Sigma Xi; Kappa Mu Epsilon; Amer. Math. Soc.; Math. Assn. of Amer.; Math. Soc. of France; Delta Phi Omega. Contrb. to: Bull. Amer. Math. Soc.; Duke Math. Jour.; Can. Jour. of Math. Ph.D. Dissertation: On Distance Geometries of Algebraic Structures. Travel: U. S.; Canada; Cuba. Hobbies: Music; Bridge; Golf; Baseball. Special Int.: Modern Mathematics, Algebraic Techniques in Digital Computing, Distance, Geometry, Lattice Theory, Groupoid Theory, General Topology.

ELLIS, Frederick Warren, 1175 Center St., Center, Mass. **PHYSIOLOGY.**

ELLIS, Gordon Huff, Rsch. Chemist, U. S. Plant Soil and Nutrition Lab., Cornell, Ithaca, N. Y. **BIOCHEMISTRY, NUTRITION.**

ELLIS, Hazel R., Prof. of Biol., Keuka Coll., Keuka Park, N. Y. **BOTANY.**

ELLIS, James Hawes, 1115 Rancho Rd., Arcadia, Calif. **OPTICS.**

ELLIS, Joseph Wesley, Prof. and Chmn., Dept. of Physics, Univ. of Calif., 405 Hilgard Ave., Los Angeles, Calif. **PHYSICS.**

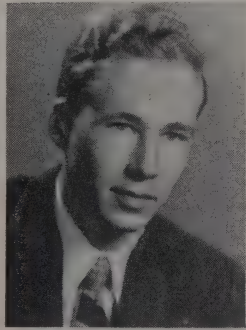
ELLIS, Max Mapes, Prof. of Physiol. and Pharmacol., Univ. of Mo. Med. Schl., Columbia, Mo. **PHYSIOLOGY.**

ELLIS, Ned R., Prin. Chemist, Animal Nutrition Investigations, Bureau of Animal Indus., U. S. D. A., 3417 22nd St., N. E., Washington, D. C. **NUTRITION.**

ELLIS, Robert S., Prof. of Psychol., Pomona Coll., Claremont, Calif. **DIFFERENTIAL PSYCHOLOGY.**

ELLISON, Eckley Sanderson, Sr. Meteorologist, Official Chg., Weather Bureau, 320 Customs House Bldg., Portland, Ore. **METEOROLOGY.**

ELMER, Glaister Ashley, Rsch. Soc. Scientist, 427 Elmer St., Pittsburgh 18, Pa.; U.S.A.F. Human Resources Rsch. Inst., Maxwell A. F. Base, Ala. **HUMAN RESOURCES RESEARCH; INDUSTRIAL SOCIOLOGY.** b. Oct. 15, 1921, Minneapolis, Minn. s. Manuel Conrad and June Ashley E. Edn.: B.A., Univ. of Pittsburgh, 1946; M.A., *ibid.*, 1947; Ph.D., Ohio State Univ., 1950. Exp.: U.S. A.F., 1942-46, Instr., Inspector, and Flight Engr. on Heavy Bombers; Wash. State Coll., Tch. Sociol., 1946-47; Ohio State Univ., 1947-50; Tech. Dir., Far East Rsch. Group, Human



Resources Rsch., Tokyo, 1951-53. Mem.: Amer. Psych. Soc.; A.S.S.; Pacific Sociol. Soc.; Ohio Valley Sociol. Soc.; Pi Kappa Alpha; Alpha Kappa Delta; Amer. Legion; etc. Author: Sociol. Factors in Indus. Contrb. to: Jour. of Ednl. Sociol.; Amer. Sociol. Rev.; Soc. and Sociol. Rsch. Ph.D. Dissertation: An Experiment in Measurement of Identification with Work Situation. War Record: A.A.F., U.S.A., Three and One-half Yrs. Hobbies: Forestry; Agri. Special Int.: Psychology; Sociology; Industry.

ELMER, Manuel Conrad, Univ. of Pittsburgh, Pittsburgh, Pa. **SOCIOLOGY.**

ELMS, Joseph Wilton, Commissioner, Div. Sewage Disposal, Dept. of Public Utilities, 1310 W. 112th St., Cleveland, Ohio. **SANITARY ENGINEERING.**

ELLWOOD, Walter Breckenridge, Mem. of Technical Staff, Bell Telephone Labs., 463 West St., N. Y., N. Y. **PHYSICS.**

ELMAN, Robert, Assoc. Prof. of Clinical Surgery, Wash. Univ. Med. Schl., St. Louis, Mo. **MEDICINE.**

ELMORE, William Cronk, Assoc. Prof., Dept. of Physics, Swarthmore Coll., Swarthmore, Pa. **PHYSICS.**

ELMSLIE, Wallace P., Dir. of Rsch., Moorman Mfg. Co., Quincy, Ill. **BIOCHEMISTRY.**

ELROD, Harold Glenn, Jr., Asst. Prof., Mech. Engrng. Dept., Case Inst. of Tech., Cleveland, Ohio. **HEAT AND FLUID FLOW.** b. Manchester, N. H., Nov. 19, 1918. s. Harold Glenn and Marion Gladys (Fritz) E. Edn.: B.Sc., M.I.T., 1942; M.A., Harvard Univ., 1947; Ph.D., *ibid.*, 1949. m. Ruth Allison Starr, Mar. 28, 1942. c.: Joanne; Carolyn; H. G. E., Ill. Exp.: Instr., Dept. Mar. Engrng., U. S. Naval Acad., 1942-45; Rsch. Engr., Clayton and Lambert Mfg. Co., Louisville, Ky, 1946; Rsch. Engr., Babcock and Wilcox Co., Alliance, Ohio, 1949-52; Asst. Prof., Mech. Engrng. Dept., Case Inst. of Tech., Cleveland, Ohio, 1952—. Mem.: A.S.M.E.; Sigma Chi; Sigma Xi. Contrb. to: Trans. A.S.M.E.; Jour. Acoustical Soc.; Indus. and Engrng. Chem.; Jour. Applied Physics. War Record: U. S. Navy, 1942-45.

ELROD, Morton John, Prof. Emer. Biol., Mont. State Univ., 205 S. Fifth E., Missoula, Mont. **ZOOLOGY.**

ELSBERG, Charles Albert, Prof. Emer. Neurol. Surgery, Columbia Univ.; Long Ridge Rd., Stamford, Conn. **NEUROLOGICAL SURGERY.**

ELSER, William James, Prof. Emer. Applied Pathol. and Bacteriol., Cornell Univ. Med. Coll., Box 815, Riviera Beach, Fla. **BACTERIOLOGY, IMMUNOLOGY.**

ELSEY, Howard McKee, Consulting Chemist, Westinghouse Rsch. Labs., Pittsburgh, Pa. **PHYSICAL CHEMISTRY.**

ELTINGE, Taher Ethel, Assoc. Prof. of Botany, Mount Holyoke Coll., South Hadley, Mass. **PLANT PHYSIOLOGY AND BACTERIOLOGY.**

ELVEHJEM, Conrad Arnold, Prof. of Biochem. and Dean of Grad. Schl., Univ. of Wis., Madison, Wis. **BIOCHEMISTRY.** b. McFarland, Wis., May 27, 1901. s. O. J. and Christine (Lewis) E. Edn.: B.S., Univ. of Wis., 1923; M.S., *ibid.*, 1924; Ph.D., *ibid.*, 1927. Hon. Deg.: Sc.D., Ripon Coll., 1942; m. Constance Waltz, June 30, 1926. c.: Peggy Ann and Robert Stuart. Exp.: Instr., Univ. of Wis., Madison, Wis., 1925-29; Asst. Prof., *ibid.*, 1930-32; Assoc. Prof., *ibid.*, 1932-36; Prof., *ibid.*, 1936—; Dean Grad. Schl., *ibid.*, 1946—. Mem.: Delta Theta Sigma; Gamma Alpha; Sigma Xi; A.A.A.S.; Phi Beta Kappa; Phi Kappa Phi; Phi Lambda Upsilon; Phi Sigma; Natl. Acad. of Sci.; Amer. Philosophical Soc. Contrb. to: Jour. Biol. Chem.; Jour. of Nutrition; Archives Biochem. Special Int.: Biochem.; Nutrition Especially B Vitamins; Relation of Vitamins to Enzymes.

ELVING, Philip J., Pa. State Coll., State College, Pa. **ANALYTICAL CHEMISTRY.**

ELWOOD, Everett Sprague, Exec. Secy. and Treas., Natl. Bd. Medical Examiners, 225 S. 15th St., Philadelphia, Pa. **MEDICAL EDUCATION AND LICENSURE.**

ELWYN, Adolph, Assoc. Prof. of Neuroanatomy, Coll. of Physicians and Surgeons, 630 W. 168th St., N. Y., N. Y. **NEUROANATOMY.**

ELY, Sumner Boyer, Supt., Pittsburgh Bureau of Smoke Prevention, 520 Roslyn Pl., Pittsburgh, Pa. **COMBUSTION ENGINEERING.**

EMBREE, Harland C., Color Control Technician, Technicolor Motion Picture Corp., Hollywood, Calif. **ORGANIC CHEMISTRY.**

EMERSON, Alfred Edwards, Prof. of Zool., Univ. of Chicago, Chicago, Ill. **ENTOMOLOGY, ECOLOGY.**

EMERSON, Fred Wilbert, Hd., Dept. of Biol. and Prof. of Botany, N. Mex. Highlands Univ., 926 Seventh St., Las Vegas, N. Mex. **PLANT ECOLOGY.**

EMERSON, Haven, Prof. Emer. Public Health Practice, Coll. of Physicians and Surgeons, Columbia Univ., 156 E. 79th St., N. Y., N. Y. **PUBLIC HEALTH.**

EMERSON, Ralph, Prof., Botany Dept., Univ. of Calif., Berkeley, Calif. **MICROBIOLOGY.**

EMERSON, Sterling, Prof. of Genetics, Calif. Inst. of Tech., Pasadena, Calif. **GENETICS.**

EMERY, Alden Hayes, Secy. and Bus. Mgr., Amer. Chemical Soc., 1155 16th St., N. W., Washington, D. C. **CHEMISTRY.**

EMIG, William Harrison, Assoc. Prof. of Biol., Univ. of Pittsburgh, Pittsburgh, Pa. **MICROTECHNIQUE.**

EMME, Earle Edward, Prof. of Psychol., Bradley Univ., Peoria 5, Ill. **CHILD PSYCHOLOGY; MARITAL BEHAVIOR.**



b. Kankakee, Ill., Jan. 31, 1891. s. William and Ella (Hertz) E. Edn.: A.B., Northwestern Univ., 1916; A.M., Columbia Univ., 1918; B.D., Garrett Sem., Northwestern Univ., 1918; Ph.D., Univ. of Chicago, 1932. m. Ada Julia Morlock, June 15, 1918. c.: Eugene Morlock; Lois. Exp.: Staff, Lawrence Coll., 1920-23; Supt. Method. Bd. of Edn. in Wis., 1924-26; Prof. of Edn. and Psychol., Nebr. Wesleyan, 1926-28; Fellow, Univ. of Chicago, 1929-33; Staff, Morningside Coll., 1934-44; Dean, Dak. Wesleyan, 1944-46; Acting Chmn. of Psychol., Bowling Green State Univ., 1947-48; Prof. of Psychol., Bradley Univ., Peoria, Ill., 1948—. Hon. Pos.: Chmn., Exec. Com., Iowa Acad. Sci., 1948-49; Mayor's Mag. Censorship Com., Sioux City, Iowa; Dean of Five Community Trng. Schls. Mem.: Phi Kappa Phi; Pi Kappa Delta; Psi Chi; Pi Gamma Mu; Phi Delta Kappa; Theta Chi; Rotary; Masons Author: Principles of Religious Edn. (with P. R. Sterrik); The Adjustment Problems of Coll. Freshmen; Religion and Life. Contrb. to: Phi Delta Kappan; Iowa Acad. Sci. Bull.; Jr. Higher Edn.; Schl. and Soc.; Jour. Psychol.; Jour. Applied Psychol.; Social Sci. Special Int.: Superstitions; Marital Adjustment; Mixed Marriages; Rsch. in Child Psychol. and Marriage Counseling.

EMMETT, P. H., Mellon Inst., Pittsburgh, Pa. **CHEMISTRY.**

EMMONS, Chester Wilson, Prin. Mycologist, U. S. P. H. S., Natl. Inst. of Health, Bethesda, Md. **MEDICAL MYCOLOGY.**

EMMONS, Joseph Victor, Chf. Metallurgist, Cleveland Twist Drill Co., 1242 E. 49th St., Cleveland, Ohio. **METALLURGY STEEL.**

EMMONS, Richard Conrad, Prof. of Geol., Univ. of Wis., Madison, Wis. **PETROLOGY, GEOLOGY.**

EMSWELLER, Samuel, U. S. D. A., Beltsville, Md. **HORTICULTURE-FLORICULTURE.**

ENDERS, Howard E., Emer. Dean, Schl. of Sci., Purdue Univ., W. Lafayette, Ind. 62 Armada Rd., S., Venice, Fla. **ZOOLOGY.**

ENDERS, John Franklin, Rsch. Dept. Infectious Diseases, Children's Hosp., 300 Longwood Ave., Boston, Mass. **MEDICAL SCIENCES.**

ENDERS, Robert Kendall, Prof. of Zool., Swarthmore Coll., Swarthmore, Pa. **ANATOMY, MAMMALOGY.**

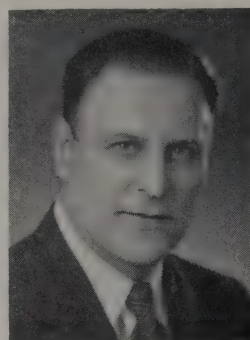
ENDRES, Herbert A., Asst. Mgr., Rsch. Dept., Goodyear Tire and Rubber Co., Akron, Ohio. **CHEMISTRY.**

ENGEL, Harry, E. L. Cournand Co., New York, N. Y. **PLASTICS & ADHESIVES.**

ENGER, Melvin Lorenus, Dean of Engrng. and Dir., Engrng. Expt. Station, Univ. of Ill., Urbana, Ill. **CIVIL ENGINEERING.**

ENGLE, Earl T., Columbia Univ., N. Y., N. Y. **GYNECOLOGIC ENDOCRINOLOGY.**

ENGLE, Harvey Roosevelt, Works Chemist, Hooker Electrochem. Co., 1203 Maple Ave., Niagara Falls, N. Y. **ANALYTICAL CHEMISTRY AND INORGANIC CHEMISTRY.**



b. Waynesburg, Ohio, May 28, 1909. s. Samuel E. and Elmira (Creighton) E. Edn.: B.A., Hiram Coll., 1932; M.A., Boston Univ., 1934; Ph.D., Cornell Univ., 1939. m. Florence Carolyn Crofoot, Nov. 5, 1938. c.: William Edward; Marie Creighton. Exp.: Chemist, N. Y. State Biol. Survey, summers, 1934-39; Chemist, Hooker Electrochem. Co., 1939-52; Works Chemist, ibid., 1952—. Mem.: Amer. Chem. Soc.; Amer. Soc. for Testing Materials; Gamma Alpha. Contrb. to: Jour. Amer. Chem. Soc.; Jour. Electrochem. Soc. Special Int.: Titanous Chloride as a Reducing Agent; Chem. of Gallium and Its Oxides, Water and Sewage Analysis; General Chem. Analysis, Organic and Inorganic.

ENGLE, Ohmer Harold, Assoc. Prof. of Biol., Mount Union Coll., 1409 Robinwood Rd., Alliance, Ohio. **ZOOLOGY.**

ENGLIS, Duane Taylor, Assoc. Prof. of Chem., Univ. of Ill., Urbana, Ill. **ANALYTICAL CHEMISTRY.**

ENGLISH, Lester Lamar, Assoc. Entomologist, Natural Resources Bldg., Urbana, Ill. **ENTOMOLOGY.**

ENGLISH, Pennoyer Francis, Prof. of Wildlife Mgt., Pa. State Coll., State Coll., Pa. **WILDLIFE MANAGEMENT.**

ENGLUND, R. Carl, retired, Holmdel, N. J. **ELECTRICAL ENGINEERING.**

ENSIGN, Forest Chester, Prof., Coll. Edn., State Univ. of Iowa, Iowa City, Iowa. **HISTORY OF EDUCATION.**

ENSMINGER, Marion Eugene, Chmn., Dept. of Animal Husbandry, State Coll. of Wash., Pullman, Wash. **ANIMAL HUSBANDRY.**



b. Stover, Mo., May 28, 1908. s. Jacob and Ella (Belt) E. Edn.: B.S., Univ. of Mo., 1931; M.S., ibid., Ph.D., Univ. of Minn., 1942. m. Audrey Helen Watts, June 11, 1941. c.: John Jacob. Exp.: Field Agent, Univ. of Mo., summers 1929 and 1930; Instr., State Tehrs. Coll., Maryville, Mo., summers 1931 and 1932; Asst. to the Supt., U. S. Soil Erosion Station, Bethany, Mo., 1933; Soil Erosion Specialist, U. S. Dept. of Interior, 1934; Mgr., U. S. Dept. of Agri., Dixon Springs Station, Robbs, Ill., 1934-37; Asst. Prof., Mass. State Coll., Amherst, Mass., 1937-40; Tchng. Asst., Univ. of Minn.,

1940-41; Prof. and Chmn., Dept. of Animal Husbandry, State Coll. of Wash., Pullman, Wash., 1941—, Consultant, Nucleonics Div., General Electric, Richland Wash.; Collaborator, Western Sheep Breeding Lab., U. S. D. A.; Collaborator, Western Cattle Breeding Lab., U. S. D. A.; Dir., Amer. Southdown Breeders' Assn.; Coll. Feed Survey Com., Amer. Feed Mfg. Assn., Inc.; Secy., Northwest Hereford Breeders' Assn.; Secy., Inland Empire Shorthorn Breeders' Assn.; Secy., Inland Empire Aberdeen-Angus Assn.; Secy., Pacific Slope Polled Shorthorn Breeders' Assn. Mem.: Alpha Zeta; Lambda Gamma Delta; Sigma Xi; Amer. Soc. Range Mgt.; Soil Conservation Soc. of Amer.; Alpha Gamma Sigma; C. of C. Author: *Animal Sci.*, 1950; *Horse Husbandry*, 1951; *Beef Cattle Husbandry*, 1951; *Sheep Husbandry*, 1952; *Swine Husbandry*, 1952. Special Int.: Breeding, Feeding, and Care and Management of Beef Cattle, Sheep, Swine, and Horses; Marketing of Meat Animals and Their Products.

ENTRIKIN, John Bennett, Hd., Dept. of Chem., Centenary Coll., Shreveport, La. ORGANIC CHEMISTRY.

EPLING, Carl Clawson, Prof. of Botany, Univ. of Calif., 372 S. Carmelia Ave., Los Angeles, Calif. SYSTEMATIC BOTANY.

EPPLEY, Marion, Pres., Eppley Lab., Inc., 12 Sheffield Ave., Newport, R. I. PHYSICAL CHEMISTRY.

EPSTEIN, Albert Arthur, 1109 Madison Ave., N. Y., N. Y. MEDICAL SCIENCES.

EPSTEIN, Paul Sophus, 1484 Oakdale St., Pasadena 4, Calif.

ERDMANN, Charles Edgar, Regional Geologist, U. S. Geol. Survey, 417 Electric Bldg., Box 1827, Great Falls, Mont. PETROLEUM GEOLOGY.

ERF, Herbert Adolph, Pres., H. A. Erf Acoustical Co., Inc., 3868 Carnegie Ave., Cleveland, Ohio.

ERGLE, David Ramsey, Chemist, Tex. Agri. Expt. Station, U. S. D. A., College Station Tex. CHEMISTRY.

ERICKSON, August Alfred, Physicist, Corning Glass Works, 80 Pershing St., Corning, N. Y. PHYSICS.

ERICKSON, Carl I., Prof. of Psychol., State Coll. of Wash., Pullman, Wash. MENTAL HYGIENE, PSYCHOLOGY.

ERICKSON, Julius Lyman Edward, Prof. of Organic Chem., La. State Univ., Baton Rouge, La. ORGANIC CHEMISTRY.

ERICKSON, Ralph W., Prof., Psychology and Hd. of Dept., Miss. State Coll. for Women, Columbus, Miss. PSYCHOLOGY. b. April 5, 1901, Wolverton, Minn. s. Wilhelm and Gertrude (Johnson) E. Edn.: B.A., 1922, M.A., 1928, Ph.D., 1937, Univ. of Minn. m. Olive E. McAllister of Minneapolis, Minn., September 25, 1926. d. Mr. and Mrs. Frank L. McAllister. c.: Elaine B. Exp.: Statistical Assistant, Univ. of Minn., 1928-29; Instr., Math., Rochester Jr. Coll., 1929-30; Instr., Psychol., Hibbing Jr. Coll., 1930-42; Psychol., U. S. Army, 1942-46; Assoc. Prof., Psychol. and Edn., Carleton Coll., 1946-47; Prof., Psychol. and Hd. of Dept., Miss. State Coll. for Women, 1947—. Mem.: A.M.S.; M.A.A.; N. Y. Acad. of Sci.; Amer. Assn. for Symbolic Logic; Amer. Philos. Assn.; Royal Inst. of Philos.; Amer. Psychol. Assn.; Fellow; Fellow, A.A.A.S.; Mason; Shriner. Contrb. to: Philos. and Sci. Jours. Ph.D. Dissertation: *The Concept of Consciousness Since Wm. James*. War Record: 2nd Lt. to Capt., U. S. Army. Travel: Canada; Alaska; Siberia. Hobbies: Chess; Music. Listed in: *Who's Who in Phil.*; A.M.S.; *Who's Who in the South and Southwest*; *Who Knows—What*. Special Int.: Hist. and Systems of Psychol., Analysis of Tests and Factor Analysis.

ERIKSON, Henry Anton, Prof. Emer. of Physics, Univ. of Minn.; 1207 Genoa St., Coral Gables, Fla. PHYSICS.

ERLANGER, Joseph, Washington Univ. Med. Schl., St. Louis, Mo. PHYSIOLOGY.

ERNST, Edwin Charles, Radiologist, Barnard Free Skin and Cancer Hosp., 3720 Washington Ave., St. Louis, Mo. RADIOLOGY.

ERNST, Frank Arthur, Plant Mgr., Solvay Process Co., Nitrogen Div., Hopewell, Va. ENGINEERING.

ERNSTENE, Arthur Carlton, Assoc. Physician, Cleveland Clinic, 2020 E. 93rd st., Cleveland, Ohio. CARDIOLOGY.

ERRINGTON, Paul E., Dept. of Zool., Iowa Univ., Ames, Iowa. WILDLIFE MANAGEMENT.

ESAU, Katherine, Assoc. Prof. of Botany and Assoc. Botanist, Univ. of Calif., Coll. of Agri., 237 1st St., Davis, Calif. PLANT ANATOMY.

ESCHELMAN, Karl Ferdinand, Assoc. Prof. of Med., Univ. of Buffalo, Med. Schl., 351 Linwood Ave., Buffalo, N. Y. INTERNAL MEDICINE.

ESHBACH, Ovid Wallace, Dean, Northwestern Tech. Inst., Evanston, Ill. ELECTRICAL ENGINEERING.

ESHLEMAN, Silas Kendrick, Dr., Prof., Dept. of Industrial Engineering, 543 N. E. 6th Avenue, Gainesville, Fla. and Gordonville, Pa. METALLURGY AND METALLOGRAPHY. b. Leaman Place, Lancaster County, Pa., July 3, 1886. s. Silas Kendrick and Emma Harriet (Slaymaker) E. Edn.: M.E., E.E., Lehigh Univ., 1908, 1909; S.M., Harvard Univ., 1910; A.B., M.A., Univ. of Fla., 1925, 1927; J.D., *ibid.*, 1936. m. Aileen Hope McClamroch of Gainesville, Fla., Aug. 18, 1927. d. Milton H. and N. Gertrude McClamroch. c.: S. Kendrick, 3rd; John M. Slaymaker. Exp.: Testing Engr., Winchester Repeating Arms Co., New Haven, Conn.; Metall. Engr., Columbia Steel and Shafing Co., Pittsburgh, Pa.; W. W. I. U. S. Army, Chief T. W. Sect., Wash., D. C.; Gen. Purchasing Agent, Columbia Steel and Shafing Co., Pittsburgh, Pa.; Mill Supt., Crucible Steel Co., *ibid.*; Engrng. and Law Prof., Univ. of Fla., Gainesville, Fla. Mem.: The Fla. Bar; Fifth Judicial Circuit of the Fed. Courts; Amer. Soc. for Engrng. Edn.; Amer. Inst. of Indus. Engrs.; Mem. Staff of Engrng. Scis. and Management, War Trng. and Army Specialized Trng. Courses, 1943-45; A.S.M.E.; S.A. M.; A.I.E.E.; Phi Alpha Delta; Phi Kappa Phi; Kappa Delta Pi. Author: Tech., Commercial, Ednl., and Legal Essays and Articles in Field. War Record: Commissioned Officer in the Ordnance Res. Corps of the U. S. Army of W. W. I. Gen. Int.: Inventions in Mech., and in the Manufacture of Special Steels for the Elec., Automotive and Ordnance Indus. Hobbies: Rural Life; Travel. Listed in: *Who's Who in Engrng.*; *Who Knows—What*; *The Internat. Blue Book*; *Who's Who in the South and Southwest*; *Who's Who in the East*; A.M.S. Special Int.: Metallurgy, Metallography, Engineering Law and Industrial Psychology.

ESHNER, Augustus Adolph, 1019 Spruce St., Philadelphia, Pa. INTERNAL MEDICINE.

ESMAY, Merle Linden, Prof. of Agri. Engr., Univ. of Mo., Columbia, Mo. THE FARM STRUCTURES FIELD OF AGRICULTURAL ENGINEERING. b. Greene County, Iowa, Dec. 27, 1920. s. Earl S. and Ruth Marie (Linn) E. Edn.: B.S., S. D. State Coll., 1942; M.S., Iowa St. Coll., 1947; Ph.D., *ibid.*, 1951. m. Katherine Linda, July 25, 1942. c.: Katherine Linda; Merle Dennis. Exp.: Extension Agricultural Engr. Specialist, So. Dak. State Coll., Brookings, S. D., 1946-47; Asst. Prof., Iowa State Coll., Ames, Iowa, 1947-51; Prof. of Agricultural Engr., Univ. of Mo., Columbia, Mo., 1951—. Mem.: Amer. Soc. of Agri. Engr.; Amer. Soc. of Engr. Edn.; Alpha Zeta; Gamma Sigma Delta; Phi Kappa Phi; Sigma Xi. Contrb. to: Engr. Jour.; Jour. of Veterinary Med.; Exp. Sta. Bull. Gen. Int.: Tchng. and Rsch. Special Int.: Field of Farm Buildings and Equipment, both in Tchng and Rsch. The Efficiency and Mechanization of Operations in and around the Farmstead has not kept Pace with the Field Operations. This Necessarily Presents a Bottle Neck in Balancing the Operations on

a Farm so the Same Amount of Labor is Required to Handle the Livestock Enterprise as is Required for the Field Operations in Growing and Harvesting the Crops.

ESPENSCHIED, Lloyd, Rsch. Consultant, Bell Telephone Labs., 463 West St., N. Y., N. Y. **ELECTRIC COMMUNICATION.**

ESSENBERG, Jacob Martin, Prof. of Anatomy, Chicago Med. Schl., 710 Wolcott Ave., Chicago, Ill. **EMBRYOLOGY.**

ESSEX, Hiram Eli, Prof. of Physiol., Univ. of Minn. Grad. Schl., Mayo Foundation, Rochester, Minn. **PHYSIOLOGY.**

ESSICK, Charles Rhein, Proprietor, Pa. Optical Co., 700 Centre Ave., Reading, Pa.

ESSIG, Edward Oliver, Prof. of Entomol. and Entomologist in the Expt. Sta., Agri. Hall, Univ. of Calif., Berkeley 4, Calif. **ECONOMICAL ENTOMOLOGY; TAXONOMIC AND ECONOMIC APHIDAE AND COCCIDAE; HISTORY OF ENTOMOLOGY.** b. Arcadia, Ind., Sept. 29, 1884. s. Monroe Franklin and Isabel (Todd) E. Edn.: B.S., Pomona Coll., 1909; M.S., *ibid.*, 1912. m. Ethel Langford in 1910. 2nd m. Marie W. Mauerhan on Sept. 11, 1950. c.: Mary Isabel. Exp.: Hort. Commissioner, Ventura Co., Calif., 1910-11; Secy., State Hort. Commn., Calif., 1911-14; Instr. and Asst. Prof. Entomol., Univ. of Calif., 1914-20; Assoc. Prof., *ibid.*, 1920-28; Prof. and Entomologist in the Expt. Station, *ibid.*, 1928—.



Mem.: Amer. Assn. of Econ. Entomol.; Entomological Soc. of Amer.; Pacific Coast Entomol. Soc.; Hist. of Sci. Club; Calif. Acad. of Sci.; Amer. Iris Soc.; Alpha Zeta; Sigma Xi; Alpha Gamma Rho. Author: *Injurious and Beneficial Insects of Calif.*, 1913 and 1915; *Insects of Western N. Amer.*, 1926; *Hist. of Entomol.*, 1931; *Russians in Calif.*, 1933; *Coll. Entomol.*, 1942; *The Genus Periphylus*, 1952. Contrb. to: Jour. of Econ. Entomol.; Pan-Amer. Entomologist; Pacific Discovery; Sci.; Scientific Monthly; Annals, Entomol. Soc. of Amer. Special Int.: Entomol.; Agri.

ESTABROOK, Gaylord Beak, Dept. of Physics, Univ. of Md., Baltimore, Md. **PHYSICS.**

ESTERMANN, Immanuel, Prof. of Physics, Carnegie Inst. of Tech., Pittsburgh, Pa. **ATOMIC PHYSICS.**

ESTES, William L., Chf. Surgeon, St. Luke's Hosp., Lectr. in Surgery, Univ. of Pa. Grad. Schl., Philadelphia, Pa. **SURGERY.**

ESTY, James Russell, Dir., Western Branch Lab., Natl. Canners Assn., 322 Battery St., San Francisco, Calif. **BACTERIOLOGY, CHEMICAL ENGINEERING.**

ETTLINGER, Hyman Joseph, Prof. of Pure Math., Mathematical Consultant, Univ. of Tex., Austin, Tex. **MATHEMATICS.**

EURICH, Alvin Christian, Vice-Pres., Stanford Univ., 870 Hamilton Ave., Palo Alto, Calif. **PSYCHOLOGY.**

EUSTIS, Warner, Dir. of Rsch., Kendall Co., 140 Federal St., Boston, Mass. **INDUSTRIAL RESEARCH MANAGEMENT.**

EVANS, Alexander William, Prof. Emer. of Botany, Osborn Botanical Lab., Yale Univ., 180 Livingston St., New Haven, Conn. **BOTANY.**

EVANS, Charles Albert, Prof. and Exec. Officer, Dept. of Microbiol., Schl. of Med., Univ. of Wash., Seattle, Wash. **BACTERIOLOGY.**

EVANS, Clytee Rebekah, Prof. and Hd., Dept. of Biol., Miss. State Coll. for Women, College Station, Columbus, Miss. **PLANT PHYSIOLOGY.**

EVANS, Earl, Univ. of Chicago, Chicago, Ill. **BIO-CHEMISTRY.**

EVANS, Florence Lydia, Asst. Prof. of Bacteriol., La. State Univ. Med. Schl., New Orleans, La. **BACTERIOLOGY.**

EVANS, George Foster, Physicist, Los Alamos Scientific Lab., Los Alamos, N. Mex. **PHYSICS.**

EVANS, George Harlowe, Prof. of Chem., Ill. Wesleyan Univ., Bloomington, Ind. **CHEMISTRY.**

EVANS, George W., 820 San Diego Rd., Berkeley, Calif.

EVANS, Gordon Goodwin, Asst. Prof. of Chem., Tufts Coll., Medford 55, Mass. **ORGANIC CHEMISTRY.** b. Brooklyn, N. Y., Feb. 13, 1921. s. William Fuller and Beatrice Annie (Briley) E. Edn.: A.B., Princeton Univ., 1942; Ph.D., Harvard Univ., 1950. m. Doletha Soorn Watt, Oct. 14, 1944. c.: Doletha Marian; William Soorn; Jocelyn Briley. Exp.: Pioneering Rsch. Section, Rayon Dept., E. I. du Pont de Nemours & Co., Inc., Buffalo, N. Y., 1942-43; Rsch. Asst., SAM Labs., Carbide and Carbon Chem. Corp., New York, N. Y., 1946; Instr., Tufts Coll., Medford, Mass., 1949-52; Asst. Prof., *ibid.*, 1952—. Mem.: Amer. Chem. Soc.; New England Assn. of Chem. Tchrs.; Sigma Xi. Contrb. to: Jour. of the Amer. Chem. Soc.; Jour. of Chem. Edn. Special Int.: Interactions of Organic Compounds with Light, Synthesis of Heterocyclic Compounds.

EVANS, Griffith Conrad, Univ. of Calif., Berkeley 4, Calif.

EVANS, Henry Brown, Prof. Emeritus of Math., Univ. of Pa., 88 Merbrook Lane, Merion Station, Pa. **MATHEMATICS AND ASTRONOMY.** b. Dayton, Ohio, July 2, 1871. s. Lewis G. and Frances (Brown) E. Edn.: M.E., Lehigh Univ., 1893; Ph.D., Univ. of Pa., 1901. m. Helen E. Mendenhall, June, 1912. Exp.: Instr. in Math. and Astronomy, Lehigh Univ., Bethlehem, Pa., 1894-95; Instr. in Math. and Astronomy, Univ. of Pa., Philadelphia, Pa., 1895-1901; Asst. U. S. Nautical Almanac Office, Washington, D. C., 1901-20; Asst. Prof. of Math., Univ. of Pa., 1904-11; Prof., *ibid.*, 1911-42; Emeritus Prof., *ibid.*, 1942—. Mem.: Amer. Math. Soc.; Math. Assn. of Amer.; Tau Beta Pi; Sigma Xi; Author: *Analytic Geometry*, 1919; *Trigonometry*, 1922; *Plane and Spherical Trigonometry*, 1925. Special Int.: Vector Analysis; Application of Math. to Engineering.

EVANS, Herbert McLean, Inst. of Exptl. Biol., Univ. of Calif., Berkeley, Calif.

EVANS, Herbert P., Prof. of Math., Univ. of Wis., Madison, Wis. **THEORY OF PROBABILITY.**

EVANS, Howard Tasker, Jr., Physicist, Geochem. and Petrol. Branch, U. S. Geol. Survey, Washington, D. C. **INORGANIC CHEMISTRY AND X-RAY DIFFRACTION.** b. Ancon, Panama Canal Zone, Sept. 9, 1919. s. Howard T. and Ruth (Dutton) E. Edn.: B.S., Mass. Inst. of Tech., 1942; Ph.D., *ibid.*, 1948. m. Eloise Humez, June 27, 1942. c.: Cecily Ruth and Dana Lawrence. Exp.: Tchng. Fellow, Tehng. Asst., Dept. of Chem., Mass. Inst. of Tech., Cambridge, Mass., 1942-45; Instr., Section of Graphics, *ibid.*, 1945-48; Rsch. Assoc., Lab. for Insulation Rsch., *ibid.*, 1947-49; Rsch. Physicist, Philips Lab., Inc., Irvington-on-Hudson, N. Y., 1949-52; Physicist, Geochem. and Petrol. Branch, U. S. Geol. Survey, Washington, D. C., 1952—. Mem.: Sigma Xi; Amer. Crystallographic Assn.; Mineral. Soc. of Amer. Contrb. to: Sci.; Acta Crystallographica; Rev. of Sci. Instr.; Jour. of Applied Phys.; Amer. Mineralogist. Special Int.: X-Ray Diffraction, X-Ray Crystallography, Crystal Structure Analysis, and Crystal Chem.

EVANS, John Ellis, Prof. and Hd., Dept. of Psychol., Iowa State Coll., Ames, Iowa. **PSYCHOLOGY.**

EVANS, James William, Dir. of Rsch., Amer. Maize-Products Co., Roby, Ind.



AGRICULTURAL BIOCHEMISTRY; CARBOHYDRATES AND FOODS. b. Chilhowee, Mo., Sept. 21, 1908. s. George W. and Lucy (Webb) E. Edn.: B.S., Central Mo. State Coll., 1928; Ph.D., Univ. of Minn., 1940. m. Helen Hughes, Aug. 31, 1930. c.: James W., Jr. Exp.: Rsch. Chemist, Union Starch and Refining Co., Granite City, Ill., 1930-37; Rsch. Asst., Univ. of Minn., 1938-39; Instr., ibid., 1939-40; Rsch. Chemist, Union Starch and Refining Co., 1940-43; Rsch. Dept., Hd. of Food and Carbo-

hydrate Section, General Mills, Inc., Minneapolis, Minn., 1943-50; Dir. of Rsch., Amer. Maize-Products Co., Roby, Ind., 1950—. Mem.: Amer. Chem. Soc.; Inst. of Food Technologists; Amer. Assn. Cereal Chemists; Amer. Assn. Textile Chemists and Colorists; Sigma Xi; Phi Lambda Upsilon; Gamma Alpha; Kappa Delta Pi; Phi Sigma Pi; C. of C. Contrb. to: Cereal Chem.; Indus. and Engrng. Chem. Gen. Int.: Development of Modified Starches; Special Processed Starches; Study of Lipides in Corn Starch. Special Int.: Corn Starches; Wheat Starches; Dextrins; Corn Syrups and Sugars; Caramel Coloring; Moisture Methods for Syrups and Sugars; Composition of Starch Hydrolysates; Development of Packaged Foods as Soups, Cake Mixes, Pie Crust Mix, Breakfast Cereals, Biscuit Mixes, Puddings.

EVANS, John Stone, Dept. Hd., Antibiotics Rsch., The Upjohn Co., Kalamazoo, Mich. BIOCHEMISTRY; ENDOCRINOLOGY. b. Sterling, Ill., Sept. 14, 1910. s. Walter E. and Rosa (Stone) E. Edn.: B.S., West. Mich. Coll. of Edn., 1933; Ph.D., Univ. of Chicago, 1939. m. Harriett Bird, June 29, 1935. c.: Susan Elizabeth; Richard Calvin; Nancy Marie. Exp.: Rsch. Chemist, The Upjohn Co., Kalamazoo, Mich., 1934-36; Rsch. Assoc., Dept. of Biochem. Univ. of Chicago, Chicago, Ill., 1937-39; Rsch. Chem., The Upjohn Co., Kalamazoo, Mich., 1940-42; Dept. Hd., Antibiotics Prod., ibid., 1942-45; Asst. Dept. Hd., Antibiotics Rsch., ibid., 1945-50; Dept. Hd., ibid., 1950—. Mem.: Sigma Xi; Kappa Rho Sigma; Kappa Delta Pi; N. Y. Acad. of Sci.; A.A.A.S.; Soc. for Exptl. Biol. and Med.; Assn. for the Study of Internatl. Secretions. Contrb. to: Jour. of Biol. Chem.; Endocrinol.; Proc. Soc. of Exptl. Biol. and Med.; Jour. of Amer. Chem. Soc. Special Int.: Antibiotics; Pituitary Hormones and Steroids.

EVANS, John W., Asst. Supvr., High Altitude Observatory, Climax, Colo. ASTRONOMY.

EVANS, Marsee Fred, SPEECH AND HEARING.

EVANS, Mildred Williams, Prof. of Chem. and Hd., Dept. of Physical Sciences, Wheaton Coll., Norton, Mass. CHEMISTRY.

EVANS, Oren Frank, Prof. of Geol., Univ. of Okla., Norman, Okla. GEOLOGY.

EVANS, Ralph Liggett, Owner, Chemical Consultants, Ralph L. Evans, Assoc., 250 E. 43rd St., N. Y., N. Y. CHEMISTRY.

EVANS, Robley D., Prof. of Physics, Mass. Inst. of Tech., Cambridge, Mass. NUCLEAR PHYSICS.

EVANS, Titus Carr, Asst. Prof. of Radiol. Coll. of Physicians and Surgeons, 630 W. 168th St., N. Y., N. Y. RADIOBIOLOGY.

EVANS, William Lloyd, Prof. Emer. of Chem., Ohio State Univ., 1975 Indianola Ave., Columbus, Ohio. CHEMISTRY.

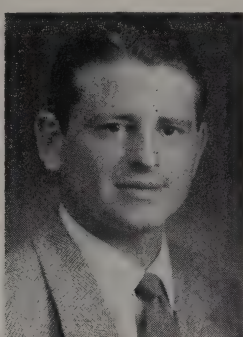
EVENDEN, Edward Samuel, Prof. of Edn., Tehrs. Coll., Columbia Univ., N. Y., N. Y. EDUCATIONAL ADMINISTRATION.

EVERETT, John Wendell, Asst. Prof. of Anatomy, Duke Univ. Schl. of Med., Durham, N. C. ANATOMY.

EVERETT, Mark Reuben, Prof. of Biochem., Chmn. Dept., Univ. of Okla. Schl. of Med., Oklahoma City, Okla. BIOCHEMISTRY.

EVERHART, J. O., Engrng. Expt. Station, Ohio State Univ., Columbus 10, Ohio. CERAMICS.

EVETT, Arthur Audley, Instr. in Physics, Sloane Phys. Lab., Yale Univ., New Haven, Conn. PHYSICS.



ICS. b. Pasco, Wash., Apr. 12, 1925. s. William A. and Helena F. (Brown) E. Edn.: B.S., State Coll. of Wash., 1948; Ph.D., ibid., 1951. m. Margaret M. Smith, Aug. 18, 1946. c.: Eric Audley. Exp.: Tchng. Asst., Wash. State Coll., 1946-48; Rsch. Fellow, ibid., 1948-51; Scientific Warfare Advisor, Weapons Systems Evaluation Group, Dept. of Defense, 1951-52; Instr. in Physics, Yale Univ., 1952—. Mem.: Amer. Physical Soc.; Phi Beta Kappa; Phi Kappa Phi; Sigma Xi; Acacia. Contrb. to:

Rev. Scientific Instruments; Jour. Chem. Physics; Physical Rev. War Record; U. S. Army Air Corps, 1943-45. Special Int.: Properties of Monomolecular Surface Films; Molecular Interactions.

EVJEN, Haakon Muus, Technical Dir., The Elfex Co., Houston, Tex. GEOPHYSICS.

EVVARD, John Marcus, 317 W. Cypress St., Phoenix, Ariz. ZOOLOGICAL SCIENCES.

EWAN, Joseph Andorfer, Assoc. Prof. of Botany, Tulane Univ., New Orleans 18, La. PLANT TAXONOMY, BOTANICAL HISTORY AND BIBLIOGRAPHY. b. Philadelphia, Pa., Oct. 24, 1909. s. Horace Gilbert and Emma (Magill) E. Edn.: A.B., Univ. of Calif., 1934. m. Ada Nesta Dunn, Aug. 20, 1935. c.: Kathleen Kilburn; Dorothy Saranne and Marjorie Magill. Exp.: Rsch. Asst. in Phaenogamic Botany, Univ. of Calif., Berkeley, Calif., 1933-37; Instr. in Biol., Univ. of Colo., Boulder, 1937-44; Botanist, Foreign Econ. Admin., Cinchona Div., Colombia, 1944-45; Asst. Curator, Div. of Plants, Smithsonian Inst., Washington, D. C., 1945-46; Assoc. Botanist, Bur. of Plant Indus., U. S. Dept. of Agr., Washington, D. C., 1946-47; Asst. Prof. of Botany, Tulane Univ., New Orleans, 1947-52; Assoc. Prof., ibid., 1952—. Mem.: Wash. Acad. of Sci.; A.A.A.S.; Torrey Botanical Club; Amer. Fern Soc.; New Orleans Acad. of Sci.; Sigma Xi; Natl. Hist. Soc. of Jamaica. Author: Rocky Mountain Naturalists, 1950. Contrb. to: Jour. of Wash. Acad. of Sci.; Amer. Midland Nat.; Torrey Bot. Club Bull.; Amer. Phil. Soc.; Amer. Fern Jour., etc. Special Int.: Taxonomy of Delphinium, neotrop. Gentianaceae, Vismia. Hist. of Amer. Bot. Biol. Bibliography; Phytogeography of Rocky Mts., Southern Calif. and Andes.

EWER, Seth Judson, R. F. D., Bernardston, Mass. BOTANY.

EWERHARDT, Frank Henry, Asst. Prof. of Physical Med., Barnes Hosp., 7319 Bruno Ave., Richmond Hgts., St. Louis County, Mo. PHYSICAL MEDICINE.

EWERS, Lela Arminda, Tehr., Biol. Sciences and Asst. Prof., Cottey Coll., 828 W. Austin, Nevada, Mo. ZOOLOGY.

EWING, Clare Olin, Chf. Chemist, United-Rexall Drug Co., 605 Country Club Dr., Pasadena Park, St. Louis, Mo. PHARMACEUTICAL CHEMISTRY.

EWING, Dwight Tarbell, Prof. of Physical Chem., Mich. State Coll., East Lansing, Mich. PHYSICAL CHEMISTRY.

EWING, George McNaught, Prof. of Math., Univ. of Mo., Columbia, Mo. MATHEMATICS. b. Lexington, Mo., Sept. 30, 1907. s. Joel Harvey and Christie (Vaughan) E. Edn.: A.B., Univ. of Mo., 1929; A.M., ibid., 1930; Ph.D., ibid., 1935. m. Mary Alice Jones, Aug. 6, 1937. c.: Alicia McNaught; Catharine Vaughan; Joel Chatham. Exp.: Instr.,

Univ. of Mo., Columbia, Mo., 1930-39; Asst. Prof., *ibid.*, 1939-44; Assoc. Prof., *ibid.*, 1944-50; Prof., *ibid.*, 1950—; Instr., (Part time), Princeton Univ., Princeton, N. J., 1940-41; Mem., Inst. for Advanced Study, Princeton, N. J., 1940-41; Mathematician, Naval Ordnance Lab., Washington, D.C., 1944-45; Mathematician, Sandia Corp., Albuquerque, N. Mex., 1951-52. Mem.: Amer. Math. Soc.; Math. Assn. of Amer.; Phi Beta Kappa; Sigma Xi; Tau Beta Pi. Contrb. to: Duke Math. Jour.; Annals of Math.; Bull. Amer. Math. Soc.; Amer. Math. Monthly. Special Int.: Calculus of Variations; Electromagnetic Theory; Systems Analysis.

EWING, Dressel Dewitt, Hd., Schl. of Elec. Engrng., Elec. Bldg., Purdue Univ., Lafayette, Ind. **ELECTRICAL ENGINEERING.** b. VanLue, Ohio, Oct. 7, 1883. s. Melvin Edward and Elizabeth Ann (Bright) E. Edn.: E.E., Ohio Northern Univ., 1905; M.E., *ibid.*, 1906. Hon. Degree: Dr. of Engrng., Ohio Northern Univ., 1936. m. Mary Catherine Schantz of Springfield, Ohio, Dec. 29, 1906. d. Geo. and Nancy Schantz. c.: Paul Bruce. Exp.: Cable Testman, C. D. & P. Tel. and Tel. Co., Pittsburgh, Pa., summer, 1906; Asst. Engr., Mo. Pacific Rwy., St. Louis, Mo., Sept.,



1906 to Sept. 1907; Instr. in Elec. and Mech. Engrng., Ohio Northern Univ., Ada, Ohio, 1907-12; Grad. Asst., Purdue Univ., Lafayette, Ind., 1912-13; Asst. Prof., 1913-16; Assoc. Prof., 1916-18; Prof. of E.E., 1918—; Hd., Schl. of Elec. Engrng., Purdue Univ., 1942—; Dir., Duncan Electric Mfg. Co., Consulting Engr.; Contributing Ed. of McGraw-Hill Publishing Co., 1915-22. Mem.: Dir. Amer. Inst. of Elec. Engrs. 1951—; Engrs. Council for Professional Development; Board of Trustees, Alessandro Volta Fund; Amer. Soc. for Engrng. Edn.; Amer. Transit Assn.; Ind. Engrng. Council; Sigma Xi; Tau Beta Pi; Eta Kappa Nu; Scabbard and Blade; Theta Tau; Rotary; Town and Gown. Author: "Electric Rwy. Engrng." Contrb. to: Elec. Rwy. Jour.; Elec. World; Elec. Engrng.; Elec. Traction. Author of a Number of Bulletins, Purdue Engrng. Expt. Sta.; and Many Unsigned Staff Articles and Editorials in McGraw-Hill Jour. Hobbies: Golf; Farm Operation; Watchmaking; Guns. Listed in: W. W. A.; W. W. in Transportation and Communication; W. W. in Commerce and Ind.; W. W. in the Midwest; Internatl. W. W.; World Biog.; A. M. S.; Who Knows—and What; Pres and Prof. in Amer. Coll.; W. W. in Engrng. Special Int.: Railway Electrification and Power Transmission.

EWING, William Maurice, Prof. of Geol., Columbia Univ., and Dir., Lamont Geol. Observ., Palisades, N. Y. GEOPHYSICS. b. Lockney, Tex., May 12, 1906. s. Floyd and Hope (Hamilton) E. Edn.: B.A., Rice Inst., 1926; M.A. *ibid.*, 1927; Ph.D., *ibid.*, 1931. Hon. Deg.: D.Sc., Wash. and Lee Univ., 1949; D.Sc., Univ. of Denver, 1953. m. Avarilla Grace Hildenbrand of Houston, Tex., 1928, divorced, 1940. d. Mr. and Mrs. H. H. Hildenbrand. c.: William Maurice, Jr. m. (2nd) Margaret Sloan Kidder of N. Y., 1944. c.: Jerome Henry; Hope Hamilton; Peter Duryee; Margaret Sloan.



Exp.: Instr. in Physics, Univ. of Pittsburgh, 1929-30; Instr. in Physics, Lehigh Univ., 1930-36; Asst. Prof. of Physics, *ibid.*, 1936-40; Guggenheim Fellow, Seismic Investigations of Ocean Basins, 1938-40; Assoc. Prof., Geol., Lehigh Univ., 1940-44; Rsch. Assoc., Woods Hole Oceanographic Inst.,

1940-50; Assoc. Prof., Geol., Columbia Univ., 1944-47; Councillor, Geol. Soc. of Amer., 1945-48; Mem. of the Panel. Rsch. and Development Bd., 1947—; Prof. of Geol., Columbia Univ., 1947; Dir., Lamont Geol. Observ., 1949—; Assoc. in Geophysics, Woods Hole Oceanographic Inst., 1942—. Mem.: Phi Beta Kappa; Natl. Acad. of Sci.; Amer. Math. Soc.; Explorers Club; Amer. Ray Paths from Seismic Time Curves. Listed in Who's Who; A.M.S. Special Int.: Exploration of Ocean Basins.

EWING, Henry E., U. S. Natl. Museum, Washington, D. C. ZOOLOGICAL SCIENCES.

EWING, Warren Walter, Prof. of Physical Chem., Lehigh Univ., Bethlehem, Pa. CHEMISTRY.

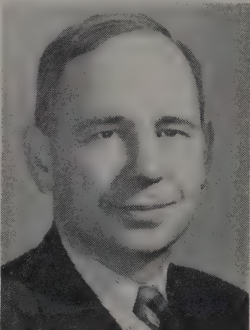
EXLINE, Paul Gettis, Section Engr., Gulf Rsch. and Development Co., P. O. Box 2038, Pittsburgh, Pa. PHYSICS.

EXNER, Frank Metcalf, Project Physicist, Minneapolis-Honeywell Regulator Co., 4609 Beard Ave., S., Minneapolis, Minn. RADIOLOGICAL PHYSICS.

EYRE, Francis H., Silviculturist, Lake States Forest Expt. Station, Univ. Farm, St. Paul, Minn. FORESTRY.

EYRING, Carl Ferdinand, Prof. of Physics, Dean of Coll. of Arts and Sciences, Brigham Young Univ., Provo, Utah. PHYSICS.

EYRING, Henry, Dean of Grad. Schl. and Prof. of Chem. and Metallurgy, Univ. of Utah, Salt Lake City 1, Utah. CHEMISTRY. b. Colonia, Juarez, Chihuahua, Mex., Feb. 20, 1901. s. Edward Christian and Caroline (Romney) E. Edn.: B.S., Univ. of Ariz., 1923 M.S., Univ. of Calif., 1924; Ph.D., *ibid.*, 1927. Hon. Deg.: D.Sc., Univ. of Utah, 1952; D.Sc., Northwest Univ., 1953. m. Mildred Bennion, Aug. 25, 1928. c. Edward Marcus; Henry Bennion and Harden Romney. Expr.: Instr. Chem., Univ. of Ariz., Tucson, Ariz., 1924-25; Inst. Chem., Univ. of Wis., Madison, Wis., 1927-28; Research Assoc., Chemistry, *ibid.*, 1928-29; National Research Fellow, Kaiser-Wilhelm Institute, Berlin, Germany, 1929-30; Lecturer, Chemistry, Univ. of Calif., 1930-31; Asst. and Assoc. Prof. Chem., Princeton Univ., Princeton, N. J., 1931-38; Prof. Chem. and Dir. of Textile Rsch. Foun., 1938-46; Dean of Grad. Schl. and Prof. Chem. and Metallurgy, Univ. of Utah, Salt Lake City 1, Utah, 1946—. Mem.: A.A.A.S.; Amer. Chem. Soc.; Natl. Acad. of Sci.; Amer. Phil. Soc.; Utah Acad. of Sci.; Amer. Phys. Soc.; Sigma Xi; Phi Kappa Phi. Author: The Theory of Rate Processes, with Samuel Glasstone and Keith J. Laidler, 1941; Quantum Chem., with John Walter and George Kimball, 1944; The Kinetic Basis of Molecular Biol., with Frank H. Johnson and Milton J. Pollisar. Contrb. to: Jour. Amer. Chem. Soc.; Phys. Rev.; Zeit. f. Physik. Chemie; Chem. Rev.; Nature; Proc. Amer. Phil. Soc.; Jour. Cell. Comp. Physiol., etc. Gen. Int.: Univ. of Ariz. Alumni Achievement Award, 1947; Rsch. Corp. Award, 1949; Second Bingham Medal from Soc. of Rheol., 1949; William H. Nichols Medal from N. Y. Sect. of Amer. Chem. Soc., 1951. Special Int.: Radioactivity, the Application of Quantum Mechanics to Chem., The Theory of Reaction Rates, Theory of Liquids.



EYSTER, Henry Clyde, Rsch. Plant Physiologist and Assoc. Prof. of Plant Physiol. Kettering Foundation, Antioch Coll., Yellow Springs, Ohio. PLANT PHYSIOLOGY.

EZEKIEL, Walter Naphtali, Prin. Mycologist in Chg. Moisture and Fungus Proofing, Bureau of Ordnance, Navy Dept., 3105 34th St., N. W., Washington, D. C. MYCOLOGY AND PLANT PATHOLOGY.

EZELL, Boyce DeWitt, Rsch. Biochemist, U. S. D. A., Plant Indus. Station, Beltsville, Md. VITAMINS OF HORTICULTURAL CROPS.

FABER, Harold Kniest, Prof. of Pediatrics, Stanford Univ. Schl. of Med., 1960 Vallejo St., San Francisco, Calif. **PEDIATRICS**.

FABER, Sidney, Harvard Med. Schl., Boston, Mass. **PATHOLOGY**.

FABIAN, Frederick W., Rsch. and Prof. of Bacteriol. and Public Health, Mich. State Coll., 506 Marshall St., East Lansing, Mich. **BACTERIOLOGY**.

FABIANIC, William L., 1831 Seminary Ave., Alton, Ill. **CERAMICS**.

FACKT, George P., 408 Paseo del Mar, Palos Verdes Estates, Calif. **CEMAMICS**.

FADUM, Ralph Eigil, Hd., Dept. of Civil Engrng., N. C. State Coll., Raleigh, N. C. **CIVIL ENGINEERING**. b. July 19, 1912, Pittsburgh, Pa. s. Torgeir Bleken and Mimi (Knudsen) F. Edn.: B.S., Univ. of Ill., 1935; M.S., Harvard, 1937; S.D., ibid., 1941. m. Nancy Fields, July 19, 1939. c. Jane Fields. Exp.: Half-time Asst., Harvard Univ., 1935-37; Instr., ibid., 1937-41; Faculty Instr., ibid., 1941-43; Asst. Prof. of Soil Mech., Purdue Univ., 1943-45; Assoc. Prof., ibid., 1945-47; Prof., ibid., 1947-49; Prof and Hd., Dept. of Civil Engrng., N. C. State Coll., Raleigh, N. C., 1949—. Mem.: Amer. Soc. of Civil Engrs.; Phi Kappa Phi; Sigma Xi; Tau Beta Pi; Amer. Soc. for Engrng. Edn.; Phi Eta Sigma; Chi Epsilon; Delta Upsilon; Rotary. Author: Notes on Soil Testing for Engrng. Purposes, with A. Casagrande, 1940. Contrb. to: Proc. of Amer. Soc. of Civil Engrs.; Applied Mech. Rev. Special Int.: Soil Mechanics.

FAGERSTROM, William Henry, Assoc. Prof. of Math., City Coll., 706 Riverside Drive, New York 31, N. Y. **MATHEMATICS AND MATHEMATICAL EDUCATION**. b. March 24, 1893, Bucatunna, Miss. s. John and Kathryn (O'Leary) F. Edn.: A.B., Tulane Univ., 1924; M.A., Columbia Univ., 1927; Ph.D., ibid., 1933; summers, Tulane Univ., 1917, 1919, 1922, 1923; Peabody Coll., 1918; Univ. of Va., 1920; Univ. of Colo., 1921; Ala. Poly., 1929; Columbia Univ., 1926, 1927, 1930. m. Lenore Lindsey of Kirksville, Mo., June 3, 1925. d. Harry Smithers and Molly Wilkes Lindsey. c.: Gerald Francis Fagerstrom. Exp.: Mobile Pub. Schl. System, Ala., 1912-29; Pres. H. S. Math. Sect., Ala. Edn. Assn., 1929-30; Ala. Coll. Sum. Schl., Tchrs., 1928; Dept. of Edn., Ala. Poly. Summer Schl., 1929; Instr., Manhattanville Coll. Summer Schl., 1930; Extension Div., Manhattan Coll., 1940-41; E.S.M.W.T., Math., City Coll., N. Y. City, 1941-43; Chmn., Math., A.S.T.P. and A.S.T.R.P., City Coll., 1943—; Visiting Prof. of Math., Univ. of Sou. Calif. Summer Schl., 1941; Univ. Trng. Command, Florence, Italy, 1945. Mem.: A.A.U.P.; Vice-Chmn. of the Metropolitan, N. Y. Section of the Mathematical Assn. of Amer., 1952-53; Math. Assn. of Amer.; Math. Soc. of Amer.; Sigma Phi Epsilon; Theta Kappa Phi; Kappa Delta Phi. Ph.D. Dissertation: Math. Facts and Processes Prerequisite to the Study of the Calculus. Travel: U. S.; Canada; Mexico; Europe; Africa. Hobbies: Travel; Reading; Theatre; Bridge. Listed in: Men of Sci.; Who's Who in the East. Special Int.: Undergraduate work in Mathematics and graduate courses required for Mathematics Majors getting M.S. Degree in Education.

FAILMEZGER, Howard, Victor Insulators, Inc., Victor, N. Y. **CERAMICS**.

FAILOR, Leona Mae, Tehng. Prof., Nebr. State Tchrs. Coll., Kearney, Nebr. **PSYCHOLOGY**.

FAIRBANKS, Berthier Wesley, Amer. Dry Milk Inst., Inc., 221 N. LaSalle St., Chicago, Ill. **AGRICULTURE, CHEMISTRY**.

FAIRBANKS, Grant, **SPEECH AND HEARING**.

FAIRCHILD, David G., retired, 4013 Douglas Rd., Coconut Grove, Fla. **BOTANY, HORTICULTURE**.

FAIRCHILD, Henry Pratt, Prof. Emer. Sociol., N. Y. Univ., Wash. Square East, N. Y., N. Y. **POPULATION AND MIGRATION**.

FAIRCHILD, Wilma Belden, Editor, Geographical Rev., Amer. Geographical Soc., Broadway at 156th St., N. Y. 32. N. Y. **GEOGRAPHY**. b. Long Beach, Calif., Jan. 14, 1915. d. Oliver William and Susan (Remington) Belden. Edn.: B.A., Scripps Coll. for Women, 1935; M.A., Clark Univ., 1937. Exp.: Library Asst., Amer. Geographical Soc., 1938-42; Rsch. Assoc., ibid., 1942-49; Editor, Geographical Rev., ibid., 1949—. Mem.: Assn. Amer. Geographers; Soc. Woman Geographers. Contrb. to: Geographical Rev.; Econ. Geography. Special Int.: Econ. and Human Geography; Geographical Bibliography; Conservation of Natural Resources.

FAIRFIELD, John Guthrie, Prof. of Heat Engrng., Rensselaer Poly. Inst., Troy, N. Y. **MECHANICAL ENGINEERING**.

FAIRHALL, Lawrence Turner, Chf. Chemical Section, Div. Indus. Hygiene, U. S. P. H. S., 406 Fairfax Rd., Bethesda, Md. **CHEMISTRY**.

FAJANS, Kasimir, Prof. of Chem., Univ. of Mich., Ann Arbor, Mich. **PHYSICAL AND GENERAL CHEMISTRY**.

FALK, Carolyn R., Bacteriologist, Bureau of Labs., Dept. of Health for the City of N. Y., 40 E. 66th St., N. Y., N. Y. **BACTERIOLOGY**.

FALK, Isidore Sydney, Dir., Bureau of Rsch. and Statistics, Social Security Admin., Federal Security Agency, 31 W. Kerke St., Chevy Chase, Md. **SOCIAL SECURITY**.

FALK, Kaufman George, Dir., Lab. Indus. Hygiene, Inc., 76 Madison Ave., N. Y., N. Y. **CHEMISTRY**.

FAMULENER, Lemuel William, retired, S-4 Tudor Hall, 275 Engle St., Englewood, N. J. **BACTERIOLOGY**.

FANKHAUSER, Gerhard, Prof. of Biol., Princeton Univ., Princeton, N. J. **EMBRYOLOGY**.

FANKUCHEN, I., Poly, Inst. of Brooklyn, Brooklyn, N. Y. **X-RAY, DIFFRACTION**.

FARAH, Alfred, Asst. Prof., Dept. of Pharmacol., Med. Schl., Univ. of Wash., Seattle, Wash. **PHARMACOLOGY**.

FARBER, Eduard, Chf. Chemist and Consultant, Timber Engrng. Co., 4530



Brandywine St., N. W., Washington 16, D. C. **CHEMISTRY OF WOOD**. b. Brody, Austria, Apr. 17, 1892. s. Samuel and Cecile (Gottlieb) F. Edn.: Ph.D., Univ. of Leipzig, Germany, 1916. m. Dora Schmidt on Sept. 18, 1922. c.: Elisabeth; Irene; Viola. Exp.: Res. Asst., Kaiser Wilhelm Institut fur Exper. Therapie, 1916 and 1919; Chief Chemist, W. Leipziger, Budapest, 1917-18; Dir. Rsch., D. Bergin A. G. and D. Holzhydrolyse A. G., 1920-38; Dir. Rsch. and Consultant, Polyxor Chem. Co., 1939-43; Chf. Chemist, Timber Engrng. Co., Washington, D. C., 1943—. Hon. Pos.: Chmn., Washington Chapter, Amer. Inst. of Chemists, 1946-48; Councilor, Amer. Chem. Soc.; Assoc. Editor, Isis. Mem.: Amer. Chem. Soc.; Amer. Inst. Chemists; A.A.A.S.; N. Y. Acad. of Sci.; N. Y. Museum Natl. Hist.; TAPPI. Author: Die geschichtliche Entwicklung der Chemie, 1921; Evolution of Chem., 1952. Contrb. to: Bugge; Tappi; Jour. Forestry; Isis; Osiris; Chymia; etc. Special Int.: Chem. of Wood, Lignin, Plastics, Fermentations; Wood Impregnation and Preservation; Hist. of Chem.

FARBER, Milton, Sr. Rsch. Engr., Calif. Inst. of Tech., Pasadena, Calif. **PHYSICAL CHEMISTRY**. b. Los Angeles, Calif., Oct. 6, 1916. s. Joshua and

Lena (Luner) F. Edn.: B.S., Univ. of Calif., 1938; M.S., Univ. of Minn., 1939. m. Constance Baldwin, Feb. 14, 1942. c.: Robert; Richard; Kathleen. Exp.: Area Supvr., Atlas Powder Co., Paducah, Ky., 1942-43; Sr. Rsch. Engr., Eastman, Oak Ridge, Tenn., 1943-45; Sr. Rsch. Engr., Carbide and Carbon, Oak Ridge, Tenn., 1945-46; Sr. Rsch. Engr., Calif. Inst. of Tech., Pasadena, Calif., 1946—. Mem.: Amer. Chem. Soc.; Sigma Xi; Jr. C. of C. Contrb. to: Jour. Chem. Phys.; Jour. Amer. Chem. Soc.; Jour. Amer. Electrochem. Soc. Special Int.: Thermo-dynamics; Reaction Kinetics; Accommodation Coefficients; Heats of Dissociation.

FARBER, Sidney, Children's Hosp., 300 Longwood Ave., Boston 15, Mass. **PATHOLOGY, BACTERIOLOGY.**

FARKAS, Adalbert, Supvr., Chem. Rsch., Barrett Div., Allied Chem. and Dye Corp., 1015 Township Line, Jenkintown, Pa. **PHYSICAL CHEMISTRY, INDUSTRIAL ORGANIC CHEMISTRY.** b. Hungary, July, 10, 1906. s. Stephen and Anna F. Edn.: Ph.D., Frankfurt Univ., 1930; Dr. Engr., Technic. Univ., Vienna, 1932. m. Deborah Miller, 1936. c.: Edward Joel. Exp.: Instr. in Phys. Chem., Univ. of Frankfurt, Germany, 1931-33; Rsch. Fellow, Dept. of Colloid Sci., Cambridge Univ., England, 1933-36; Asst. Prof. of Phys. Chem., Hebrew Univ., Jerusalem, 1936-41; Group Leader, Rsch. Dept., Union Oil Co., Wilmington, Calif., 1942-46; Supvr., Rsch. Dept., Barrett Div., Allied Chem. and Dye Corp., Glenolden, Pa., 1946—. Mem.: Amer. Chem. Soc.; A.A.A.S.; Amer. Inst. of Chemists; Philadelphia Catalysis Club; Philadelphia Org. Chemists' Club; Chem. Soc.; Faraday Soc. Author: Ortho-hydrogen, Parahydrogen and Heavy Hydrogen, 1935; Exptl. Methods in Gas Reactions, with H. W. Melville, 1939. Editor: Physical Chemistry of Hydrocarbons, 1950-52. Contrb. to: Jour. Amer. Chem. Soc.; Jour. Phys. Chem.; Jour. Chem. Soc.; Trans. Farad. Soc.; Indus. Engrng. Chem.; Encyclopedia Britannica. Special Int.: Catalysis; Catalytic Oxidation; Hydrocarbon Chem.; Chem. of Parahydrogen and Heavy Hydrogen; Coal Tar Chems.; Organic Peroxides; Prevention of Decay of Crusts Fruit.

FARLEY, Franklin, Management Consultant, Food Machinery and Chem. Corp., 161 E. 42 St., N. Y. 17, N. Y. **CHEMICAL ENGINEERING.** b. Bellaire, Ohio, Sept. 1, 1895. s. Samuel Franklin and Catherine (Blamey) F. Edn.: B.S., Univ. of Kans., 1918. m. Florence Graham Mulligan, Jan. 18, 1930. c.: Susanne. Exp.: Engr., Washington Marine Inst. Co., N. Y., N. Y., 1919-21; Chem. Engr., Arthur D. Little, Inc., Cambridge, Mass., 1921-23; Asst. Treasurer and Treasurer, the Phosphate Mining Co., N. Y., N. Y., 1923-41; Vice-Pres., Internatl. Minerals and Chem. Corp., Chicago, Ill., 1941-52. Mem.: Amer. Inst. of Chem. Engrs.; Amer. Inst. of Mining and Metallurgical Engrs.; A.A.A.S.; Sigma Alpha Epsilon; Sigma Xi; Tau Beta Pi; Alpha Chi Sigma. War Record: U. S. Army, 1918.

FARMER, F. Malcolm, Vice-Pres. and Consulting Engr., Electrical Testing Labs., Inc., 79th St. and East End Ave., N. Y., N. Y. **ELECTRICAL ENGINEERING.**

FARNHAM, Frank C., Consulting Geophysicist, 3617 Florida Rd., Baltimore 7, Md. **GEOPHYSICAL PROSPECTING.** b. Archer, Nebr., July 16, 1901. s. Edwin Roy and Clara (Templin) F. Edn.: A.B., Nebr. Wesleyan Univ., 1924; Sc.M., N. Y. Univ., 1926. m. L. Gem White, 1926. c.: Ruth A.; Paul R.; Martha L. and Keith A. Exp.: Asst. Prof. of Physics, Mo. Schl. of Mines, Rolla, Mo., 1926-43; Staff Geophysicist, U. S. Geol. Survey, Washington, D. C., 1943-52; Consulting Geophysicist, Baltimore, Md., 1952—. Mem.: A.A.A.S.; A.G.U.; Phi Kappa Phi. Gen. Int.: Patented; Method of Placing Explosives for Seismic Prospecting. Patented, Elastic Suspension Magnetometer. Special Int.: Geophys. Prospecting; Development of Instruments and Techniques with Special Emphasis on Resistivity and Shallow Seismic Refraction Methods.

FARNSWORTH, Alice Hall, Prof. of Astron., Mount Holyoke Coll., 61 College St., South Hadley, Mass. **ASTRONOMY.** b. Williamstown, Mass., Oct. 19, 1893. d. Frederic T. and Anna Caroline (Tufts) F. Edn.: A.B., Mount Holyoke Coll., 1916; M.S.,

Univ. of Chicago, 1917; Ph.D., *ibid.*, 1920. Exp.: Instr. in Astron., Mount Holyoke Coll., 1920-22; Instr. in Astron., Univ. of Chicago, 1925-26; Asst. Prof. of Astron., Mount Holyoke Coll., 1923-28; Assoc. Prof., *ibid.*, 1928-37; Prof., *ibid.*, 1937—; Dir., John Payson Williston Observatory, 1936—. Mem.: A.A.A.S.; Amer. Astronomical Soc.; Amer. Assn. Var. Star Observers; Phi Beta Kappa. Contrb. to: Popular Astron.; Astronomical Jour.; Astrophys. Jour. Special Int.: Observation of Sunspots; Lunar Occultations; Photographic Photometry.

FARNSWORTH, Goldena, Prof. and Hd., Dept. of Physics and Math., Hollins Coll., Hollins Coll., Va. **PHYSICS.**

FARNSWORTH, Harry Edward, Prof. of Physics, Brown Univ., Providence, R. I. **PHYSICS.**

FARNSWORTH, Paul Randolph, Prof. of Psychol., Stanford, Calif. **PSYCHOLOGY OF MUSIC, SOCIAL PSYCHOLOGY.**



b. Waterbury, Conn., Aug. 15, 1899. s. H. and Elisabeth Rose (March) F. Edn.: A.B., Ohio State Univ., 1921; M.A., *ibid.*, 1923; Ph.D., *ibid.*, 1925. m. Helen Elliott Cherington, Aug. 31, 1926. c.: Elliott C.; Susan M. Exp.: Asst. to Prof. of Psychol., Stanford Univ., Stanford, Calif., 1925—. Mem.: Amer. Psychol. Assn.; West. Psychol. Assn.; Amer. Musicol. Soc.; A.A.A.S.; Amer. Soc. for Aesth.; Phi Beta Kappa; Phi Delta Kappa; Sigma Xi; Gamma Alpha; Pi Mu Epsilon. Author: Soc. Psychol., with R. T. La Pierre, 1936; Musical Taste, 1950. Contrb. to: Various Psychol. and Aesthetic Jours. Special Int.: Soc. Psychol. Aspects of Music.

FARNSWORTH, Philo Taylor, Dir. and Consultant, Farnsworth Television and Radio Corp., P. O. Box 147, Fryeburg, Maine. **ELECTRONIC PHYSICS.**

FARQUHAR, Donald Wells, Instr. in Biol., Coll. of the City of N. Y., Convent Ave. and 139th St., N. Y., N. Y. **ENTOMOLOGY.**

FARR, Wanda Kirkbride, Rsch. Chemist, Celanese Corp. of Amer., 19 Russel Pl., Summit, N. J. **CYTOLOGY.**

FARRAR, Clarence B., Prof. of Psychiatry, Univ. of Toronto, 20 Oriole Rd., Toronto, Ont., Can. **PSYCHIATRY.**

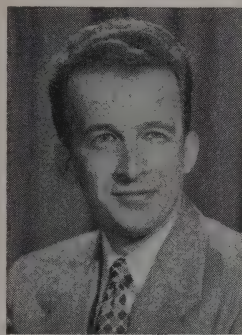
FARRELL, Francis D. Prof. of Rural Institutions, Kans. State Coll., Manhattan, Kans. **ECONOMICS.**

FARRIS, Edmond John, Exec. Dir., Assoc. Mem. of the Wistar Inst., Phila., Pa. **REPRODUCTION; ANATOMY.** b. Buffalo, N. Y., July 28, 1907. Edn.: B.A., Univ. of Buffalo, 1929; Ph.D. Univ. of Pa., 1938. m. Louise Augusta Stroman of Charleston, S. C., June 5, 1932. c.: Louise Augusta, Edmond J., Jr., Suzanne Lartigue. Exp.: Rsch. Assoc. Amer. Museum Natural Hist., 1928-29; Instr. in Anatomy, Md. Coll., S. C., 1929-34; Instr. in Anatomy, Georgetown, Univ., 1934-35; Instr. in Anatomy, Univ. of Buffalo, 1935-36; Exec. Dir., Assoc. Mem. of the Wistar Inst., 1936; Prof. of Anat., Pa. Acad. of Fine Arts; Visiting Lect., Univ. Pa. Schl. Med. Hon. Pos.: Editor, Jour. Biol. Photo. Assn.; Director, Biol. Photo. Assn.; Ed. Amer. Anat. Memoirs; Assoc. Ed., N. Y. Acad. Sci. No. XLVI. Mem.: Assn. Anat.; A.A.A.S.; Sigma Xi; Internatl. Assn. Med. Museums; Phi Beta Kappa; Amer. Eugenics Soc.; Biol. Photo Assn. Pres., 1947-48; Amer. Soc. Zool.; Amer. Soc. Study Sterility; Masons; Knight Templar. Hon. Mem.: Soc. Panama de Obstet. y Ginecol.; Corresponding Mem., Brazilian Soc. of Sterility. Author: Anatomy and Physiology Lab. Guide, 6th Ed., 1949; Arts Students' Anatomy, 2nd Ed., 1944; The Rat in Lab. Investi-

gation (co-author with J. Q. Griffith, Jr.), 2nd Ed., 1949; Human Fertility and Problems of the Male; Care and Breeding of Lab. Animals (Ed. and Author). Contrb. to: Anat. Rec.; Amer. Jour. Anat.; Sci. Ph.D. Dissertation: (1) Emotional Lymphocytosis in the Albino Rat. (2) Increase in Lymphocytes in Healthy Persons Under Certain Emotional States. Gen. Int.: Rsch.; Gen. Rsch. in Anat.; Determination of Effect of Emotions, Fatigue and Exhaustion on Man by Blood Count; New Plastic Method of Preservation; Processes of Aging; Human Ovulation. Awarded Gold Medal: Natl. Res. Foundation for Alleviation of Human Sterility; Amer. Urological Assn. Annual Award, 1949, for Outstanding Research on Human Male Fertility. Hobbies: Golf; Athletics; Arts. Listed in: A.M.S.: Who Knows; The Book of Authorities; Who's Who in Amer.

FARWELL, Hermon Waldo, Prof. of Physics, Pupin Physics Lab., Columbia Univ., 130 Woodridge Pl., Leonia, N. J. OPTICS.

FASSEL, Velmer Arthur, Assoc. Prof. Chem., Iowa State Coll., Ames, Iowa.



CHEMICAL SPECTROSCOPY; PHYSICAL CHEMISTRY; ANALYTICAL CHEMISTRY. b. Frohna, Mo., Apr. 26, 1919. s. Arthur E. G. and Alma (Poppitz) F. Edn.: B.S., Mo. State Coll., 1941; Ph.D., Iowa State Coll., 1947. m. Mary A. Katschke, July 25, 1943. Exp.: Rsch. Asst., Manhattan Project, Iowa State Coll., Ames, Iowa, 1942-43; Jr. Chemist, ibid., 1943-46; Assoc. Chemist, Inst. for Atomic Rsch., ibid., 1946-47; Asst. Prof. Chem. Dept. and Inst. for Atomic Rsch., ibid., 1947-51; Assoc. Prof., ibid., 1951—. Mem.: Amer. Chem. Soc.; Amer. Inst. of Phys.; Optical Soc. of Amer.; Iowa Acad. of Sci.; Phi Lambda Upsilon; Sigma Xi. Contrb. to: Analytical Chem.; Jour. Optical Soc. of Amer.; Spectrochimica Acta. Special Int.: Applications of Emission, Absorption, Infrared, Fluorescent and X-ray Spectroscopy to Problems in Chem., especially Analytical Problems, Hydrogen Bonding, Molecular Structure.

Prof., ibid., 1951—. Mem.: Amer. Chem. Soc.; Amer. Inst. of Phys.; Optical Soc. of Amer.; Iowa Acad. of Sci.; Phi Lambda Upsilon; Sigma Xi. Contrb. to: Analytical Chem.; Jour. Optical Soc. of Amer.; Spectrochimica Acta. Special Int.: Applications of Emission, Absorption, Infrared, Fluorescent and X-ray Spectroscopy to Problems in Chem., especially Analytical Problems, Hydrogen Bonding, Molecular Structure.

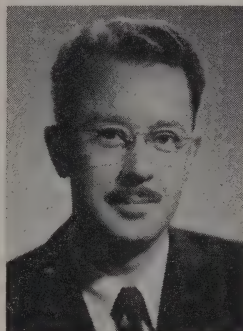
FATH, Arthur Earl, Geologist, Socony-Vacuum Oil Co., Inc., 26 Broadway, N. Y., N. Y. PETROLEUM GEOLOGY.

FAULCONER, Albert, Jr., Consultant in Anesthesiology, Mayo Clinic; Dir. of Rsch., Sect. on Anesthesiology, Mayo Foundation, Rochester, Minn. ANESTHESIOLOGY. b. Oct. 24, 1911. Ark. City, Kans. s. Albert and Grace (McMillen) F. Edn.: B.S. (med.), Kan. Univ., 1936; M.D., Kan. Univ., Med. Schl., 1936; M.S., (Anes.), Univ. of Minn. Postgrad. Schl. of Med., 1948. m. Mary Jean White of Highland Park, Mich., June 18, 1938. d. Augustus R. and Bertha McLeod White. c.: Albert, III; David White; Barbara. Exp.: Private Practice of Med., Rochester, Mich., 1938-41; U. S. Army Med. Corps, 1941-46; Fellow in Anesthesia, Mayo Foundation, 1946-47; Consultant, Sect. on Anesthesiology, Mayo Clinic, 1947—. Subcommittee on Anesthesiology, Natl. Rsch. Coun. Mem.: Chmn. Comm. on Rsch., Amer. Soc. of Anesthesiology, Inc.; Fellow, A.M.A.; A.S.A.; A.S.P.E.T.; Fellow, Governor, Amer. Coll. of Anesthesiology; Diplomate, Amer. Bd. of Anesthesiology; Sigma Xi; Beta Theta Pi; Nu Sigma Nu. Author: Chapt., Choice of the Anesthetic in Anesthesia, by Amer. Authors (to be pub.). Contrb. to: Anesthesiology; Current Rsch. in Anesthesia and Analgesia. War Record: Chf. of Anesthesiology, Finney Gen. Hosp., Thomasville, Ga., Maj. U. S. A. R. (Med.). Gen. Int.: Bd. of Gov., Amer. Coll. of Anesthesiology; Sub-Comm. on Anesthesia of the Natl. Rsch. Coun. Hobby: Apple Orchard. Listed in: Dir. of Med. Specialists; A.M.S.: Who's Who in the Midwest. Special Int.: Physiol. of Respiration and Circulation in Humans During Anesthesia; Methods for Gas Analysis.

FAULL, Joseph Horace, Prof. Emer. Forest Pathol., Harvard Univ., 72 Fresh Pond Lane, Cambridge, Mass. FOREST PATHOLOGY.

FAUNCE, Wayne Moody, Vice Dir. and Exec. Secy., Amer. Museum Natural History, N. Y., N. Y. EDUCATION, NATURAL HISTORY.

FAUST, Charles L., Chief of Electrochem. Engrng. Div., Battelle Mem. Inst., Columbus 1, Ohio.



ELECTROCHEMICAL ENGINEERING AND ELECTROCHEMISTRY; ELECTROPROCESSES. b. St. Louis, Mo., Nov. 8, 1906. s. Charles M. and Edna V. (Lawson) F. Edn.: B.S., Wash. Univ., 1930; M.S., ibid., 1931; Ph.D., Univ. of Minn., 1934. m. Florence L. Paradeau, 1934. c.: Charles D.; Jon L. and Teri-Louise. Exp.: Exchange Repairman, Southwestern Bell Telephone Co.; Western Electric Co., St. Louis, Mo., 1927-29; Asst. Instr., Univ. of Minn., Minneapolis, Minn., 1931-34; Staff, Battelle Mem. Inst., Columbus, Ohio, 1934—. Hon. Pos.: Pres., Electrochem. Soc., 1950-51; Vice-Pres., ibid., 1947-50; Bd. of Dir., ibid., 1942-44; 1947-52; Assoc. Editor, Monthly Rev. and Plating, 1944-49; Special Consultant Metallurgical Adv. Bd., 1951—; War Metallurgy Comm., 1942-44. Mem.: Electrochem. Soc.; Amer. Chem. Soc.; Amer. Electroplaters' Soc.; Electrodepositors' Tech. Soc., London; Alpha Chi Sigma; Sigma Xi; Tau Beta Pi; Phi Lambda Upsilon; Pi Mu Epsilon. Contrb. to: Jour. Electrochem. Soc.; Plating; Product Engrng.; Amer. Machinist; The Iron Age; Steel; Metal Finishing; Jour. Electrodepositors' Tech. Soc.; Machinery; Amer. Aviation. Special Int.: Electroprocesses. Especially Electrodeposition, Electrowinning, Electrorefining, Metal Finishing, Electropolishing, Anodic Dissolution, Alloy Deposition, Pickling, Fused Salt Electrolysis, Electrochem. Behavior and Electrolysis.

FAUST, Ernest Carroll, Prof. of Parasitology, Dept. of Tropical Med., Tulane Univ., 1430 Tulane Ave., New Orleans, La. MEDICAL PARASITOLOGY.

FAUSTMAN, Daniel Jackson, City Traffic Engr., City of Sacramento, 1243 Marian Way, Sacramento, Calif. TRAFFIC ENGINEERING. b. Sacramento, Calif., Aug. 7, 1916. s. W. F. and Berenice E. (Smith) F. Edn.: B.S., Univ. of Calif., 1937; Harvard University, Certificate in Transportation, 1938. m. Sara Louise Heilbron, Sept. 28, 1941. c.: Daniel Jackson, Jr. Exp.: Air Base Engr., Hamilton Field, Calif., 1941; Chf., Special Engrng. Sect., Traffic Control Branch, Engr. Bd., Ft. Belvoir, Va., 1942-43; Asst. Chf. to Chf., Applied Electronics Branch, ibid., 1944-45; Gen. Mgr. and Chf. Engr., Sherrill Mfg. Corp., Peru, Ind., 1946; Assoc. Trans. Engr., State Public Utilities Commn., San Francisco, Calif., 1947-48; City Traffic Engr., Sacramento, Calif., 1948—; Lectr., Northwestern Univ., 1950; Univ. of Calif., 1951-52; Ore. State Coll., 1952; Traffic Engineering Consultant to: Napa, Woodland, Chico, San Jose, Richmond, Vallejo, Placerville, Calif. Mem.: Inst. of Traffic Engrs.; Traffic Rsch. Assoc.; Assoc. Mem., Amer. Soc. of Civil Engrs. and Hwy. Rsch. Bd.; Phi Delta Theta; Rotary. Contrb. to: Eno Traffic Quarterly; Traffic Engrng.; Civil Engrng.; N. J. Civil Engr.; Public Safety, Calif. Hwy. Patrolman; Electronics; Machine Design. War Record: U. S. Army Reserve Corps, 1938-47; Calif. National Guard, 1947 to date (Lt. Col.).

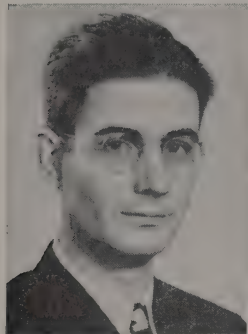
FAY, Marion Spencer, Dean and Prof. of Physiol. Chem., Woman's Med. Coll. of Pa., Philadelphia, Pa. PSYCHOLOGICAL CHEMISTRY.

FAY, Richard Dudley, Assoc. Prof. of Electrical Communications, Mass. Inst. of Tech., Cambridge, Mass. ACOUSTICS.

FAZEL, Charles Stever, Dir. of Development, Solvay Process Co., Nitrogen Div., Hopewell, Va. CHEMISTRY, PHYSICS.

FEARING, Franklin Smith, Prof. of Psychol., Univ. of Calif., Los Angeles, Calif. PSYCHOLOGY.

FEARON, Robert Earl, Dir. of Rsch., Well Surveys, Inc., 1430 S. Terrace Drive, 314 S. Kenosha Ave., Tulsa, Okla. NUCLEAR PHYSICS; ORGANIC CHEMISTRY. b. Nov. 17, 1912, Spokane, Wash. s. Edwin H. and Edith Lillian (Thompson) F. Edn.: B.S., 1933, M.S., 1934, Univ. of Pittsburgh. m. Ruth S. Fearon of Pittsburgh, Pa., Feb. 23, 1938. d. E. J. and Mabel Strothers. c.: Lee Chas.; Anne Carol; George Calvin; Edward Robert; Martha Ruth. Exp.: Grad. Coun. Scholar, Teaching Univ. of Pittsburgh, 1933-36; Schlumberger Well Surveying Corp., Field



Engr., Geophys. Well Survey, 1936-38; Rsch. Engr., Engr. Lab., Tulsa, Okla., 1938-39; Well Surveys, Inc., Dir. of Rsch., 1939-41; Rsch. Engr., Stanolind Oil and Gas Co., 1941-44; Dir. of Rsch., Well Surveys, Inc., 1944—; Phys. Tchng., Downtown Coll., Univ. of Tulsa, 1946; Chmn. State Comm. on Registration, Okla. Soc. for Prof. Engr. Mem.: A.P.S.; A.C.S.; Amer. Geophys. Union; Amer. Inst. of Mining and Metallurgical Engr.; Soc. Exploration Geophys.; Tulsa Geol. Soc.; Soc. of Amer. Milit. Engr.; A.A.A.S.; Tulsa Little Theatre; Natl. Cong. of Parents and Tchrs. Travel: N. Amer. Gen. Int.: Discovered Most Refined Method Known for Measuring Very Small Currents of Electricity (Patent). Hobbies: Beekeeping; Silviculture; Children. Listed in: A.M.S.: Who knows—and What: Who's Who in South and Southwest. Special Int.: Nuclear Prospecting Instruments (Oil, Uranium); Non Clogging Drawing Inks.

FEDERER, Charles Anthony, Jr., Staff Mem., Harvard Coll. of Observatory, Cambridge, Mass. ASTRONOMY.

FEHR, Roy Benner, Mechanical Engr., 704 Forestdale Rd., Royal Oak, Mich. MECHANICAL ENGINEERING.

FEIKER, Frederick Morris, Dean, Schl. of Engrng., Geo. Washington Univ., Washington, D. C. ENGINEERING MANAGEMENT.

FEINBERG, Benjamin George, Chemist and Owner, B. G. Feinberg, Chemicals, 118 W. 44th St., N. Y., N. Y. INDUSTRIAL CHEMISTRY.

FEKETE, Elizabeth, Rsch. Assoc., R. B. Jackson Memorial Lab., P. O. Box 558, Bar Harbor, Maine. HISTOLOGY, PATHOLOGY.

FELD, Jacob, Consulting Engr., 60 E. 23rd St., N. Y., N. Y. SOIL MECHANICS.

FELDMAN, William H., 926 8th Ave. S. W., Rochester, Minn. VETERINARY PHARMACOLOGY.

FELICIANO, Jose M., Prof. and Hd. Dept. Geol. and Geog., Coll. of Lib. Arts, and Hd. of the Philippines, Quezon City, P. I. GEOLOGY. b. Oct. 22, 1887, San Fernando, Pampanga. s. Mauricio and Graciana (Tiomico) F. Edn.: G. Phar., Univ. of Philippines, 1916; A.B., B.S., ibid., 1917; M.S., ibid., 1921; Phar. D., Univ. of Santo Tomas, 1921; Ph.D., Univ. of Chicago, 1923. m. Anatolia Panlilio of Mexico, Pampanga, 1924. d. Jose and Marie Tison Panlilio. c.: Leticia; Florentino; Erlinda. Exp.: Grad. Asst. in Pharm., Univ. of Philippines, 1916; Asst. Instr. in Chem., 1917; Asst. Instr. in Chem., 1918; Instr. in Chem., 1919; Instr. in Chem., 1920; Univ. of Philippines Fellow for Univ. of Chicago and Stanford, 1921-24; Asst. Prof. and Act. Hd., Dept. of

Geog. and Geol., Coll. of Lib. Arts, Univ. of Philippines, 1924-25; Assoc. Prof. and Hd., Dept., 1926—; Prof. and Hd., 1938—. Mem.: N.R.C. of Philippines; Petrol. Tech. B.; Philippine Pharmaceutical Assn.; Sigma Xi; Fellow, A.A.A.S.; Kappa Epsilon Pi; Philippine Sci. Soc.; Sigma Pi Sigma; Amer. Geol. Soc.; Phi Kappa Phi; N.R.C.; Geol. Soc. of Philippines; Philippine Soc. of Mining, Met. and Geol. Engr.; Internatl. Coun. of Museums; P. I. Geog. Soc. Author: Articles in Sci. Publications. Ph.D. Dissertation: The Relation of Concentrations to Coal Seams. Travel: N. Amer.; Japan; New Zealand; Australia; Siam; Singapore. Hobbies: Movies; Farming. Listed in: A.M.S.; Internationaler Geologen und Mineralogen Kalender. Special Int.: Sedimentation and Hydrology.

FELLERS, Carl Raymond, Hd., Dept. of Food Tech., Univ. of Mass., Amherst, Mass. FOOD AND FISHERIES TECHNOLOGY. b. Hastings, N. Y., Oct. 4, 1893. s. Frank and Mary (Baratier) F. Edn.: A.B., Cornell Univ., 1915; M.Sc., Rutgers Univ., 1916; Ph.D., ibid., 1918. m. Josephine Sanders, Mar. 28, 1921. c.: Francis X.; Mary J.; Martha L.; Anne M.; John C.; Paul J.; David A.; Stephen G. Edn.: Staff, U. S. Public Health Service, Charlotte, N. C., 1918-19; Staff, U. S. Bur. of Chem., U. S. Dept. of Agri., Washington, D. C., 1920; Staff, Natl.



Canners Assn., Seattle, Wash., 1921-23; Assoc. Prof., Univ. of Wash., Seattle, Wash., 1924-26; Rsch. Prof., Univ. of Mass., Amherst, Mass., 1926-41; Lt. Col. USAR, QMC, 1926-53; Bronze Star, W. W. II, S. W. Pacific; Hd. of Dept. of Food Tech., ibid., 1941—. Hon. Pos.: Pres., Inst. of Food Tech., 1949-50; Pres., Univ. of Mass. Chapt., Sigma Xi; Chmn., Food and Nutrition Sect., U. S. Public Health Assn.; Chmn., Agri. and Food Div., Amer. Chem. Soc.; Dir., QM Food and Container Assoc.; Dir., Blue Channel Corp., Mem.: Amer. Chem. Soc.; Inst. Food Tech.; Sigma Xi; Phi Kappa Phi; Phi Lambda Upsilon; Amer. Fisheries Soc.; Soc. Amer. Bacteriol.; Amer. Soc. of Hort. Sci.; A.A.A.S.; N. Y. Acad. of Sci.; Theta Kappa Phi. Contrb. to: Food Rsch.; Food Tech.; Jour. Bacteriol.; Proc. Amer. Fisheries Soc.; Proc. Jour. of Hort. Sci.; Mass. Agril. Expt. Sta. Bull.; Amer. Chem. Soc. Jour.; Food Indus.; Chem. Abstracts; Jour. of Nutrition and Various Food Trade Jours. Special Int.: Effect of Processing on Nutritive Value of Foods.

FELLERS, Francis X., Dr. of Med., Asst. Resident Pediatrics, Boston Floating Hosp., Boston, Mass., 52 Fearing St., Amherst, Mass. PEDIATRICS. b. Seattle, Wash., Feb. 6, 1922. s. Carl R. and Josephine (Sanders) F. Edn.: B.A., Amherst Coll., 1944; M.D., Cornell Univ., 1946. Exp.: Intern in Pediatrics, New York Hospital, New York, N. Y., 1946-47; Medical Officer, U. S. Air Force, L. I., N. Y.; Hawaii; Japan; Tripoli, Libya; Paris, France; Mass., 1947-53; Asst. Resident Ped., Boston Floating Hosp., Boston, Mass., 1953—. Mem.: Phi Beta Kappa; N. Y. Acad. Sci.; Amer. Med. Assn.; A.A.A.S.; N.Y.H.A.s. Contrb. to: Sci.; Pediatrics; Federation Proceedings; A. F. Med. Jour. Special Int.: Pediatrics.

FELLERS, Rufus G., Electronic Scientist, Section Hd., U. S. Naval Rsch. Lab., 3812 Nash. St., S. E., Wash., D. C. MICROWAVE ELECTRONICS. b. Columbia, S. C., Sept. 26, 1920. s. Rufus and Anna (LaBorde) F. Edn.: B.S., Univ. of S. C., 1941; Ph.D., Yale Univ., 1943. m. Catherine Morrison of Albany, N. Y., Mar. 18, 1946. d. Mr. and Mrs. A. L. Morrison. c. Rita Ann. Exp.: Asst. in Instrn., Yale Univ., 1942-43; Instr., ibid., 1943-44; Instr., New Haven Jr. Coll., 1941-43; Electronic Scientist, U. S. Naval Rsch. Lab., 1944 to present; Lectr. in Elec. Engrng., Univ. of Md., 1947—. Mem.: I.R.E.; A.I.E.E.; Sigma Xi; Phi Beta Kappa; Sigma Chi; Gamma Alpha. Contrb. to:

Proc. I.R.E.: Elec. Engrng. Ph.D. Dissertation: The Polyphase Commutator Regulator for Speed Control. War Record: Commissioned Ensign, U.S.N.R., Mar., 1945. Active duty to Sept., 1945. Listed in: A.M.S. Special Int.: Microwave Theory, Electromagnetic Theory, A. C. Machinery.

FELLOWS, Julian Robert, Prof. of Mech. Engrng., Univ. of Ill., Urbana, Ill. **HEATING, VENTILATING AND AIR CONDITIONING.** b. Nov. 9, 1900, Jackson, Mich. s. Richard John and Lida (McCrum) F. Edn.: B.S. in Mech. Engrng., Univ. of Mich., 1924; M.S. in Mech. Engrng., Univ. of Ill., 1934. m. Mildred Elizabeth of Rives Junction, Mich., Dec. 27, 1919. d. Mr. and Mrs. John Hoyt King. c.: Robert Julian. Exp.: Student Engrng., Westinghouse Elec. Co., 1924; Production Planning Engrng., Hudson Motor Car Co., 1925; *ibid.*, Packard Motor Car Co., 1926; Plant Engrng., Dodge Truck Div., Chrysler Corp., 1927-30; Instr., Prof., Univ. of Ill., 1930—. Mem.: Sigma Xi; Soc. for Promotion of Engrng. Edn.; Amer. Soc. of Mech. Engrs.; Amer. Soc. of Heat and Vent. Engrs.; Tau Beta Pi; Pi Tau Sigma; Univ. Club. Author: Vol. I, Engrng. Expt. Sta. Bull. No. 300, 1938. Co-author: Heating Ventilating and Air-Conditioning Fundamentals, 1949. Contrb. to: Mech. Engrng.; Coal Heat, Heating-Piping, and Air Conditioning. Gen. Int.: Inventor of Down-Draft Conversion Burner; Coinventor of Down Draft Coking Furnace. Special Int.: Fuels, Combustion, and Burners.

FELLOWS, R. L., 748 N. Kensington Ave., La Grange, Ill. **CERAMICS.**

FELSENFELD, Oscar, Dir. of Bacteriol., Hektoen Rsch. Inst., 629 So. Wood St., Chicago 12, Ill.



MICROBIOLOGY AND TROPICAL MEDICINE. b. Austria, May 21, 1906. s. Isidore and Terezia (Falkovic) F. Edn.: M.D., Charles Univ., Prague, Czechosl., 1930. Exp.: Asst., Charles Univ., Prague, Czechosl., 1930-33; Bacteriol. and Epidemiol., Czechosl. Pub. Health Serv., 1933-40; Assoc., Dept. of Clin. Path., Meharry Medical Coll., Nashville, Tenn., 1940-41; Chf. Bacteriol., Ill. State Hosp. Serv., 1941-43; Instr. in Clin. Path., Chicago Medical Schl., 1943; Asst., then Assoc. Prof. of Microbiol. and Trop. Med., 1944-49; Prof., Lectr. in Microbiol., Strich Med. Schl. of Loyola Univ., Chicago, 1948-49; Chf. Bact., Mt. Sinai Hosp. and Rsch. Foundation, Chicago, Ill., 1945-47; Res. Assoc., Schl. of Trop. Med., San Juan, P. R., 1947-48; Visiting Prof., U. Coll., W. Indies, Jamaica, 1951-52; Prof. Lectr., Univ. of Ill. Coll. of Med. and the Grad. Schl., Chicago, 1949; Director of Field Services, Trop. Res. Found., 1951—; Fellow, A.A.A.S.; Roy. Soc. Trop. Med.; Amer. Pub. Health Assn. Mem.: Coll. Amer. Pathol.; Soc. Amer. Bact.; Amer. Soc. Parasit.; Amer. Soc. Trop. Med.; Amer. Soc. Pathol. and Bacteriol.; Amer. Assn. Immunol.; Amer. Soc. Protozool.; Soc. Ill. Bacteriol.; Midwest Soc. Parasitol.; Amer. Feder. Clin. Rsch.; Biometric Soc. Author: co-author, Progress in Enterobacteriaceae, 1947; Clinical Tropical Med., 1951. Contrb. to: 140 scientific papers. Travel Europe; Caribbean; Asia; Africa. Hobbies: Painting; Classic Music. Listed in: A.M.S.; Who's Who in the Midwest; Who Knows—and What. Special Int.: Enteric Diseases; Diseases transmitted from Animals to Man.

biol. and Trop. Med., 1944-49; Prof., Lectr. in Microbiol., Strich Med. Schl. of Loyola Univ., Chicago, 1948-49; Chf. Bact., Mt. Sinai Hosp. and Rsch. Foundation, Chicago, Ill., 1945-47; Res. Assoc., Schl. of Trop. Med., San Juan, P. R., 1947-48; Visiting Prof., U. Coll., W. Indies, Jamaica, 1951-52; Prof. Lectr., Univ. of Ill. Coll. of Med. and the Grad. Schl., Chicago, 1949; Director of Field Services, Trop. Res. Found., 1951—; Fellow, A.A.A.S.; Roy. Soc. Trop. Med.; Amer. Pub. Health Assn. Mem.: Coll. Amer. Pathol.; Soc. Amer. Bact.; Amer. Soc. Parasit.; Amer. Soc. Trop. Med.; Amer. Soc. Pathol. and Bacteriol.; Amer. Assn. Immunol.; Amer. Soc. Protozool.; Soc. Ill. Bacteriol.; Midwest Soc. Parasitol.; Amer. Feder. Clin. Rsch.; Biometric Soc. Author: co-author, Progress in Enterobacteriaceae, 1947; Clinical Tropical Med., 1951. Contrb. to: 140 scientific papers. Travel Europe; Caribbean; Asia; Africa. Hobbies: Painting; Classic Music. Listed in: A.M.S.; Who's Who in the Midwest; Who Knows—and What. Special Int.: Enteric Diseases; Diseases transmitted from Animals to Man.

FELTON, Lloyd Derr, Med. Dir., U. S. P. H. S., Natl. Inst. of Health, Bethesda, Md. **PATHOLOGY, BACTERIOLOGY.**

FENIMORE, H. Emory, 201 N. Colia Ave., Muncie, Ind. **PHYSICS, CHEMISTRY.**

FENN, Wallace Osgood, Prof. of Physiol. and Asst. Dean, Schl. of Med. and Dent., Univ. of Rochester, Rochester, N. Y. **PHYSIOLOGY.** b. Aug. 27, 1893, Lanesboro, Mass. s. Wm. Wallace and

Faith Huntington (Fisher) F. Edn.: A.B., Harvard Univ., 1914; A.M., *ibid.*, 1916, Ph.D., *ibid.*, 1919. Honorary Sc.D., Univ. of Chicago, 1950. m. Clara Bryce Comstock of Brookline, Mass., 1919. c.: Wm. Wallace, II; Ruth; Priscilla; David Bryce. Exp.: Instr., Applied Physiol., Harvard Med. Schl., 1919-22; Travelling Fellow, Rockefeller Inst., 1922-24; Prof. of Physiol., Schl. of Med. and Dent., Univ. of Rochester, 1925—; Asst. Dean, 1949—, Mem.: Amer. Acad. Arts and Sci.; Natl. Acad. of Sci.; Amer. Philosoph. Soc.; Amer. Physiol. Soc. (Pres., 1946-48); British Physiol. Soc.; A.A.A.S.; Sigma Xi. Ph.D. Dissertation: The Effect of Electrolytes on Organisms and on Gelatin. War Record: 2nd Lt., San. Corps, 1917-18. Gen. Int.: Lewis Prize, Amer. Philos. Soc., 1949; Sharpe and Dohme Award by Amer. Physiol. Soc., 1950. Listed in: A.M.S.; Who's Who in Amer.; etc.

FENNER, Clarence Norman, retired, 64 Broad St., Clifton N. J. **GEOLOGY.**

FENNER, Lawrence Myron, Agent, Bureau of Entomol. and Plant Quarantine, 503 Main St., East Orange, N. J. **PLANT PATHOLOGY.**

FENNING, Con, Prof. of Physiol., Univ. of Utah, Salt Lake City, Utah. **PHYSIOLOGY.**

FENNINGER, Carl W., **BOTANY.**

FENSKE, Merrell R., Pet. Ref. Lab., Pa. State Coll., State College, Pa. **PETROLEUM.**

FENTON, Frederick Azel, Prof. and Hd., Dept. of Entomol., Okla. A. and M. Coll., Stillwater, Okla. **ENTOMOLOGY.**

FENTON, Ralph Albert, Prof. and Hd., Dept. of Physiol. Chem., Yale Univ. Med. Schl., New Haven, Conn. **OPHTHALMOLOGY, OTOLARYNGOLOGY.**

FERENCE, Michael, Jr., Evans Signal Lab., Belmar, N. J. **ELECTRONICS.**

FERGUS, Ernest Newton, Prof. of Farm Crops, Agronomist in Chg. Forage Crop and Pasture Investigations, Univ. of Ky., 122 Waller Ave., Lexington, Ky. **FORAGE CROPS AND PASTURES.**

FERGUSON, Alexander McGowen, Dir., Seed Breeding and Seed Production, Ferguson Seed Farms, Box 95, Howe, Tex. **PLANT BREEDING, PRODUCTION GENETICS, PLANT DISEASES.**

FERGUSON, Alfred Lynn, Prof. of Chem., Univ. of Mich., Ann Arbor, Mich. **ELECTROCHEMISTRY.**

FERGUSON, Charles Vaughan, Rsch. Engr., General Electric Co., 1322 Stratford Rd., Schenectady, N. Y. **PHYSICAL CHEMISTRY.**

FERGUSON, Edward, Jr., Prof. of Biol. and Hd. of Dept., St. A. and M. Coll., Orangeburg, S. C. **ZOOLOGY.** b. Jan. 6, 1907, Dawson, Ga. s. Edward Sr. and Lucinda (Perry) F. Edn.: A.B., Univ. of Ill., 1929; M.S., *ibid.*, 1933; Ph.D., *ibid.*, 1942. m. Corinne Allen of St. Louis, Mo., July 25, 1929. d. Mr. and Mrs. Henry Allen. c.: Edward III; Lloyd Allen. Exp.: Prof. of Biol., State A. and M. Coll., Orangeburg, S. C., 1929-36; Assoc. Prof. of Biol., Sou. Univ., La., 1936-40; Tch. Biol., Summer H. S. St. Louis, Mo., 1940-41; Asst. Prof. of Biol., Stowe Coll., St. Louis, Mo., 1941-46; Prof. of Biol., Tenn. A. and I. State Coll., 1946-48; Chmn., Div. of Arts and Sci., Prof. of Biol., Md. State Coll., 1948-51; Prof. of Biol. and Hd. of Dept., St. A. and M. Coll., Orangeburg, South Carolina, 1951—. Mem.: Sigma Xi; Phi Sigma; Beta Kappa Chi; A.A.A.S.; Amer. Soc. Zool.; Soc. Systematic Zool.; Omega Psi Phi. Contrb. to: Amer. Midland Naturalist. Ph.D. Dissertation: Studies on the Seasonal Life Hist. of Three Species of Freshwater Ostracoda. Travel: U. S. Gen. Int.: Gen. Edn. Bd. Fellow, 1932-33, 1937-38; Omega Psi Phi Frat. Fellow, 1941-42. Hobbies: Reading Detective Stories. Listed in: A.M.S. Special Int.: Ostracoda; Seasonal Life History studies; morphology and taxonomy.

FERGUSON, Max Burton, Assoc. Prof. of Zool., Eastern Ill. State Coll., 1235 Taylor St., Charleston, Ill. **PHYSIOLOGY (HUMAN)**. b. Cedar, Iowa, Mar. 26, 1916. s. John Carl and Lois Ethel (Brubaker) F. Edn.: B.A., Iowa State Tchrs. Coll., 1939; M.A., State Univ. of Iowa, 1947; Ph.D., *ibid.*, 1950. m. Reta Berneice Morrison, Mar. 28, 1942. c.: John Alan; Jane Ellen. Exp.: Tch. High Schl. Science at Royal, Iowa, 1939-41; Grad. Asst., St. Univ. of Iowa, 1947-49; Instr., Iowa State Coll., 1949-50; Asst. Prof., Eastern Ill. State Coll., 1950-52; Assoc. Prof., *ibid.*, 1953—. Mem.:



A.A.A.S.; Sigma Pi; Phi Delta Kappa; Sigma Xi; Mason. Contrb. to: Physiol. Zool. War Record; Communications Officer, Air Corps. Special Int.: Cellular Respiration.

FERGUSON, Walter Finall Cross, Assoc. Prof. of Physics, N. Y. Univ., Washington Square, N. Y., N. Y. **SPECTROSCOPY, OPTICS**.

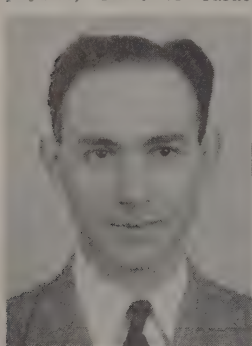
FERGUSON, Sterling Price, Rsch. Fellow, Blue Hill Observatory, Harvard Univ., Cambridge, Mass. **METEOROLOGY, MECHANICAL ENGINEERING**.

FERMI, Enrico, Univ. of Chicago, Chicago 37, Ill.

FERNALD, Evelyn Ida, Prof. of Botany, Rockford Coll., Rockford, Ill. **BOTANY**.

FERNALD, Henry Torsey, Prof. Emer. Entomol., Mass. State Coll., Amherst, Mass.; 1128 Oxford Rd., Winter Park, Fla. **ENTOMOLOGY**.

FERNANDEZ-MORAN, Humberto, Prof. of Biophysics, Univ. of Caracas, Venezuela, S. Amer.



NEUROLOGY **PHYSICAL RESEARCH OF NERVOUS SYSTEM**. b. Maracaibo, Venezuela, Feb. 18, 1924. s. Luis and Elena (Villalobos) F. Edn.: M.D., Univ. of Munich, 1944; M.D., Univ. of Caracas, 1945; Ph.D., Univ. of Stockholm, 1952. Exp.: Fellow in Neurol., Geo. Washington Univ., Washington, D. C., 1945-46; For. Asst. Neurosurg. Clin. Serafimerlas, Stockholm, Sweden, 1946-48; Rsch. Fellow Nobel Inst. of Physics, 1947-49; Rsch. Fellow, Inst. Cell Rsch., *ibid.*, 1952; Prof. of Biophysics, Univ. of Caracas, Venezuela, S. Amer., 1951—. Hon. Pos.: Cultural Attache, Legation of Venezuela in Sweden. Mem.: Academia Ciencias Fisicas y Matematicas, Caracas; Soc. Neurol. Buenos Aires, Porto Alegre, Lima, Santiago Chile; Soc. Cirugia Buenos Aires, Porto Alegre, Lima. Author: The Submicroscopic Organization of Vertebrate Nerve Fibres, 1952. Contrb. to: Exptl. Cell Rsch.; Biochem. et Biophysica Acta; etc. Special Int.: Nerve Ultrastructure Rsch.; Electron Microscopy; Biophysical Rsch. Nervous System.

FERNELIUS, W. Conrad, Head Dept. of Chem., Pa. State Coll., State College, Pa. **INORGANIC CHEMISTRY**.

FERNOW, Karl Hermann, Asst. Prof., N. Y. State Coll. of Agri., Cornell Univ., Ithaca, N. Y. **PLANT PATHOLOGY**.

FERRARO, Armando, Prin. Rsch. Neuropathologist, Psychiatric Inst., 722 W. 168th St., N. Y., N. Y. **PSYCHIATRY**.

FERRIER, Walter Frederick, retired, 87 Harper Ave., Toronto, Ont., Can. **ECONOMIC GEOLOGY**.

FERRIS, Gordon Floyd, Prof. of Biol., Stanford Univ., Stanford, Calif. **ENTOMOLOGY**.

FERRIS, John G., District Engr., 612 Capitol Sav. and Loan Bldg., 112 E. Allegan St., Lansing, Mich. **GROUND-WATER HYDROLOGY**.

FERRIS, Seymour Washington, Chemical Engrng. Supvr., Sun Oil Co., Marcus Hook, Pa. **PETROLEUM CHEMISTRY**.

FERRY, Frederick Carlos, Pres. Emer., Hamilton Coll., 324 Hart St., New Britain, Conn. **MATHEMATICS**.

FERRY, Ronald M., Assoc. Prof. of Biol. Chem., John Winthrop House, Harvard Univ., Cambridge, Mass. **BIOLOGICAL CHEMISTRY**.

FERTIG, John William, Prof. of Biostatistics, Schl. of Public Health, Columbia Univ., 600 W. 168th St., N. Y., N. Y. **BIOSTATISTICS**.

FESSLER, A. H., Fenton, Mich. **CERAMICS**.

FETTERS, Cecil Raymond, Rsch. Chemist, Libbey-Owens-Ford Glass Co., Toledo, Ohio. **CHEMISTRY**.



b. Edon, Ohio, Sept. 10, 1906. s. David D. and Eva (Wiser) F. Edn.: A.B., Bethany Coll., 1928; M.S., Univ. of Chicago, 1940. m. Lucile G. Long, Apr. 12, 1936. Exp.: Chemist, U. S. Rubber Co., Ohio, 1942; Tch., Rudolph, Ohio, 1928-44; Chemist, Rossford Ordnance Dept., Rossford, Ohio, 1945-47; Asst. Prof. of Chem., Denison Univ., 1947-52; Rsch. Chemist, Libbey-Owens-Ford Glass Co., Toledo, Ohio, 1952—. Mem.: Amer. Chem. Soc.; A.A.A.S.; Ohio Acad. of Sci.; A.A.U.P.; Phi Kappa Tau; Alpha Epsilon Delta. Contrb. to: A.C.S. Cooperative General Chem. Tests, 1950-52; Ohio Schls. Special Int.: Glass Films; Alkali Metals.

FETTKE, Charles Reinhard, Prof. of Geol., Carnegie Inst. of Tech., 118 Wightman St., Pittsburgh, Pa. **ECONOMIC GEOLOGY**.

FETZER, Lewis William, 1107 Sarasota Circle, Dallas, Tex. **INTERNAL MEDICINE**.

FEUSSE, Elmer George, Prof. and Hd., Dept. of Chem., Southwestern La. Inst., 213 Brashear St., Fayette, La. **PHYSICAL CHEMISTRY**.

FEYNMAN, Richard P., Calif. Inst. of Tech., Pasadena, Calif. **PHYSICS**.

FIALA, Anthony, Major, Ord. Reg., U. S. Army, 148 83rd St., Brooklyn, N. Y. **EQUIPMENT FOR EXPLORATION, POLAR AND TROPICAL**.

FICKLEN, Joseph Burwell, III, Special Health Officer, Health Dept., County of Los Angeles, 808 N. Spring St., Los Angeles, Calif. **CHEMICAL ENGINEERING**.

FIEGER, Rebecca Leaming, Dir., Garden State Finance Co., 116 N. Seventh St., Camden, N. J. **PSYCHOLOGY**.

FIELD, Ada Martitia, retired, Rt. 1, Guilford College, N. C. **NUTRITION**.

FIELD, Crosby, Pres., Flakice Corp., 360 Furman St., Brooklyn, N. Y. **ENGINEERING**.

FIELD, George Sydney, Chf., Div. A, Defense Rsch. Bd. and Scientific Adv. to Chf. of Naval Staff, Dept. of Natl. Defense, Ottawa, Canada. **ACOUSTICS**. b. Wimbledon, England, Oct. 23, 1905. s.

James and May Edith (Davies) F. Edn.: B.Sc., Univ. of Alberta, 1929; M.Sc., *ibid.*, 1930; D.Sc., *ibid.*, 1937. m. Jean Olive Richards, May 10, 1930. c.: Robert; Gregory and Denise. Exp.: Physicist, Natl. Rsch. Council of Can., 1930-47; Dir., Scientific Rsch and Development, Royal Canadian Navy, 1947-49; Deputy Dir. Gen., Defense Rsch. Bd., Dept. of Natl. Defense 1949-51; Chf. Div. A., Defense Rsch. Bd. and Scientific Adviser to Chf. of Naval Staff, Royal Canadian Navy, Ottawa, Can., 1951—. Mem.: Acoustical Soc. of Amer.; Fellow, Royal Soc. of Can.; Sr. Mem., Inst. of Radio Engrs. Contrb. to: Can. Jour. of Rsch. Nature. Special Int.: Ultrasonics and Architectural Acoustics; Vibrations in rods and disks; Propagation of Sound in Water; Sonar Devices.

FIELD, Henry, Rsch. Fellow in Phys. Anthropol., Peabody Museum, Harvard Univ., 3551 Main Hwy., Coconut Grove, Fla. ANTHROPOLOGY AND PRE-HISTORY OF SOUTHWESTERN ASIA. b. Chicago, Ill., Dec. 15, 1902. Edn.: B.A., New Coll., 1925; M.A., *ibid.*, 1928; D.Sc., *ibid.*, 1937. Exp.: Curator of Phys. Anthropol., Field Museum of Natural History, 1926-41; Rsch. Fellow in Phys. Anthropol., Peabody Museum, Harvard Univ., 1950—. Mem.: A.A.A.S.; A.A.A.; Anthropol. Inst. of Amer. Author: The Anthropol. of Iraq, 1935-52; The Anthropol. of Iran, 1939; The Anthropol. of Caucasus, 1953. Contrb. to: Amer. Anthropologist; Amer. Jour. Archaeology; Southwestern Jour. Anthropol. Special Int.: Southwestern Asia and Western Europe.

FIELD, John, II, Prof. of Physiol., Stanford Univ., 747 Dolores St., Stanford University, Calif. PHYSIOLOGY, CELL METABOLISM.

FIELD, Richard Montgomery, South Duxbury, Mass. GEOLOGY, ZOOLOGY.

FIELD, Robert Franklin, Consultant Engr., General Radio Co., 275 Massachusetts Ave., Cambridge, Mass. COMMUNICATION ENGINEERING.

FIELD, William Lusk Webster, Hd. Master, Milton Acad., Milton, Mass. GEOLOGY, ZOOLOGY.

FIELDS, Paul Eldon, 212 W. Main St., Crawfordsville, Ind. PSYCHOLOGY.

FIESENHEISER, Elmer I., Professor of Civil Engr., Ill. Inst. of Tech., Chicago, Ill. STRUCTURAL ENGINEERING. b. Aug. 4, 1906, South Bend, Ind. s. Christian and Dorothea (Schubert) F. Edn.: B.S., C.E., Purdue Univ., 1930; C.E., *ibid.*, 1945; M.S., C.E., Ill. Inst. of Tech., 1946. m. Ellen Carlson of South Bend, Ind., Dec. 27, 1930. d. Edward and Eva Carlson. c.: Ellen Florence. Exp.: Structural Engr., Amer. Bridge Co.; Chicago Sanit. Dist.; Arthur G. McKee and Co.; U. S. Bur. of Pub. Roads; Conrad and Young, Inc., Consultant, Cyclotron Design; Tall Guyed Towers; Slide Rule; Irrigation Well Equipment; Teaching, Ill. Inst. of Tech., 1943-50. Mem.: A.A.A.S.; A.C.I.; A.S.C.E.; A.S.E.E.; I.S.P.E.; N.S.P.E.; I.A.B.S.E.; Chi Epsilon. Contrb. to: Engr. News Record; A.S.C.E. Trans.; Jour. of Engr. Edn.; Pub. Roads Jour. Listed in: Who Knows—and What. Special Int.: Structural Engineering.

FIESER, Louis F., Sheldon Emery Prof. of Organic Chem., Harvard Univ., Cambridge, Mass. ORGANIC CHEMISTRY. Edn.: A.B., Wills, 1920; Ph.D., Harvard Univ., 1924. Hon. Deg.: D.Sc., Williams, 1939. Exp.: Assoc. and Assoc. Prof., Bryn Mawr, 1926-30; Staff, Harvard Univ., 1930—; Prof., *ibid.*, 1937—; Sheldon Emery Prof. of Organic Chem., *ibid.*, 1939—. Mem.: Natl. Acad. Sci. Author: Experiments in Organic Chem., 1935, 1941. Co-author: Natural Products Related to Phenanthrene, 1926, 1937; Organic Chem., 1944, 1950. War Record: Worked on Incendiary Bombs and Malaria Problem and in 1945 went to Germany



with the ALSOS Mission. Special Int.: Aromatic Chem.; Cancer-producing Hydrocarbons; Vitamin K; Quinones; Chemotherapy; Steroids.

FIFIELD, Willard Merwin, Asst. Dir. of Admin., Fla. Agri. Expt. Station, Gainesville, Fla. RESEARCH ADMINISTRATION.

FIGGE, Frank Henry John, Prof. of Anat., Univ. of Md. Med. Schl., 29 S. Greene St., Baltimore 1, Md. ANATOMY; CANCER RESEARCH. b. Dec. 23, 1904, Silver Cliff, Colo. s. John Figge and Barbara (Schwab) F. Edn.: A.B., Colo. Coll., 1927; Ph.D., Univ. of Md., 1934. m. Rosalie Yerkes of Upper Darby, Pa., June 25, 1932. d. Dawson Martin and Myrtle Harris Yerkes. c.: Rosalie Ann; Barbara Elizabeth. Exp.: Asst. in Biol., Colo. Coll., 1925-26; Hd. Asst. Biol. and Comparative Anat., 1926-28; Observer in Chg. of Meteorol. Sta., 1926-28; Asst. in Anat. Med. Schl., Colo. Univ., 1928-29; Md., 1929-30; Instr., 1930-34; Assoc., 1934-35; Asst. Prof., 1935-36; Assoc. Prof., 1936-47; Prof. Exp. Anat., 1947-49; Visiting Prof., Anat., Univ. of Pa. Med. Schl., 1949. Hon. Pos.: Exec. Comm., Amer. Assn. Anatomists; Corp. Mem., Marine Biol. Lab., Woods Hole, Mass., 1939—; Rockefeller Fellowship, Yale Univ., Med. Schl., 1940-41; Trustee, Biol. Sta. Comm., 1947—; Bd. Dir. and Exec. Comm., Md. Div., Inc., Amer. Cancer Soc., 1948—; Vice-Pres., *ibid.*, 1952—; Sec.-Treas., Md. Chapt., Soc. for Exp. Biol. and Med., 1949-52. Mem.: Amer. Soc. Zoologists; Amer. Assn. for Study of Internal Secretions; A.A.A.S.; Amer. Assn. for Cancer Rsch.; Sigma Xi; Univ. of Md. Biol. Soc.; Histochem. Soc.; Delta Epsilon; Phi Beta Pi; Pres., Torch Club, 1953—; Ice Club of Baltimore, Inc. Author: Took part in Symposia: A.A.A.S. Rsch. Conf. on Cancer, 1945; Biol. Melanomas, Spec. Pub. of N. Y. Acad. of Sci., Vol. IV, 1948. Contrb. to: Med. Jours. Ph.D. Dissertation: Neuro-Humoral Control of Circulation. Travel: Europe; N. Amer.; Great Britain. Gen. Int.: Cancer Rsch. Hobbies: Skating; Color and Stereo Photography. Listed in: A.M.S.; Who's Who in Amer.; Who Knows—and What.

FILBERT, Robert B., Jr., Chief, Chem. Engrng. Rsch., Battelle Memorial Inst., 505 King Ave., Columbus, Ohio. CHEMICAL ENGINEERING. b. Womelsdorf, Pa., Feb. 15, 1921. s. R. B. and Helen (Luft) F. Edn.: B.S., Penn State, 1941; M.S., *ibid.*, 1947. m. Joan Brown, July 1, 1950. c.: Thomas R.; Anne R. Exp.: Staff, Hercules Powder Co., Wilmington, Del., 1941-43; U. S. Navy, 1943-46; Staff, Battelle Memorial Inst., 1947—. Mem.: Phi Lambda Upsilon; Tau Beta Pi; Pi Mu Epsilon; Phi Eta Sigma; Amer. Chem. Soc.; Amer. Inst. Chem. Engrs. Special Int.: Process Design and Development; Chem. Hydrometallurgy Technol.; Fertilizer Technol.; Cost estimating.

FILIPPI, Hugo, Ill. Brick Co., 228 N. La Salle St., Rm. 1716, Chicago 1, Ill. CERAMICS.

FILLEY, Walter Owen, retired, 136 Cold Spring St., New Haven, Conn. FORESTRY.

FILLINGER, Harriett Huldah, Prof. of Chem., Hollins Coll., Hollins College, Va. CHEMISTRY. b. Bristol, Va. d. Wm. Hale and Ann Eliza (Lincoln) F. Edn.: S.B., Univ. of Chicago, 1920; M.S., *ibid.*, 1921; Grad. Work, *ibid.* Exp.: Sullins Coll., Jr. Coll., Miss. Synodical Coll.; N. Sullins Coll.; Hollins Coll. since 1921. Mem.: Amer. Chem. Soc.; A.A.U.W.; Sigma Xi; A.C.S.; Va. Acad. of Sci.; A.A.U.P.; Fellow, A.A.A.S.; Kappa Mu Sigma. Author: Rsch. on Aminosulfonic Acid and Relations in Liquid Ammonia, 1921; Experiments in Gen. Chem. for Coll., 1928; Chromatographic Analysis for Metal Ions of a First Course in Qualitative Analysis, 1952. Contrb. to: Sci. Jours. Listed in: Who's Who in Chem.; A.M.S.; Who's Who in South and Southwest. Special Int.: Inorganic qualitative analysis by chromatographic adsorption analysis.

FILZ, Frank Ralph, Chemist and Technical Supvr., Wheelwright Div., The Mead Corp., Leominster, Mass. PAPER CHEMISTRY.

FINCHER, John Albert, Prof., Hd. of Dept. of Biol., Howard Coll., Birmingham, Ala. ZOOLOGY. b. Sept. 8, 1911, Union, S. C. s. Rob C. and

Addie Delilah (Murphy) F. Edn.: B.S., Univ. of S. C., 1933; M.S., *ibid.*, 1935; Ph.D., Univ. of N. C., 1939. m. Ruby Catherine Broom of Spartanburg, S. C., Aug. 19, 1939. d. Jessie Fee and Henry Bunyan Broom. c.: Jud. th. Ellen, Janice Manette, John Albert, Jr. Exp.: Libr. Asst., Univ. of S. C., 1932; Prin., Pineview Elem. Schl., W. Columbia, S. C., 1933; Instr., Part-time, in Biol., Univ. of S. C., 1934; Grad. Asst. in Zool., Univ. of N. C., 1935-39; Instr. in Biol., Cumberland Coll., Williamsburg, Ky., 1939; Asst. Prof. of Biol., Millsaps Coll., 1940-42; Assoc. Prof., *ibid.*, 1943-46; Prof. and Hd. of Dept. of Biol., Howard Coll., 1946—. Mem.: A.A.A.S.; Amer. Soc. of Zool.; Ala. Acad. of Sci.; Phi Beta Kappa; Omicron Delta Kappa; Sigma Xi; Alpha Epsilon Delta; Blue Key; Pi Kappa Alpha; Eta Sigma Phi; Alpha Phi Omega. Contbr. to: Jour. of Morphology Sci. Ph.D. Dissertation: Origin of Germ Cells in Stylotella Heliophila (a Tetraxonid Sponge) Wilson. Travel: U. S.; Canada. Hobbies: Field Sports. Listed in: A.M.S.: Who Knows—and What. Special Int.: Invertebrate Cell Behavior and Development; Freshwater Biology.

FINDLEY, Warren George, Chf., Evaluation Branch, Advisory Staff, Air Univ., Maxwell Field, Ala. **PSYCHOMETRICS.**

FINK, Donald Glen, Co-Dir. of Rsch., Philco Corp., Philadelphia 34, Pa. **ADMINISTRATION OF RESEARCH; ELECTRONICS; TELEVISION; RADAR; NAVIGATIONAL DEVICES.** b. Englewood, N. J., Nov. 8, 1911. s. Harold G. and Margaret (Glen) F. Edn.: B.Sc., Mass. Inst. of Tech., 1933; M.Sc., Columbia Univ., 1942. m. Alice Berry on Apr. 10, 1948. c.: Kathleen Marion; Stephen Donald. Exp.: Rsch. Asst., M. I. T., 1933-34; Editorial Staff, Electronics Mag., 1934-52; Editor-in-Chf., *ibid.*, 1946-52; Staff Mem., M. I. T. Radiation Lab., 1941-43; Expert Consultant, Office



Secy. of War, 1943-45; Co-Dir. of Rsch., Philco Corp., Philadelphia 34, Pa., 1952—. Hon. Pos.: Chmn., Joint Technical Advisory Comm., 1949-50; Vice-Chmn., Natl. Television System Comm., 1950-52. Mem.: Fellow, Inst. of Radio Engrs.; Fellow, Amer. Inst. of E. E.; Phi Mu Delta; Tau Beta Pi; Sigma Xi; Eta Kappa Nu. Author: Engrng. Electronics, 1938; Microwave Radar, 1942; Television Standards and Practice, 1943; Radar Engrng., 1947; Television Engrng., 1952. Contbr. to: Proc. I. R. E.; Electrical Engrng.; Electronics. Gen. Int.: Medal of Freedom, 1946; Presidential Certificate of Merit, 1948. Special Int.: Television Standards; Color Television; Loran; Ground Radar.

FINK, William LaVilla, Chf., Phys. Metallurgy Div., Aluminum Co. of Amer., Box 772, New Kensington, Pa. **PHYSICAL METALLURGY OF LIGHT ALLOYS; DEVELOPMENT OF NEW ALLOYS AND NEW METHODS.** b. Fairmount, Ind., Sept. 14, 1896. s. James Otto and Vella (Lindsey) F. Edn.: B.S.E., Univ. of Mich., 1921; M.S.E., *ibid.*, 1923; Ph.D., *ibid.*, 1926. m. Laura Frances French, July 14, 1926. c.: Lucie French; Joanna Roslyn. Exp.: Metallurgist, Aluminum Co. of Amer., Research Bureau, Cleveland, Ohio, 1925-30; Asst. to Chf. Metallurgist, Aluminum



Rsch. Laboratories, New Kensington, Pa., 1930-43; Instr., Phys. Metallurgy, Carnegie Inst. of Tech., 1936-37; Chf. of Phys. Metallurgy Div., Aluminum Co. of Amer., 1943—. Mem.: Amer. Soc. Testing

Materials; Amer. Crystallog. Assn.; Inst. of Metals (British); A.A.A.S.; Amer. Chem. Soc.; S.N.T.; A.O.A.; Amer. Soc. for Metals; Phi Lambda Upsilon; Tau Beta Pi; Sigma Xi; RESA; A.I.M.E.; Gamma Alpha; Kiwanis. Co-Author: Phys. Metallurgy of Aluminum Alloys, 1949. Contbr. to: Jour. Iron Steel Inst.; Phys. Rev.; Trans. Amer. Soc. Steel Treating; Indus. and Engrng. Chem.; Amer. Inst. Mining and Metallurgical Engrs. Special Int.: Phys. Metallurgy of Aluminum Alloys; X-Ray Methods; Aluminum Alloy Development; Corrosion, and Non-Destructive Testing.

FINKELSTEIN, Leo, Editor-in-Chf., Historical Branch, Chemical Warfare Service, 200 W. Baltimore St., Baltimore, Md. **CHEMICAL WARFARE.**

FINLAND, Maxwell, Asst. Prof. of Med., Harvard Med. Schl., 818 Harrison Ave., Boston, Mass. **MEDICINE.**

FINLEY, Cecile Bolton, Acting Asst. Prof. of Psychol., Univ. of Va., 1530 Dairy Rd., Charlottesville, Va. **PSYCHOLOGY.**

FINLEY, Harold Eugene, Chmn., Dept. of Zool., Howard Univ., Washington, D. C. **ZOOLOGICAL AND BOTANICAL SCIENCES.**

FINNER, Paul F., Hd., Dept. of Psychol. and Dir., Psychol. Lab., Fla. State Coll. for Women, 930 W. Park Ave., Tallahassee, Fla. **PSYCHOLOGY.**

FIPPIN, Elmer O., Sr. Agriculturist, Agri. Div., Tenn. Valley Authority, Knoxville, Tenn. **SOILS AND AGRONOMIC STATISTICS.**

FIREMAN, Peter, retired, Lambertville, N. J. **CHEMISTRY.**

FIROR, Warfield M., Assoc. Prof. of Surgery, Johns Hopkins Univ. Schl. of Med., Baltimore, Md. **SURGERY.**

FIRTH, Frank Edward, Fisheries Officer, U S-STEM to Indonesia, 1100 Randolph Ave., Milton 86, Mass. **FISHERIES BIOLOGY AND TECHNOLOGY.** b. Nashua, N. H., Mar. 26, 1905. s. Nathaniel W. and Catherine (MacKay) F. m. Martha Stevens on Aug. 26, 1939. c.: Sandra Leigh; Susan MacKay; Sara Jane. Exp.: U. S. Bureau of Fisheries, 1928-44; Mgr., Netting Rsch. Dept., The Linen Thread Co., Inc., 1946; Mgr., Net Preservation Development, Cuprinol Div., Darwarth, Inc., 1948-49; Fisheries Consultant, 1949-50; Fisheries Officer, U. S.-STEM to



Indonesia, 1950—. Mem.: N. Y. Acad. of Sci.; Amer. Inst. of Chemists; Amer. Soc. of Ichthyologists and Herpetologists; Biological Soc. of Wash., D. C.; Inst. of Textile Chemists and Colorists; A. F. and A. M. Contbr. to: N. J. Fisherman; Fishing Gazette; Copeia; Atlantic Fisherman; Pan-Pacific Fisherman; The Tuna Fisherman; Card Age; Zoologica. Collaborator on "Marine Products of Commerce" by Donald K. Trossler and J. McW. Lemon. Special Int.: Fisheries Biol.; Rope and Cordage Fibers; Rope and Net Preservatives; Fishing Boats and Gear.

FISCHELIS, Robert Philipp, Secy. and General Mgr., Amer. Pharmaceutical Assn., 2215 Constitution Ave., N. W., Washington, D. C. **CHEMISTRY, PHARMACY.**

FISCHER, Arthur Frederick, Dir., Natural History Museum, Balboa Park, San Diego, Calif. **TROPICAL FORESTRY.**

FISCHER, Carl H., Prof. of Ins. and Prof. of Actuarial Math., Univ. of Mich., Ann Arbor, Mich. **ACTUARIAL SCIENCE.** b. Aug. 22, 1903, Newark, N. J. s. Carl H. H. and Minnie (Hahn)

F. Edn.: B.S., Wash. Univ. (St. Louis), 1923; M.A., Univ. of Ia., 1930; Ph.D., *ibid.*, 1932. m. Kathleen Kirkpatrick of St. Louis, Mo., Sept. 25, 1925. d. Dr. and Mrs. H. E. Kirkpatrick. c.: Patrick Carl; Michael John. Exp.: Spec. Engr., Amer. Steel Foundries, 1923-26; Instr. in Math., Beloit Coll., 1926-29; Grad. Asst., Univ. of Ia., 1929-32; Instr. in Math., Univ. of Minn., 1932-33; Spec. Rsch. Asst., Northwestern Natl. Life Ins. Co., Minn., 1933-34; Instr. Math., Wayne Univ., 1934-37; Asst. Prof., 1937-41; Asst. Prof. Math., Univ. of Mich., 1941-45; Assoc. Prof., 1945-50; Prof. of Ins. and Prof. of Actuarial Math., 1950—; Consulting Actuary for Pension Funds and Ins. Cos. Mem.: Sigma Xi; Soc. of Actuaries; Fraternal Act. Assn.; Inst. of Math. Statistics; A.M.S.; M.A.A.; Amer. Statistical Assn.; A.A.U.T.I.; Mich. Act. Soc.; Acacia. Author: Math. of Life Insurance (with C. J. Nesbitt), 1943; Math. of Finance (with P. R. Rider), 1951. Contrb. to: Math., Statistics, and Actuarial Jours. Ph.D. Dissertation: On Correlation Surfaces of Sums with a Certain Number of Random Elements in Common. Listed in: A.M.S.; Who Knows—and What; Who's Who in Central States; Dir. of Amer. Scholars. Special Int.: Pension Plans.

FISCHER, Eric, Intelligence Rsch. Specialist, Geography, Army Map Service, and Lectr. in Geogr., Geo. Wash. Univ., Wash., D. C., 301 Philadelphia Ave., Takomac Park, Md. **PHYSIOGEOGRAPHY AND POLITICAL GEOGRAPHY**. b. Vienna, Austria, Jan. 13, 1898. s. Max and Olga (Pollaczek) F. Edn.: Ph.D., Univ. of Vienna, 1921. m. Irene Kaminka of Vienna, Dec. 21, 1930. d. Armand and Clara Kaminka. c.: Gay A.; Michael M. J. Exp.: 1925-38, Prof. at Gymnasium, Vienna, Austria; 1943-44, Instr., Bard Coll., Annandale-on-Hudson, N. Y.; 1944-45, Geog., O.S.S., Wash., D. C.; 1946-47, Political Geog., Dept. of State, *ibid.*; 1947-49, Geog., Va. Geog. Inst., Charlottesville, Va.; 1948-49, Lectr. in Geog. and Foreign Affairs, Univ. of Va.; Prof. of Geo. N. Y. U., 1949-50; Lect. Geo. U. of Md., 1951—. Mem.: Amer. Geog. Soc.; Assn. of Amer. Geog.; Geog. Gesellschaft in Wien; Arctic Inst. of N. Amer.; Amer. Hist. Assn. Author: (Co-author) *Ein politischer Abenteuerer*, 1937; *The Passing of the European Age*, 1943, and 1948; *A German and English Glossary of Geographical Terms*, 1950. Contrb. to: Geog. Rev.; *Annals of the Assn. of Amer. Geog.*; *Jour. of Mod. Hist.*; *Social Forces*; *World Politics*. Ph.D. Dissertation: Die Wiederherstellung der österreichischen Finanzen nach den Napoleonischen Kriegen und der Staatsbankrott von 1816. Travel: Central Europe, Balkan Peninsula; Italy; Near East; N. Africa; Spitzbergen. Listed in: A.M.S.

FISCHER, Ernst, Prof. of Physiol., Physical Med., Medical Coll. of Va., Richmond, Va. **PHYSIOLOGY**.

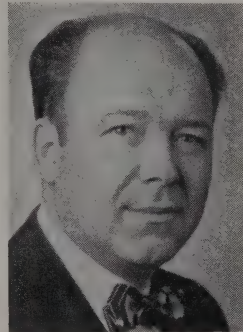
FISCHER, Martin Henry, Prof. of Physiol., Coll. of Med., Univ. of Cincinnati, Cincinnati, Ohio. **PHYSIOLOGY**.

FISCHER, Richard, Prof. Emer. of Chem., Univ. of Wis., 1 Langdon St., Madison, Wis. **CHEMISTRY**.

FISCHMANN, Joseph, Asst. Clinical Prof. of Urology, Tufts Med. Schl., Genito-Urinary Surgeon, 520 Commonwealth Ave., Boston 15, Mass. **GENITO-URINARY SURGERY**. b. Kézdivasárhely, Hungary, July 4, 1902. s. Martin and Isabella (Klein) F. Edn.: B.A., Roman Catholic Gymnasium, Kézdivasárhely, 1920; M.D., Med. Faculty of Univ. of Berlin, Germany, 1926; F.A.C.S., Coll. of Surgeons, 1950. Exp.: Resident in Surgery, First Service, Univ. Clinic, Berlin, 1926; Chief Resident in Surgery, Berlin City Hosp., 1928-33; Assoc. to Prof., Lichtenberg, St. Hedwig Hosp., Berlin, 1933-36; Rsch. Fellow in

Surgery, Harvard Univ., 1939-41; Instr. in Urology, Tufts Med. Schl., Boston, Mass., 1941-50; Asst. Prof. in Urology, *ibid.*, 1950-51; Asst. Clinical Prof., *ibid.*, 1951—. Mem.: Amer. Coll. of Surgeons; New England Section of Amer. Urological Assn.; Amer. Urological Assn.; Amer. Med. Assn.; Mass. Med. Soc.; Cambridge Med. Improvement Soc. Contrb. to: *Jour. of Urology*; *Urological Rev.*; *Radiol.*; *New England Jour. of Med.*; *Proc. Amer. Biol. and Med. Soc.*; *Surgery*; *British Jour. of Urol.*; *Deutsche Medicinische Wochenschrift*; *Deutsche Zeitschrift fuer Chirurgie*. Special Int.: Rsch. in the Field of Cancer of Prostate, Urological Radiol.

FISCHTHAL, Jacob H., Asst. Prof. of Biol., Harpur Coll., State Univ. of N. Y., Endicott, N. Y. **PARASITOLOGY**. b. Brooklyn, N. Y., Apr. 18,



1917. s. Max and Pauline (Denker) F. Edn.: B.S., Long Island Univ., 1937; M.S., State Univ. of Iowa, 1938; Ph.D., Univ. of Mich., 1950. m. Lois Clinton, Apr. 18, 1942. c.: Barry; Dorene; Glenn. Exp.: Aquatic Biologist, North Atlantic Fishery Investigations, U. S. Fish and Wildlife Service, 1943; Aquatic Biologist, Fish Mgt. Div., State of Wis. Conservation Dept., 1943-48; Instr. of Biol., Triple Cities Coll., Syracuse Univ., 1948-50; Asst. Prof. of Biol., Harpur Coll., State Univ. of N. Y., 1950—. Mem.: Amer. Soc. Parasitologists; Amer. Microscopical Soc.; Helminthological Soc. of Wash.; Wis. Acad. of Sci., Arts and Letters; Phi Sigma; Sigma Xi. Contrb. to: *Jour. Parasitology*; *Trans. Amer. Microscopical Soc.*; *Amer. Midland Naturalist*; *Trans. Wis. Acad. Sci., Arts and Letters*; etc. Special Int.: Taxonomy and Ecology of Fish Parasites and Their Hosts; Broad Tapeworm of Man and Its Life Cycle; Ecology of Worm Parasites of Salamanders.

FISH, Charles John, Chg. Dept. of Zool. and Dir., Narragansett Marine Lab., Rhode Island State Coll., Kingston, R. I. **BIOLOGICAL OCEANOGRAPHY**.

FISH, Harold Dufur, Dir., Schl. Service, Amer. Cancer Soc., 350 Fifth Ave., N. Y., N. Y. **ZOOLOGY, GENETICS**.

FISH, Velmer B., Asst. Prof. of Chem., Lehigh Univ., Bethlehem, Pa. **BIOLOGICAL AND ORGANIC CHEMISTRY**. b. Mallard, Iowa, Nov. 17, 1912. s. Benjamin T. and Mabel (Draper) F. Edn.: B.S., Iowa State Coll., 1936; Ph.D., *ibid.*, 1942. m. Kathryn Kolarich, Sept. 9, 1939. c.: Mary Anne; Leland D. Exp.: Chemist, W. Va. Agri. Expt. Station, W. Va. Univ., 1942-45; Micro-analyst, J. T. Baker Chem. Co., 1942-48; Asst. Prof. of Chem., Lehigh Univ., 1948—. Mem.: Amer. Chem. Soc.; A.A.A.S.; Sigma Xi; Phi Lambda Upsilon; Phi Kappa Phi; Alpha Epsilon Delta. Contrb. to: *Jour. Amer. Chem. Soc.*; *Analytical Chem.*; *Iowa State Coll. Jour. Sci.*; *Proc. Iowa Acad. Sci.*; *Proc. Amer. Soc. Horticultural Sci.*; *Plant Physiol.* Special Int.: Microanalytical techniques as applied to some natural products and to the analysis of organic compounds.

FISHBACK, Hamilton Rodell, Jerrick Memorial Hosp., 2001 Dwightway, Berkeley, Calif. **PATHOLOGY**.

FISHBEIN, Morris, Editor, *Jour. Amer. Med. Assn.*, 535 N. Dearborn St., Chicago, Ill. **MEDICINE**.

FISHBERG, Ella Harriet, Beth Israel Hosp., Stuyvesant Park E., N. Y., N. Y. **MEDICINE**.

FISHER, Anna Bathsheba, Assoc. Prof. of Biol., Northwestern State Coll., Alva, Okla. **BOTANY, BACTERIOLOGY**.

FISHER, Chester G., Pres., Fisher Scientific Co., Pittsburgh, Pa. **SCIENTIFIC INSTRUMENTS**.

FISHER, Daniel Jerome, Assoc. Prof. of Mineralogy, Univ. of Chicago, Chicago, Ill. MINERALOGY.

FISHER, Durward Frederick, Prin. Horticulturist, U. S. Horticultural Station, Beltsville, Md. BOTANY, AGRICULTURE.

FISHER, Edna Marie, Asst. Prof. of Biol. Sciences, San Francisco State Coll., San Francisco, Calif.

FISHER, George Elmer, Prof. of Chem. and Dir. Labs., Susquehanna Univ., Selinsgrove, Pa. CHEMISTRY, GEOLOGY.

FISHER, Kenneth Clarke, Asst. Prof. of Animal Physiol., Univ. of Toronto, Toronto, Ont., Can. PHYSIOLOGY.

FISHER, Lawrence C., Sr. Meteorologist in Chg. Weather Bureau Office, Seattle, Wash. METEOROLOGY.

FISHER, Lloyd Wellington, Prof. and Hd., Dept. of Geol., Bates Coll., 508 Main St., Lewiston, Maine. GEOLOGY.

FISHER, Sarah Carolyn, Prof. of Psychol., Univ. of Calif., Los Angeles, Calif. PSYCHOLOGY.

FISHER, Waldo Emanuel, Prof. of Indus., Wharton Schl., Univ. of Pa., Philadelphia, Pa. INDUSTRIAL RELATIONS.

FISHLER, Maurice Charles, Hd., Biol. and Med. Sci. Div., U. S. Naval Radiological Defense Lab., San Francisco 24, Calif.

ATOMIC MEDICINE. b. Chicago, Ill., Nov. 9, 1912. s. Julius and Bertha (Wagner) F. Edn.: A.B., Univ. of Calif. at Los Angeles, 1936; Ph.D., Univ. of Calif., 1943; M.D., Univ. of Calif., San Francisco, Calif., 1947. m. Phyllis Helene, June 17, 1934. c.: Harold Nelson and Kenneth Lawrence. Exp.: Manhattan Dist. Subcontract, Univ. of Calif., Berkeley, Calif., 1943; Physiol., Donner Lab., Univ. of Calif., San Francisco, Calif., 1945; Asst. Surgeon, Pub. Health Service, San Francisco, Calif., 1947-48; Hd., Biol. Branch, U. S. Naval Radiological Defense Lab., San Francisco, Calif., 1948-51; Hd., Biol. and Med. Sci. Div., *ibid.*, 1951—. Mem.: A.M.A.; A.A.A.S.; Soc. of Exptl. Biol. and Med.; Deputy Mem., Joint Panel on the Med. Aspects of Atomic Warfare, Rsch. and Development Bd. of the Dept. of Defense; Alpha Omega Alpha; Sigma Xi. Contrb. to: Jour. of Biol. Chem.; Jour. Gen. Physiol.; Amer. Jour. of Physiol.; Sci.; Calif. Med.; U. S. Naval Radiological Defense Lab. Reports. Special Int.: Lipid Metabolism; Radiation Biol. and Med.

FISK, Emma Luelle, Assoc. Prof. of Botany, Univ. of Wis., Madison, Wis. BOTANY.

FISK, Harold Norman, Chf. Geologic Rsch. Section, Humble Oil and Refining Co., P. O. Box 2180, Houston, Tex. PETROLEUM GEOLOGY. b. Medford, Ore., Aug. 31, 1908. s. George Norman and Lulu Blanch (McPherson) F. Edn.: B.S., Univ. of Ore., 1930; M.A., *ibid.*, 1931; Ph.D., Univ. of Cincinnati, 1935. m. Emma Allen Ayrs, June 8, 1935. c.: George Ayrs; Norma Jean. Exp.: Lab. Asst., Univ. of Cincinnati, 1931-33; Lab. Instr., Northwestern Univ., Evanston, Ill., 1931-33; Instr. in Mineralogy, La. State Univ., 1935-38; Asst. Prof., *ibid.*, 1938-41; Assoc. Prof., *ibid.*, 1941-45; Prof. of Geol., *ibid.*, 1945-48; Chf., Geologic Rsch. Section, Humble Oil and Refining Co., Houston, Tex., 1948—. Hon. Pos.: Pres., Soc. Econ. Paleontologists and Mineralogists, 1953; Rsch. Geologist, La. Geol. Survey, 1936-41; Consultant, Miss. River Commn., 1941-52. Mem.: Fellow, Geol. Soc. Amer.; Amer. Geophysical Union; Soc. Econ. Paleontologists and Mineralogists; Amer. Assn. Petroleum Geologists; Houston Geol. Soc.; Sigma Xi; Sigma Gamma Epsilon. Special Int.: Stratigraphy.

FISKE, Cyrus Hartwell, Prof. of Biol. Chem., Harvard Med. Schl., Boston, Mass. CHEMISTRY, MEDICINE.

FITZ, James Clarence, Dir., Nutritional Rsch. Lab., Borden Co., Box 533, Elgin, Ill. NUTRITION.

FITZ, Martin Frederick, Prof. of Psychol. and Clinician Testing Bureau, Iowa State Coll., Ames, Iowa. TESTS AND MEASUREMENTS.

FITZGERALD, Fred Finley, retired, Gabel Bldg., Morris, Ill.

FITZGIBBON, John J., Private Practice, 56 Suffolk St., Holyoke, Mass. DENTISTRY.

FITZ HUGH, Oscar Garth, Pharmacologist, U. S. Food and Drug Admin., Washington, D. C. PHARMACOLOGY.

FITZPATRICK, Edward Augustus, Pres., Mt. Mary Coll., 9101 W. North Ave., Milwaukee, Wis. EDUCATION, SOCIOLOGY.

FITZPATRICK, Florence K., Rsch. Bacteriologist, Sharp and Dohme, Inc., Glenolden, Pa. BACTERIOLOGY.

FITZPATRICK, Harry Morton, Prof. of Plant Pathol., Cornell Univ., Ithaca, N. Y. MYCOLOGY.

FITZPATRICK, Rev., S. J., Fordham Univ., N. Y., N. Y. INDUSTRIAL SOCIOLOGY.

FLACK, Herbert L., Chf. Pharmacist, Jefferson Med. Coll. Hosp., Philadelphia, Pa. PHARMACY.

FLAGG, Arthur Leonard, Consulting Mining Engr., P. O. Box 2345, Phoenix, Ariz. GEOLOGY, ENGINEERING.

FLAGG, Frederick Potter, Consulting Metallurgist, 65 Fairmont Ave., Waltham, Mass. PHYSICAL METALLURGY.

FLAGG, John F., Knolls Atomic Power Lab., G. E. Co., Schenectady, N. Y. CHEMISTRY, ANALYTICAL.

FLANAGAN, John C., Prof. of Psychol., Univ. of Pittsburgh, Pittsburgh, Pa. PSYCHOLOGY.

FLANAKIN, Hubert Agee, Acting Dir., Engrng. Experiment Sta. and Asso. Prof. of C.E., L. S. U., Baton Rouge, La. PLANNING—HIGHWAY AND TRAFFIC ENGINEERING. b. Big Sandy, Tex., Feb. 7, 1905. s. John Henry and Mary Elinor (Dugan) F. Edn.: B.C.E., L. S. U., 1927; Civ. Engr., L. S. U., 1933; Traffic Engr. Cert., Yale, 1941. m. Beverly Kendall Favrot of Baton Rouge, La., July 8, 1934. d. J. St. Clair and Lucy Favrot. c.: Kendall Mab; Tara Dugan. Exp.: 1927-29, Resident Hwy. Engr., Webster Parish, Hwy. Dept., Minden, La.; 1929-31, Detailer Strl. Steel, Amer. Bridge Co., Gary Ind.; 1931-36, Designer, La. Dept. of Highways, Baton Rouge, La.; 1936-41, Traffic and Planning Engr., La. Dept. of Hwys., Baton Rouge, La.; 1941-42, State Planning Engr., La. Dept. of Pub. Works, Baton Rouge, La.; 1942-43 and 1946-47, Area Dir., Natl. Housing Agency, Dallas, Tex.; 1947-51, Asso. Prof., C.E., La. State Univ.; 1951—, Acting Dir., Engrng. Exp. Sta., *ibid.* Mem.: Natl. Acad. of Sci.; Hwy. Rsch. Bd.; Inst. Traffic Engrs.; Amer. Soc. Engr. Edn.; Amer. Soc. Refrigerating Engrs.; Amer. Road Bldrs. Assn.; Tau Beta Pi; Phi Kappa Phi; Masons; Kiwanis. War Record: 1943-46, U. S. Army Transportn. Corps, T.C.O.C.S. Instr. in Chg. of Hwy. Transpn., 6 months, Off. in Chg. Design and



Planning, New Orleans Port of Embarkation, Ship Conversion Prog., O/C, Hwy. Planning for Posts, Camps and Stations. Hobbies: Civic and Church work. Listed in: Who Knows What. Special Int.: Behavior of Vehicles in Motion; Regional Planning; Hwy. Planning.

FLANDERS, Stanley Ellsworth, Assoc. Entomologist, Univ. of Calif., Citrus Expt. Station, Riverside, Calif. ENTOMOLOGY, AGRICULTURE.

FLEISHER, Edward, Assoc. Prof. of Math., Brooklyn Coll., 20 Plaza St., Brooklyn, N. Y. MATHEMATICS.

FLEISHER, Moyer Springer, Bacteriologist, Jewish Hosp., 216 S. Kingshighway, St. Louis, Mo. BACTERIOLOGY.

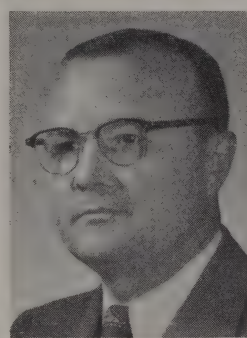
FLEMER, John Adolph, retired, Capt., U. S. Coast and Geodetic Survey, Oakgrove, Va. PHOTO-TOPOGRAPHY.

FLEMING, Cecile White, Psychologist, Div. Sales Personnel Selection, Burton Bigelow Organization, 445 Riverside Dr., N. Y., N. Y. PSYCHOLOGY.

FLEMING, John Adam, Adv. in Internat. Scientific Relations, Carnegie Instn. of Washington, 1530 P St., N. W., Washington 5, D. C. GEOPHYSICS. b. Cincinnati, Ohio, Jan. 28, 1877. s. Americus v. and Katherine B. (Ritzmann) F. Edn.: B.S., Univ. of Cincinnati, 1899; D.Sc., *ibid.*, 1933; D.Sc., Dartmouth Coll., 1934. m. Henrietta C. Ratjen (dec.), Mar. 26, 1912. m. 2. Carolyn Ratjen, Oct. 30, 1913. c.: Margaret Catherine. Exp.: Engr. Asst., Saengerbund Soc. of Cincinnati, Ohio, 1899; Recorder, Aid, Asst., U. S. Coast and Geodetic Survey, Washington, D. C., 1899-1903; Partner and Supt., Vulcan Copper Works, Cincinnati, Ohio, 1903-04; Magnetic Observer, U. S. Coast and Geodetic Survey at Washington, D. C., 1904-10; Chf. Mathematician, Asst. Dir., Div., Dept. of Terrestrial Magnetism of the Carnegie Instn. of Washington, Washington, D. C., 1904-46; Adv. in Internat. Scientific Relations, Carnegie Instn., *ibid.*, 1946—. Mem.: Natl. Acad. of Sci.; Wash. Acad. of Sci.; Amer. Phys. Soc.; Amer. Meteorol. Soc.; A.A.A.S.; Amer. Geophys. Union; Amer. Inst. of Mining and Metallurgical Engrs.; Amer. Geographical Soc.; Natl. Geographic Soc.; Seismol. Soc. of Amer.; Phil. Soc. of Washington; Natl. Inst. of Soc. Sci.; Cosmos Club of Washington. Author: The Ziegler Polar Expedition, 1907; Terrestrial Magnetism and Elec., 1909; Scientific Results of Cruise VII of the Carnegie During 1928-29; etc. Contrb. to: Jour. of Terrestrial Magnetism; Phys. Rev.; Trans. of Amer. Geophys. Union; Trans. of Internat. Assn. of Terrestrial Magnetism and Elec.; Proc. of Geol. Soc. of Peru, etc. Gen. Int.: Hon. Mem., Royal Soc. of New Zealand; State Russian Geog. Soc.; Michelsen Inst. of Sci. and Intellectual Freedom of Norway; Geophys. Soc. of Finland; Norwegian Acad. of Sci. and Letters; Geol. Soc. of Peru; Geographical Soc. of Lima; Certificate of Exceptional Services, Bureau of Ord., U. S. Navy, 1945; Certificate Effective Services of O.S.R.D., 1945; William Bowie Medal of Amer. Geophys. Union, 1941; Charles Chree Medal and Prize of Phys. Soc. of London, 1945; Comdr. of Order of St. Olaf of Norway, 1948; Pres., Internat. Con. of Sci. Unions, 1946-49; Pres., Internat. Assn. of Terrestrial Magnetism and Elec., 1930-48; Chmn. of Sect. of Geophys. of Natl. Acad. of Sci., 1951-54; Chmn. of Natl. Rsch. Coun. Comm. on Internat. Sci. Unions, 1946—; Comm. of Terrestrial Magnetism and Atmospheric Elec. of the Internat. Meteorol. Org., 1930-46; Mem. Internat. Comm. for Polar Yr., 1931-46; U. S. Natl. Comm. on Geophys., 1947-48; U. S. Delegate from Natl. Rsch. Coun. and Natl. Acad. of Sci. to Internat. Assemblies at Stockholm, Sweden, 1930; Lisbon, Portugal, 1933; Edinburgh, Scotland, 1936; Washington, D. C., 1939; Trustee, Woods Hole Oceanographic Inst., 1930-50; Sigma Xi. War Record: In Chg. of All Work at DTM of Carnegie Inst. of Wash. under War Contracts Concerned with Ordnance Devices Including Proximity Fuze, Radio-Wave and Communications Improvement, Magnetic Compasses and Odographs, Magnetic Field and Motorized Vehicles, Uranium Studies, Ionospheric Studies, Hydrographic Studies, and Radioactivity Studies; Mem., Radio Wave Propagation Comm. of Joint and Combined Chfs. of Staff; Consultant,

Sect. T. Office of Sci. Rsch. and Dev., 1941-44; Design of Constant-Temp. Magnetic Obs. now Adopted for many World Obs.; Designs of Geomagnetic Instruments for Field and Obs. Use; Have Promoted and Expended the World Magnetic Survey on Land and Sea; Has Shown the Correlations Between Geomagnetic Phenomena and Those of the Sun the Ionosphere; and Earth-Currents; Has Improved Investigations Concerned with the Daily Variations of the Magnetic Field of the Earth. Special Int.: Geophysics, Especially Geomagnetism and Geoelectricity and Oceanography.

FLEMING, Maurice Carl, Hd., Biol. Dept., Md. State Tchrs. Coll., Tony Tank Rd., Salisbury, Md.



BIOLOGY; SCIENCE EDUCATION. b. Pocomoke, Md., Mar. 19, 1914. s. J. Carl and Marian O. (Mills) F. Edn.: A.B., Western Md. Coll., 1934; A.M., Tchrs. Coll., Columbia Univ., 1938; Ph.D., Schl. of Edn., N. Y. Univ., 1942; Ed.D., Tchrs. Coll., Columbia Univ., 1952. m. Dr. Jessie Laib, Apr. 4, 1947. c.: Keith Allan. Exp.: Sci. Tchr. and Coach of Athletics, Crisfield, Md., H. S., 1936-40; Tchn. Fellow, Schl. of Edn., N. Y. Univ., 1940-42; Edn. Officer, U. S. Army, 1942-45; Instr. and Coordinator of Veterans Affairs, Schl. of Edn., N. Y. Univ., 1946; Instr. (Part-time), Newark State Tchrs. Coll., Newark, N. J., 1946; Hd., Biol. Dept. and Coordinator Jr. Coll. Program, Md. State Tchrs. Coll., Salisbury, Md., 1946—. Hon. Pos.: Pres., Md. Assn. of Jr. Colleges, 1952-53; Pres., Salisbury, Md. Branch, Reserve Officers Assn. of the U. S., 1947-48. Mem.: Natl. Assn. for Rsch. in Sci. Tchn.; Phi Delta Kappa; Kappa Delta Pi. Contrb. to: Sci. Edn. Special Int.: Sci. Edn. and Admin. of Higher Edn.; Study of Law.

FLETCHER, Charles Cloyes, retired, 4800 Wheeler Rd., S. E., Washington, D. C.

FLETCHER, Harris Francis, Prof. of English, 429 Library, Univ. of Ill., Urbana, Ill. PHILOLOGY.

FLETCHER, Harvey, Dir. of Rsch. and Hd. of Engrng. Sci. Dept., Brigham Young Univ., Provo, Utah. SPEECH AND HEARING AND COMMUNICATION RESEARCH.



b. Provo, Utah, Sept. 11, 1884. s. Charles E. and Elizabeth (Miller) F. Edn.: B.S., Brigham Young Univ., 1907; Ph.D., Univ. of Chicago, 1911. Hon. Deg.: D.Sc., Columbia Univ., 1935; D.Sc., Case Schl. of Applied Sci., 1941; D.Sc., Stevens Inst. of Tech., 1941; D.Sc., Kenyon Coll., 1941; D.Sc., Univ. of Utah, 1945. m. Lorena Chipman, Sept. 9, 1908. c.: Phyllis; Stephen H.; Charles; James; Robert; Harvey, Jr.; Paul. Exp.: Hd. of Dept. of Physics and Math., Brigham Young Univ., Provo, Utah, 1911-16; Dir. of Physical Rsch., Bell Telephone Labs., 1916-49; Prof. of Elec. Engrng., Columbia Univ., 1949-52; Dir. of Rsch. and Hd. of Engrng., Brigham Young Univ., Provo, Utah, 1952—. Mem.: Amer. Physical Soc.; Acoustical Soc. of Amer.; Natl. Acad. Sci.; A.I.E.E.; A.A.A.S.; Otological Soc. of Amer. (Hon.); Amer. Soc. for Speech and Hearing (Hon.); Assn. Audio Engineering Soc. (Hon.) Author: Speech and Hearing, 1929; Speech and Hearing in Communication, 1953. Contrb. to: Physical Rev.; Jour. Acoustical Soc.; I.R.E. Jour.; A.I.E.E. Jour.; etc. Special Int.: Speech and Hearing; Psychological Acoustics and Three Dimensional

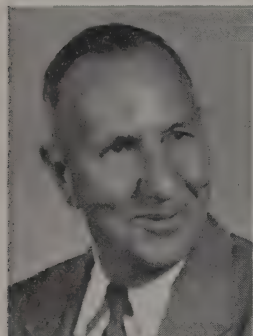
Sound Pictures, etc.: Determination of Electrical Charge on the Electron.

FLICK, Fulton Brooks, Partner, Brown, Critchlow, Flick and Peckham, 1706 First National Bank Bldg., Pittsburgh, Pa. **CHEMICAL PATENTS.**

FLINN, Frederick Bonner, retired, 15 Amsterdam Ave., N. Y., N. Y. **APPLIED PHYSIOLOGY.**

FLINT, Francis C., Hazel-Atlas Glass Co., 15th and Jacobs Sts., Wheeling, W. Va. **CERAMICS.**

FLINT, Lewis Herrick, Prof. of Botany, Dept. of Botany, Bacteriol. and Plant Pathol., La. State Univ., Baton Rouge, La. **LIGHT RELATIONS OF PLANTS; FRESHWATER RED ALGAE; HYDRATION OF IONS.**



b. Milton, Vt., Feb. 5, 1893. s. Hale L. and Annie M. (Herrick) F. Edn.: B.S., Univ. of Vt., 1915; M.S., *ibid.*, 1916; Ph.D., *ibid.*, 1923. m. Jessie Chedel, Apr. 28, 1917. c.: Alden C.; Marguerite Ann.; Christine Isabel; Austin W. Exp.: Instr. in Botany, Univ. of Vt.; Asst. Botanist, Vt. Expt. Sta., 1916-23; Assoc. Plant Physiologist, U.S.D.A., 1923-36; Plant Physiologist, Boyce Thompson Inst., 1936-37; Prof. of Botany, La. State Univ., Baton Rouge, La., 1937—, Hon. Pos.: S. E. Section, Amer. Plant Physiologists. Mem.: A.A.A.S.; Botanical Soc. Amer.; Amer. Phytopathol. Soc.; Amer. Soc. Plant Physiologists; Physiological Soc. Amer.; La. Acad. Sci.; Sigma Xi; etc. Contrb. to: Plant Physiol.; Science; Amer. Jour. Botany; Proc. La. Acad. Sci. War Record; Private, World War I.

FLINT, Richard Foster, Prof. of Geol., Yale Univ., New Haven, Conn. **GLACIAL GEOLOGY.**

FLOR, Harold Henry, Pathologist, U. S. D. A., N. Dak. Expt. Station, Fargo, N. Dak. **PLANT PATHOLOGY.**

FLORA, Charles Paxson, retired, 155 Church St., Watertown, Mass. **WAGE AND SALARY ADMINISTRATION.**

FLORY, Charles D., Res. Partner, Rohrer, Hibler Ave., N. Y. 20, N. Y. **CONSULTING PSYCHOLOGIST.** b. Sept. 28, 1902, Nokesville, Va. s. Samuel Henry and Lydia Frances (Kerlin) F. Edn.: A. B., Manchester Coll., 1924; A.M., Univ. of Chicago, 1928; Ph.D., *ibid.*, 1933. m. Mary Grossnickle of N. Manchester, Ind., June 4, 1925. d. W. O. Grossnickle. c.: Elaine Marie; Frances Ann. Exp.: Bippus, Ind., H. S., 1924-27; Park Coll., Mo., 1928-30; Ft. Hayes, Kan. State Tchrs. Coll., summer, 1930; Asst., Univ. of Chicago, 1930-



33; Gen. Edn. Bd. Fellow, 1933-35; Lawrence Coll., Wis., 1935-43; Stevenson Jordan and Harrison, Consulting Psychol., 1943-45; Rohrer, Hibler, and Replogle, 1945—; N. Tex. State Tchrs. Coll., Summers, 1936, 1937, 1938, 1940; Univ. Wis., summers, 1941, 1942. Mem.: Fellow and Diplomat, A.P.A.; A.A.A.S.; Amer. Coll. Personal Assn.; Phi Delta Kappa; N. Y. Sales Exec.; Ardsley Country Club. Author: Monographs: Phys. Growth of Mentally Deficient Boys; Osseous Dev. of the Hand as an Index of Skeletal Development; Infant Behavior (with others); Growth of Intelligence as Measured by Repeated Tests. Contrb.

to: Ednl. Record; Jour. of Consulting Psychol. Ph.D. Dissertation: Phys. Growth of Mentally Deficient Boys. Travel: N. Amer. Hobbies: Fishing; Golf; Woodworking. Listed in: A.M.S. Special Int.: Physical and Mental Growth; Psychol. Evaluations; Indus. Counseling.

FLORY, Paul J., Cornell Univ., Ithaca, N. Y. **CHEMISTRY.**

FLOSDORF, Earl William, Independent Rsch. Consultation and Dir. of Rsch. and Development, F. J. Stokes Co., Forest Grove, Pa. **MEDICAL CHEMISTRY AND PHYSICS.**

FLY, Claude L., Chief Agronomist and Soils Engr., Morrison-Kundsen-Afghanistan, Inc., Khandahar, Afghanistan. **IRRIGATION LAND DEVELOPMENT; SOILS—SURVEYS, LAND CLASSIFICATION, RESEARCH; SOIL CONSERVATION—SURVEYS AND PLANNING.** b. Fulbright, Tex., June 23, 1905. s. Anderson B. and Emily Josephine (Lowry) F. Edn.: B.S., Okla. A. and M. Coll., 1927; M.S., *ibid.*, 1928; Ph.D., Iowa State Coll., 1931. m. Miriam Rector, Aug. 21, 1927. c.: Maurita Ellen; John Marvin. Exp.: Hd. Sci. Dept., Panhandle A. and M. Coll., Goodwell, Okla., 1931-35; Survey Supvr., Soil Conservation Service, Amarillo, Tex., 1935-41; Asst. Regional Soil Scientist, Soil Conservation Service, Lincoln, Nebr., 1942-46; Soil Specialist and Agronomist, U.N.R.R.A. in Italy, Sicily and Greece, 1946-47; State Soil Scientist, Soil Conservation Service, Kansas, 1947-53. Mem.: Amer. Soc. Agron.; Soc. of Soil Sci.; Soil Conservation Soc.; Range Management Soc.; Friends of the Lands; Sigma Xi; Alpha Chi Sigma. Author: Soil Conservation in Kans., 1947. Contrb. to: Soil Conservation Jour.; Jour. Amer. Soc. Agron.; Jour. Soc. Range Management. Special Int.: Rsch. in Soil Phys.; Plant Physiol.; Soil Taxonomy; Special Knowledge in Soil and Water Conservation Techniques in Semiarid Agri. and Irrigation Land Development.

FOGELSANGER, Aldus, Secy., Evaporated Metal Films Corp., Hanshaw Corners, Ithaca, N. Y. **PHYSICS.**

FOGG, John Milton, Jr., Vice Provost and Prof. of Botany, Univ. of Pa., 6807 Quincey St., Philadelphia, Pa. **SYSTEMATIC BOTANY.**

FOHS, Ferdinand Julius, Oil Geologist, San Jacinto Bldg., Houston, Tex. b. N. Y., Mar. 1, 1884.



s. Mark E. and Fredricka (Baum) F. m. Cora Baldauf, 1908. c.: Ella (dec.); Frances. Exp.: Mine Supt., Ky., 1901; Field Asst. Geologist, U. S. Geol. Survey, 1902; Engr. in Chg. of Mines in Ky., 1902-05; Asst. State Geologist of Ky., 1905-12; Lectr., Schl. of Mines, State Univ. of Ky., 1906-08; Special Lectr. in Oil Geol., Columbia Univ., 1927 and 1947; Investigator, Natural and Water Resources of Palestine and Directed Development of Water, 1919, 30, 36, 37; Investigator of Oil Possibilities of Sicily, 1927; Private Report on Natural Resources of Palestine to World Zionist Organization and British War Office, 1919; Humphreys-Fohs Group of Companies, 1914-31; Vice Pres. and Consulting Geologist, Humphreys Corp.; Pres., Fohs Oil Co., 1932-46; Independent Oil Operator, 1946—; Pres. and Dir., Whitclay Oil Operators, Inc., 1952—; Dir., Amer. Financial and Development Corp. for Israel 1951—; Mgr. and Dir., Dakamont Exploration Corp., 1952—; Dir., Independent Petroleum Assn. of Amer. Hon. Pos.: Chmn., Fohs Foundation, 1937—; Dir., Houston Contemporary Arts Museum. Mem.: Fellow, Geol. Soc. Amer.; Amer. Inst. Mining and Metallurgical Engrs.; Amer. Assn. Petroleum Geologists; A.A.A.S.; British Inst. Petroleum Tech. Gen. Int.: Founded with Mrs. Fohs in 1926, the Ella Fohs Camp for Underprivileged Girls, which has been

Developed into a Coeducational Non-Sectarian Institution for 300 Children.

FOHS, F. Julius, Consulting Geologist, Lamar Hotel, Houston, Tex. GEOLOGY, GEOGRAPHY.

FOLDY, L. L., Case Inst. of Tech., Cleveland 6, Ohio. PHYSICS.

FOLEY, John Porter, Jr., Assoc. Dir., Industrial Div., Psychological Corp., 522 Fifth Ave., N. Y., N. Y. PSYCHOLOGY.

FOLGER, Harry Thomas, Prof. of Biol., Fisk Univ., Nashville, Tenn. BIOLOGY.

FOLK, M. Hayne, Jr., Dean, Schl. of Agri. and Forestry; Hd. Dept. Bot. and Prof. Bot., La. Poly.

Inst., Ruston, La. BOTANY. b. Pomaria, S. C., Feb. 9, 1899. s. M. Hayne and Carrie (Setzler) F. Edn.: B.S. in Agron., Valedictorian, Clemson Agri. Coll., 1919; M.S., La. State Univ., 1929; Grad. Study, Univ. of S. C., spring, 1926; La. State Univ., summers, 1927-29, 1942, 1949. m. Juanita Blanche Coates of Monroe, La., Aug. 9, 1923. d. Joseph T. and Mary Davitt Coates. Exp.: Asst. Prin. and Voc. Agri. Tech., Choudrant, La. H. S., 1919-20; Asst. Prin. and Voc.



Agri. Tchr., Hillsboro, W. Va. H. S., 1925-36; Asst. Prof., Dept. Biol., La. Poly Inst., 1926-36; Assoc. Prof., ibid., 1936-42; Prof., ibid., 1942-47; Prof. and Hd. Dept. Bot., Dean, Schl. of Agri. and Forestry, 1947—. Mem.: Theta Psi Zeta Chapt., Lambda Chi Alpha; Omicron Delta Kappa; Phi Kappa Phi; Pres., La. Tech. Men's Faculty Club; La. Tech. Athletic Comm.; Amer. Legion, Post Commander; N. La. Rally Assn.; Dir., N. La. State Fair Assn.; A.A.A.S.; Amer. Farm Bur. Fed.; N.E.A.; La. Acad. of Sci.; La. Edn. Assn.; La. Fruit Growers Assn.; La. Forestry Assn.; La. Jersey Cattle Club; La. Artificial Breeders Assn.; N. La. Poultry Growers Assn.; Lions Club; C. of C. Author: Methods of Delinting Cotton Seed for Early Germination, 1919; A New Method for Preparing Sulfonaphthalein Indicators, 1929; A Hist. of the N. La. H. S. Rally, 1936. Gen. Int.: Recipient of Clemson's Norris Medal, Awarded for Gen. Excellence in Scholarship During Four Years in Coll.; Amer. Shorthorn Breeders Assn. Award for First Prize Winning Essay on Shorthorn Cattle, 1919. Hobbies: Gardening; Hunting. Listed in: Who's Who in Amer.; Who's Who in South and Southwest; Who Knows—and What. Special Int.: Plant Pathology.

FOLKERS, Karl, Dir. of Org. and Biol. Chem. Rsch., Merck and Co., Inc., 617 Belvidere Ave., Plainfield, N. J. CHEMISTRY. b. Decatur, Ill., 1906. Edn.: B.S., Univ. of Ill., 1928; Ph.D., Univ. of Wis., 1931. Exp.: Post-Doctorate Rsch. Fellow in Organic Chem., Sterling Chem. Lab., Yale Univ., 1931-34; Staff, Lab. of Pure Rsch., Merck and Co., Inc., Rahway, N. J., 1934—; Asst. Dir. of Rsch., Rsch. and Development Div., ibid., 1938-45; Dir., Organic and Biochem. Rsch. Dept., ibid., 1945—; Assoc. Dir., Rsch. and Development Div., ibid., 1951-53. Mem.: Natl. Acad. Sci.; Amer. Chem. Soc.; Amer. Soc. of Biol. Chem.; A.A.A.S.; N. Y. Acad. Sci.; Alpha Chi Sigma; Phi Lambda Upsilon; Sigma Xi. War Record: During World War II, Mem. of the Div. of Chem. of the Office of Scientific Rsch. and Development; In Mar., 1948, Awarded a Presidential Certificate of Merit in Connection with Work for the Office of Scientific Rsch. and Development. Gen. Int.: Co-recipient in 1940 of the Mead Johnson and Co. Award for Rsch. on the Vitamin B Complex; In 1941 Amer. Chem. Soc. Award for Meritorious Work in Pure Chem.; Co-recipient in 1949 of the Mead Johnson and Co. Award for Rsch. on the Vitamin B Complex, Particularly Vitamin B₁₂; Received the Bd. of Dirs. Scientific Award in Merck and Co., Inc., 1951.

FOLKS, Homer, retired, 428 Hawthorne Ave., Yonkers, N. Y. SOCIAL WORK, PUBLIC HEALTH.

FOLLOWS, Alan G., Sr. Rsch. Chemist, Solvay Process Div., Allied Chem. and Dye Corp., Syracuse, N. Y. PHYSICAL CHEMISTRY, AND CHEMICAL ENGINEERING. b. England, Dec. 20, 1921. s. William L. and Lillian N. (Meyers) F. Edn.: B.Sc., Queens Univ., 1944; M.Sc., ibid., 1946; Ph.D., Univ. of Toronto, 1948. m. Elva J. Sexsmith, Jan. 21, 1950. c.: Christine Lynn and Jill Marilyn. Exp.: Special Lectr., Depts. of Chem. and Chem. Engrng., Univ. of Toronto, 1947-48; Rsch. Chemist, Solvay Process Div., Allied Chem. and Dye Corp., Syracuse 1, N. Y., 1948—. Mem.: Amer. Inst. of Chem. Engrs.; Amer. Chem. Soc. Contrb. to: Canadian Jour. of Chem. Special Int.: Electrical Conductivities; Thermodynamics; Potash Products; Titanium.

FOLSOM, Donald, Plant Pathologist, Agri. Expt. Station and Hd., Dept. of Plant Pathol., Univ. of Maine, Orono, Maine. PLANT PATHOLOGY.

FOLSOM, Theodore Robert, 3928 Alameda Dr., San Diego, Calif. PHYSICS.

FONDA, Gorton R., Rsch. Chemist, Rsch. Lab., General Electric Co., 1028 Parkwood Blvd., Schenectady, N. Y. ELECTRONICS.

FONTAINE, F. E., Pearl River, N. Y. PURE-CULTURE FERMENTATION TECHNIQUES.

FOORD, James Alfred, retired, 272 Lincoln Ave., Amherst, Mass. AGRICULTURE.

FOOTE, Paul Chamberlain, Chf. Optical Engr., Bell and Howell Co., 7100 McCormick Rd., Chicago, Ill. PHYSICS.

FOOTE, Paul Darwin, Exec. Vice-Pres. and Dir., Gulf Rsch. and Dev. Co., Harmarville, Pa. PHYSICS. b. Andover, Ohio, Mar. 27, 1888. s. Howard Spencer and Abbie Lottie (Tourge) F. Edn.: A.B., Western Reserve Univ., 1909; A.M., Univ. of Nebr., 1911; Ph.D., Univ. of Minn., 1917; DSC, Carnegie Inst. Tech., 1953. m. 1st Berenice C. Foote, (dec.), Feb. 3, 1913. m. 2nd Miriam S. (Shanks) Sage, June 26, 1940. c.: Jane; William Spencer; Evan T. Sage. Exp.: Physicist, Bur. of Standards, Washington, D. C., 1911-27; Dir. of Rsch., Gulf Rsch. & Dev. Co., Pittsburgh 30, Pa., 1927—. Mem.: A.A.A.S.; Optical Soc. of Amer.; Fellow Amer. Phys. Soc.; Natl. Acad. of Sci.; Amer. Petroleum Inst.; Wash. Acad. of Sci.; Inst. of Petroleum Tech.; Amer. Inst. of Mining and Metal. Engrs.; Amer. Geophys. Union; Amer. Chem. Soc.; Natl. Rsch. Coun.; Amer. Philos. Soc.; Faraday Soc.; Phi Beta Kappa; Sigma Xi; Sigma Pi Sigma; Sigma Tau; Rotary; C. of C. Author: Pyrometric Practice, with others, 1921; The Origin of Spectra, with Fred Loomis Mohler, 1922; Physics in Industry, with others, 1937. Contrb. to: Optical Soc. of Amer. Jour.; Rev. of Sci. Instruments; Jour. of Franklin Inst.; Physics; Jour. Applied Physics; Proc. of Amer. Phil. Soc.; Scientific Monthly.

FORAKER, Forest A., Prof. of Math., Univ. of Pittsburgh, 1313 Macon Ave., Pittsburgh, Pa. MATHEMATICS.

FORAN, Thomas George, Prof. of Edn., Catholic Univ. of Amer., 1341 Hemlock St., Washington, D. C. EDUCATIONAL PSYCHOLOGY.

FORBES, Alexander, Prof. Physiol. Emeritus, Harvard Univ., 610 Harland St., Milton, Mass. NEUROPHYSIOLOGY. b. Milton, Mass., May 14, 1882. s. William Hathaway and Edith (Emerson) F. Edn.: A.B., Harvard Coll., 1904; A.M., Harvard Grad. Schl., 1905; M.D., Harvard Med. Schl., 1910. Hon. Deg.: D.S., Tufts Coll., Oct., 1952. m. Charlotte Irving Grinnell, June 9, 1910. c.: Katharine; Janet; Florence; A. Irving. Exp.: Instr. in Physiol., Harvard Med. Schl., 1910-11, 1912-21; Assoc. Prof. of Physiol., Harvard Med. Schl., 1921-36; Prof. of Physiol., ibid., 1936-48; Emeritus Prof., ibid., 1948—. Hon. Pos.: Pres., George Jr. Republic Assn. Mem.: Amer. Physiol. Soc.; Amer. Acad. Arts and Sci.; Amer. Philos. Soc.; Natl. Acad. Sci.; Sigma Xi. Author: Northernmost Labrador

Mapped from the Air, 1938. Contbr. to: Amer. Jour. Physiol.; Jour. Neurophysiol.; Science; Electroencephalography and Clinical Neurophysiol. War Record: Lt. (jg) U. S. N. R. F., 1917-19; Lt. Comdr. (MC) U. S. N. R., 1940-43; Comdr., 1943-45; Capt., 1945. Special Int.: Physiol. of Nervous System, especially Spinal Reflexes; Development of Electrical Recording Techniques; Studies of Nerve Impulse; Physiol. of Brain under Narcosis; Electrophysiol. of Retina with reference to Color Vision.

FORBES, Ernest Browning, Dir., Inst. of Animal Nutrition, Prof. Emer. Animal Nutrition, Pa. State Coll., 500 W. Fairmount Ave., State College, Pa. NUTRITION.

FORBES, George Shannon, Prof. and Chmn., Dept. of Chem., Mallinckrodt Chemical Labs., Harvard Univ., Cambridge, Mass. PHYSICAL CHEMISTRY.

FORBES, Grace Springer, Assoc. Prof. of Zool. and Dean, Bard Coll., Annandale-on-Hudson, N. Y. ZOOLOGY, COLLEGE ADMINISTRATION.

FORBES, Henry Stone, Assoc. Neuropathol., Harvard Med. Schl., Boston, Mass.; 71 Forest St., Milton, Mass. INTERNAL MEDICINE AND PHYSIOLOGY.

FORBES, John Campbell, Rsch. Prof. in Biochem., Medical Coll. of Va., Richmond, Va. BIOCHEMISTRY.

FORBES, William Trowbridge Merrifield, Asst. Prof., Dept. of Entomol., Cornell Univ., Ithaca, N. Y. ENTOMOLOGY.

FORBUS, Wiley, Duke Univ., Durham, N. C. PATHOLOGY.

FORD, Leonard Augustine, Chmn., Div. of Sci. and Math., Mankato, Minn., S. T. C. Address: 522



Record St., Mankato, Minn. b. Oct. 19, 1904. Valley Springs, S. D. s. John Haquin and Mary (Ringdahl) F. Edn.: A.B., Gustavus Adolphus Coll., 1925; M.S., Univ. of Ia., 1928; Ph.D., ibid., 1931. m. Anne Albertina Swanson of Beresford, S. D., Aug. 14, 1932. d. Mr. and Mrs. Charlie Swanson. c.: Joyce Anne; Barbara Jean. Exp.: H. S. Instr. Sci., Oakes, N. D., 1925-26; Benson, Minn., 1926-27; Austin, Minn., 1928-29; Grad. Asst. in Chem., Chem. Dept., State Univ. of Ia., Iowa City, Ia., 1929-31; Prin. and Hd. Sci. Dept., Roosevelt Milit. Acad., Aledo, Ill., 1931-36; Chmn., Chem. Dept., Sioux Falls Coll., S. D., 1936-39; Prof. of Chem., Mankato S. T. C., 1939—. Mem.: A.C.S.; Minn. Acad. of Sci.; A.A.U.P.; Alpha Chi Sigma; Phi Lambda Upsilon; Lions. Contbr. to: Sci. Jour. Ph.D. Dissertation: The State of Calcium in Gelatin. Gen. Int.: Process for Canning Fresh Water Fish. Hobbies: Fishing; Hunting; Canoeing. Listed in: A.M.S.

FORD, Ernest Sidney, Dept. of Botany, Univ. of Fla., Gainesville, Fla. BOTANICAL SCIENCES.

FOREGGER, Richard, Pres., Foregger Corp., Inc., 55 W. 42nd St., N. Y., N. Y. ANESTHETICS.

FORKNER, Claude Ellis, Assoc. Prof. of Clinical Med., Cornell Med. Coll., 1300 York Ave., N. Y., N. Y. INTERNAL MEDICINE.

FORMAN, Frederick, Assoc. Prof., Dept. of Geol., Oberlin Coll., Oberlin, Ohio. SEDIMENTARY GEOLOGY.

FORNOFF, Frank Junior, Assoc. Prof. of Dept. of Chemistry and Chemical Engineering, Lehigh Univ., Bethlehem, Pa. INORGANIC CHEMISTRY. b. March 29, 1914, Mount Carmel, Ill. s. Frank

and Ada (Arnold) F. Edn.: A.B., Univ. of Ill., 1936; M.S., Ohio State Univ., 1937; Ph.D., ibid., 1939. Exp.: Procter and Gamble Fellow, Ohio State Univ., 1938-39; Natl. Rsch. Fellow in Chem., Univ. of Calif., 1939-40; Instr. in Chem., Lehigh Univ., 1940-42; Asst. Prof., ibid., 1942-44; Chem. Engrng., Western Elec. Co., N. Y. C., 1944-45; Asst. Prof., Lehigh Univ., 1945-47; Assoc. Prof., ibid., 1947—. Mem.: Amer. Chem. Soc.; Phi Beta Kappa; Sigma Xi; Phi Kappa Phi; Phi Lambda Upsilon; Phi Eta Sigma; Theta Chi. Ph.D. Dissertation: The Rare Earth Metals and Their Compounds: A Study on Ceria Oxide. Hobbies: Y.M.C.A.; Church Boys' Work. Listed in: A.M.S. Special Int.: Rare earths.

FORSAITH, Carl Cheswell, Prof. of Wood Technol., N. Y. State Coll. of Forestry, Syracuse, N. Y. WOOD TECHNOLOGY.

FORSYTHE, George E., Mathematician, Natl. Bur. of Standards; Visiting Assoc. Prof. of Mathematics, Univ. of Calif., Los Angeles, Calif. Address: 414 22nd St., Santa Monica, Calif. MATHEMATICS. b. January 8, 1917, State College, Pa. s. Warren E. and DeEtta (Brodie) F. Edn.: A.B., Swarthmore, 1937; Sc.M., Brown, 1938; Ph.D., Brown, 1941. m. Alexandra Illmer of Cortland, N. Y., 1941. c.: Warren Louis; Diana Elizabeth. Exp.: Instr. in Math., Brown Univ., 1938-39, 1940-41; Instr. of Math., Stanford Univ., 1941-42; Rsch. Engr., Boeing Airplane Co., Seattle, Wash., 1946-47; Asst. Prof. of Meteorol., U. C. L. A., 1947-48; Math., Natl. Bur. of Standards and Visiting Assoc. Prof. of Math., U. C. L. A., 1948—. Mem.: Amer. Math. Soc.; Sigma Xi; Phi Beta Kappa; Assoc. for Computing Machinery; Phi Delta Theta. Author: Dynamic Meteorol. (with others), 1945. Contbr. to: Math. Jours., Meteorol. Jours. Ph.D. Dissertation: Summability of Random Variables. War Record: U. S. A. F., 1942-46, Finished as Capt., Meteorologist. Listed in: A.M.S. Special Int.: Numerical Mathematical Analysis.

FORSYTHE, Warren Ellsworth, Prof. of Hygiene and Public Health and Dir., Health Service, Univ. of Mich., Ann Arbor, Mich. MEDICINE.

FOSSBERG, Francis Raymond, Fellow, John Simon Guggenheim Memorial Foundation, R. F. D. 1, Holmes Run Rd., Falls Church, Va. BOTANY.

FOSBINDER, Russel J., Pres., Maltbie Chemical Co., 240 High St., Newark, N. J. MEDICINAL CHEMISTRY.

FOSCUE, Edwin Jay, Prof. of Geography, Southern Methodist Univ., 3225 Hanover St., Dallas, Tex. GEOGRAPHY.

FOSDICK, Marion L., N. Y. State Coll. of Ceramics, Alfred, N. Y. CERAMICS.

FOSHAY, Lee, Prof. of Bacteriol., Coll. of Med., Univ. of Cincinnati, Cincinnati, Ohio. BACTERIOLOGY.

FOSSLER, Mary Louis, Asst. Prof. Emer. of Zool., Univ. of Southern Calif., 550 N. Los Robles Ave., Pasadena, Calif. CHEMISTRY.

FOSTER, Abram John, Prof., Social Studies, State Tchr. Coll., Millersville, Pa. HISTORY OF AMERICAN APPLIED SCIENCE AND TECHNOLOGY. b. Belle Vernon, Pa., Nov. 25, 1915. s. John D. and Maggie (Allen) F. Edn.: B.S., St. Tchr. Coll., California, Pa., 1936; M.A., Duke Univ., 1947; Ph.D., Univ. of Pittsburgh, 1952. m. Phyllis Lewellyn, Aug. 5, 1944. c.: Eileen; Nancy; Judith. Exp.: Tchr., Physics, and Chem., Rostraver High Schl., Rostraver, Pa., 1937-41; 1945-47; Instr., Pa. St. Coll., St. Coll., Pa., 1947-49; Lectr., Univ. of Pittsburgh, Pittsburgh, Pa., 1949-51; Assoc. Prof., State Tchr. Coll., Slippery Rock, Pa., 1951-52; Prof., St. Tchr. Coll., Millersville, Pa., 1952—. Mem.: Amer. Assn. of Univ. Prof.; Phi Alpha Theta; Phi Sigma Pi; Amer. Legion; Natl. Edn. Assn.; Pa. Edn. Assn.; Pa. Council for Social Studies; Pa. Historical Soc. Author: The Coming of the Electrical Age to the U. S., 1952. Special Int.: Hist. of Amer. Technology, Especially Hist. of Electricity in Amer., up to about 1910.

FOSTER, Alice, Rosenwald Hall, Univ. of Chicago, Chicago, Ill. ECONOMIC GEOGRAPHY.

FOSTER, Alice Willena, Assoc. Prof., Univ. of Western Ontario, London, Ont., Can. LIGHT.

FOSTER, Arthur Crawford, Sr. Plant Pathologist, Bureau of Plant Industry Station, Beltsville, Md. PLANT PATHOLOGY, BIOCHEMISTRY, PHYTO-TOXICITY OF INSECTICIDES AND PESTICIDES. b. Meridian, Miss., Nov. 27, 1893. s. Jessie Green and Sallie (Wright) F. Edn.: B.Sc., N. C. State Coll., 1917; M.Sc., Univ. of Wis., 1920. m. Dorothy Hart, Sept., 1920. c.: Dorothy; Sallie; Marcia; John Arthur. Exp.: Student Asst. in Botany, Ala. Poly. Inst., Auburn, Ala., 1910-14; Rsch. Asst. in Plant Pathol., N. J. Agril. Expt. Sta., and Rutgers Univ., 1915-16; Asst. Plant Pathologist, N. C. Agril. Expt. Sta., West Raleigh, N. C., 1916-17; Heinz Rsch. Fellow, Univ. of Wis., 1919-20; Extension Plant Pathologist, N. C. Agril. Expt. Station, Raleigh, N. C., 1920-21; Assoc. and Pathologist in Chg., Vegetable Crop Disease Field Lab., U. S. Dept. of Agri., Sanford, Fla., 1921-27; Pathologist, Sr. Pathologist, U. S. Dept. Agri., Madison, Wis., 1927-30; Sr. Pathologist, ibid., Arlington Farm, Va., 1930-34; Sr. Pathologist, Bureau of Plant Industry Station, Beltsville, Md., 1934—. Mem.: A.A.A.S.; Amer. Botanical Soc.; Amer. Soc. Plant Physiol.; Amer. Chem. Soc.; Sigma Xi; Phi Sigma. Contrb. to: Jour. Agril. Rsch.; Sci.; N. C. Tech. Bull.; The Plant Disease Reporter; Amer. Jour. Botany; etc. War Record: Sgt., U. S. Army, World War I. Special Int.: Parasitic and Non-Parasitic Diseases of Vegetable Crops, Transpiration of Plants, Crop Production, Broad General Effect of the New Organic Insecticides on Crop Production.

FOSTER, Aubrey Alfred, Agent, U. S. Dept. Agri. Schl. of Forestry, Athens, Ga. PLANT PATHOLOGY. b. Los Angeles, Calif., Oct. 12, 1912. s. Ernest William and Elsie (Dryhurst) F. Edn.: B.S., Cornell Univ., 1939; Ph.D., Cornell Univ., 1945. m. Grace Mathilda Kuchler, Sept. 13, 1941. c.: David George, Ruth Kathleen, Betty Jo, Kenneth Ernest. Exp.: Assoc. Pathologist, Central Fla. Exp. Sta., Sanford, Fla., 1945-48; Assoc. Prof., Cornell Univ., Ithaca, N. Y., 1948-50; Prof. Piedmont Coll., Demorest, Ga., 1951-53; Agent, U. S. Dept. Agri. Schl. of Forestry, Athens, Ga.



Mem.: Amer. Soc. for Horticultural Sci.; Amer. Phytopathol. Soc.; Amer. Chem. Soc.; Ga. Acad. of Sci.; A.A.A.S. Special Int.: Enzymes concerned with seed germination; Mechanism of fungicidal action; Diseases of Vegetables and Flowers.

FOSTER, Laurence Standley, Chf., Metals Forming Branch, Rsch. Lab., Watertown Arsenal, Watertown, Mass. CHEMISTRY.

FOSTER, Margaret Dorothy, Geochemist, U. S. Geol. Survey, Washington, D. C. GEOCHEMISTRY.

FOSTER, Mark Gardner, Asst. Hd., Physics Dept., Cornell Aeronautical Lab., Buffalo, N. Y. INDUSTRIAL PHYSICS.

FOSTER, Richard Fredric, Hd., Aquatic Biol. Unit, Radiological Sci. Dept., Nucleonics Div., Gen. Elec. Co., Richland, Wash. FISHERIES: RADIO-BIOLOGY. b. Grand Lake Stream, Maine, Mar. 17, 1917. s. Fred J. and Lillian M. (Alley) F. Edn.: B.S., Univ. of Wash., 1938; Ph.D., ibid., 1948. m. Florence Guberlet, June 28, 1942. c.: Constance L.; Lucy M. Exp.: Biologist, State of Wash., Pollution Commn., 1942-43; Rsch. Assoc., Applied Fisheries Lab., Univ. of Wash., Seattle, Wash., 1943-45; Unit Hd., Aquatic Biol. Unit, Richland, Wash., 1945—. Mem.: A.A.A.S.; Amer. Fisheries Soc.; Wildlife Soc.; Amer. Soc. Ichthyol. and Herpetol.; A.I.B.S.; Pac. Fishery Biol.; Sigma Xi; Phi Sigma; Phi Mu

Alpha; Phi Kappa Sigma. Contrb. to: Growth: The Progressive Fish-Culturist; Bull. State of Wash. Pollution Comm. Special Int.: Effects of Radioactivity on Aquatic Organisms, Detection and Measurement of Pollution, Culture of Salmonoid Fish, Migration and Spawning of Salmonoid Fish, Mgmt. of Fresh Water Fish.

FOSTER, Robert Henry King, Assoc. Prof. of Pharmacol., St. Louis Univ. Schl. of Med., St. Louis, Mo. PHARMACOLOGY.

FOULK, Charles William, Prof. Emer., Ohio State Univ., 275 E. Lane Ave., Columbus, Ohio. CHEMISTRY.

FOUND, Clifton Garwin, Rsch. Dir., General Electric Co., Nela Park, Cleveland, Ohio. PHYSICS.

FOUST, Harry Lewis, Prof. and Hd., Dept. of Veterinary Anatomy, Iowa State Coll., Ames, Iowa. HISTOLOGY, EMBRYOLOGY.

FLOWERBAUGH, Clarence C., 818 Guardian Bldg., Cleveland, Ohio. ATTORNEY.

FOWLER, Horatio Seymour, Asst. Prof. of Biol., Dir. of Iowa Tchr. Conservation Camp, Iowa State Tchr. Coll., Cedar Falls, Iowa. NATURE AND SCIENCE EDUCATION, CONSERVATION EDUCATION. b. Highland Park, Mich., Mar. 1, 1891. s. Horatio Seymour and Bessie (Ladd) F. Edn.: B.S., Cornell Univ., 1911; M.S., ibid., 1916; Ph.D., ibid., 1951. m. Kathleen Marshall, Nov. 21, 1945. c.: Kathleen Marie. Exp.: Sci. Tchr., McLean Central Schl., McLean, N. Y., 1946-47; Sci. Tchr., Dryden-Freeville Central Schl., Dryden, N. Y., 1947-49; Asst. in Sci. Edn., Cornell Univ., Ithaca, N. Y., 1949-51; Asst. Prof., Southern Ore. Coll., Ashland, Ore., 1951-52; Asst. Prof., Iowa State Tchr. Coll., Cedar Falls, Iowa, 1952—. Mem.: A.A.A.S.; Amer. Nature Study Soc.; Natl. Assn. of Biology Tchr.; Central Assn. of Sci. and Math. Tchr.; A.A.U.P.; Ore. Acad. of Sci.; Iowa Acad. of Sci.; Iowa Sci. Tchr. Assn.; Phi Delta Kappa; Phi Delta Kappa; Phi Kappa Phi. Contrb. to: Schl. Sci. and Math.; The Amer. Biol. Tchr.; Jour. of Edn. Rsch.; Nature Magazine; Sci. Tchr.; Oregon Edn. Jour.; Midland Schl. Special Int.: Nature and Sci. Edn.

FOWLER, John Robert, Prof. and Chmn., Dept. of Zool., La. Poly. Inst., Ruston, La. ECOLOGY, GENETICS.

FOWLER, Joseph Lee, Dir., Oak Ridge High Voltage Lab., Oak Ridge Natl. Lab., Oak Ridge, Tenn. PHYSICS. b. Springfield, Ohio, Nov. 19, 1913. s. E. C. and Ruth Mae (Reese) F. Edn.: A.B., Univ. of Tenn., 1938; M.S., ibid., 1938; Ph.D., Princeton Univ., 1943. m. Ruth Gray Bowling, Aug. 17, 1945. c.: James Reese; Robert Bowling. Exp.: Section Leader, Isotron Project, Princeton Univ., 1942-43; Section Leader and Alternate Group Leader in Bomb Phys. Div. in Manhattan District at Los Alamos, New Mexico, 1944-46; Group Leader, Cyclotron Group, Los Alamos Scientific Lab., 1946-50; Dir., Oak Ridge High Voltage Lab. in Phys. Div., Oak Ridge Natl. Lab., Oak Ridge, Tenn., 1951—. Mem.: Fellow, Amer. Phys. Soc.; Sigma Xi; Tau Beta Pi; Phi Kappa Phi; Delta Phi Alpha. Contrb. to: Phys. Rev.; Rev. of Scientific Instruments; Jour. Applied Phys. Special Int.: High Energy Neutron, Proton and Deuteron Interaction with Nuclei; Fission Fragment Mass and Energy Distributions; Flow of a Gas Through Porous Media.

FOWLER, Marvin Edward, Pathologist, U. S. D. A., Bureau of Plant Indus., Soils and Agri. Engrng., Beltsville, Md. PLANT PATHOLOGY.

FOWLER, Robert M., Electrometallurgical Rsch. Labs., Niagara Falls, N. Y. ANALYTICAL CHEMISTRY.

FOWLKES, John Guy, Dean, Schl. of Edn., Univ. of Wis., Madison, Wis. EDUCATIONAL ADMINISTRATION.

FOX, Denis Llewellyn, Assoc. Prof. of Marine Biochem., Scripps Inst. of Oceanography, Univ. of Calif., La Jolla, Calif. BIOCHEMISTRY.

FOX, Gerald Willis, Prof. of Physics, Iowa State Coll., Ames, Iowa. PHYSICS.

FOX, John Perrigo, Staff Mem., Internat. Health Div., Rockefeller Inst., 66th St. and York Ave., N. Y., N. Y. **INFECTIOUS DISEASE, IMMUNOLOGY.**

FOX, Lauretta Ewing, Dept. of Biol. Sci., Cincinnati Coll. of Pharmacy, 423 W. Eighth Ave., Cincinnati, Ohio. **MEDICINE.**

FOX, Leon A., Rt. 2, Havre de Grace, Md. **MEDICINE.**

FOX, Thomas G., Lab. Head, Rohm and Haas Co., Rsch. Labs., 5000 Richmond St., Philadelphia 37, Pa. **CHEMISTRY; PHYSICS AND HIGH POLYMER CHEMISTRY.** b. Union Deposit, Pa., Feb. 19, 1921. s. Thomas G. and Kathryn (Fasnacht) F. Edn.: B.S., Lebanon Valley Coll., 1940; Ph.D., Columbia Univ., 1943. m. Joyce A. Cake, June 21, 1941. c.: Joyce Melinda. Exp.: Asst. in Chem., Columbia Univ., 1940-43; Allied Chem. and Dye Fellow, 1942-43; Instr. in Chem., Columbia Univ., 1943-44; Rsch. Chemist, Goodyear Tire and Rubber Co., Akron, Ohio, 1946-48; Rsch. Assoc., Cornell Univ., Ithaca, N. Y., 1948-50; Rsch. Chemist, Rohm and Haas Co., 1950—. Mem.: Amer. Chem. Soc.; Amer. Phys. Soc.; A.A.A.S.; Sigma Xi; Phi Lambda Upsilon. Contrb. to: Jour. Amer. Chem. Soc.; Jour. Applied Phys.; Jour. Chem. Phys.; Jour. Phys. Chem.; Jour. Polymer Sci. War Record: U. S. Navy, 1944-46. Special Int.: Phys. Chem. of Polymers; Intrinsic Viscosities and Thermodynamics of Polymer Solutions; Molecular Weights of Polymers; Melt Viscosities and Second Order Transition in Polymers; Crystallization in Polymers; Kinetics of Polymerization.

FOXWORTHY, Fred William, 762 Arlington Ave., Berkeley, Calif. **SYSTEMATIC BOTANY.**

FRAME, Floyd Hill, Chmn., Elec. Engrng. Dept. and Prof. Elec. Engrng., Mo. Schl. of Mines and Metallurgy, 703 E. 12th St., Rolla, Mo. **ELECTRICAL ENGINEERING.**

FRANCIONI, John Baptiste, Jr., Prof. and Hd., Dept. of Animal Indus., La. State Univ., Baton Rouge, La. **ANIMAL INDUSTRY.**

FRANCIS, Alfred West, Rsch., Assoc., Socony-Vacuum Oil Co., Inc., Paulsboro, N. J. **CHEMISTRY.** b. Brookfield, Conn., Mar. 11, 1896.



s. Cyrus W. and Ida Francis (Terry) F. Edn.: B.S., Worcester Poly. Inst., 1917; Chem. E., *ibid.*, 1929; Ph.D., Yale, 1924. m. Dorothy Hardy, June 26, 1918. c.: Edward H. (dec.); Mary Hillenbrand; Diantha Pare and Nancy Jones. Exp.: Asst. Biochem., U. S. Dept. of Agri., Washington, D. C., 1917-18; Rsch. Chem., E. I. du Pont de Nemours and Co., 1918-22; Rsch. Chem., Arthur D. Little, Inc., Cambridge, Mass., 1925-31; Rsch. Assoc. Socony-Vacuum Oil Co., Paulsboro, N. J., 1931—. Mem.: Phi Sigma Kappa; Alpha Chi Sigma; Tau Beta Pi; Sigma Xi; Amer. Chem. Soc. Contrb. to: Jour. Amer. Chem. Soc.; Ind. Engrng. Chem.; Analytical Chem.; Chem. Rev.; Jour. Amer. Pharm. Assn.; Jour. Phys. Chem.; Sci.; Oil and Gas Jour.; Chem. Indus.; Natl. Pet. News. Special Int.: Solvent Extraction; Ternary Phase Diagrams; Aliphatic and Aromatic Alkylation; Critical Solution Temperatures; Correlation of Phys. Properties of Hydrocarbons; Thermodynamics of Hydrocarbons; Olefin Complexes; Structural Colors in Emulsions.

FRANCIS, Thomas, Jr., Henry Sewall Univ. Prof. of Epidemiology and Chmn., Dept. of Epidemiology, Schl. of Pub. Health, Univ. of Mich.; Prof. of Epidemiology, Dept. of Pediatrics and Communicable Diseases, Univ. of Mich., Med. Schl., Schl. of Pub. Health, Ann Arbor, Mich. **VIROLOGY.** b. Gas City, Ind., July 15, 1900. s. Thomas Francis

and Elizabeth Ann (Cadogan) F. Edn.: B.S., Allegheny Coll., 1921; M.D., Yale Med., 1925. Hon. Deg.: D.Sc., 1941, Allegheny Coll.; M.S., 1941, Yale Med. Schl. m. Dorothy Packard Otton of Can., June 29, 1933. c.: Mary Jane; Thomas Francis, III. Exp.: Interne in Med., New Haven Hosp., 1925-26; Res. Phys. in Med., New Haven Hosp., 1926-27; Instr. in Med., Yale Med. Schl., 1927-28; Asst. in Med. and Asst. Res. Phys., Hosp. of Rockefeller Inst., 1928-30; Chf. Res. Phys., *ibid.*, 1930-33; Assoc. in Med., *ibid.*, 1931-36; Mem. of Staff of Internat. Health Div., Rockefeller Found. (in Chg. of Influenza Rsch.), 1936-38; Prof. of Bact. and Dir. of Bacteriol. Lab., N. Y. Univ., Coll. of Med., 1938-41; Asst. Visiting Phys., Willard Parker Hosp., N. Y. City, 1938-39; Assoc. Visiting Phys., *ibid.*, 1939-40; Visiting Phys., *ibid.*, 1940-41; Visiting Phys., Bellevue Hosp., Third Med. Div., 1938-41; Prof. of Epidemiology, Schl. of Pub. Health, and Chmn. of Dept., Univ. of Mich., 1941. Hon. Pos.: Commn. on Influenza, Army Epidemiol. Bd., 1941—; Dir., Overseas Missions to Natousa, Etoussa, Antilles and Pacific Area during War; Lectr., Tropical and Military Med., Army Med. Schl., Wash., D. C., during War; Awarded Medal of Freedom, U. S. Army, 1946; Mem. of the Com. on Growth of the Natl. Rsch. Council and also a mem. of its Virus Panel; Mem. of Virus and Rickettsial Study Section for the Div. of Rsch. Grants for the Natl. Inst. of Health, 1948-52; Lasker Award Apha, 1947; Howard Taylor Ricketts Award, Univ. of Chicago, 1952; Bruce Medal, Amer. Coll. Phys., 1953; Chmn., Com. on Rsch. and Standards and as mem. of the Governing Council of the Amer. Public Health Assn., 1946-50; etc. Mem.: Harvey Soc.; Soc. Amer. Bacteriologists, Pres., 1947; Amer. Soc. Clinical Investigation, Pres., 1946; Fellow, A.A.A.S.; Soc. Exptl. Biol. and Med.; A.M.A.; A.A.A.S.; Amer. Assn. Immunologists; Fellow, Amer. Public Health Assn.; Amer. Epidemiol. Soc.; Amer. Soc. Exptl. Pathol.; Assn. Amer. Physicians; Assn. Schl. of Public Health; Constantinian Soc.; Central Soc. for Clinical Rsch.; Hist. of Sci. Soc.; Natl. Acad. Sci.; N. Y. Acad. Med.; N. Y. Acad. Sci.; Sigma Xi; Alpha Omega Alpha; Phi Kappa Phi; Delta Omega. Special Int.: Virus Diseases, especially Pneumonia, Influenza and Poliomyelitis.

FRANCKE, Don Eugene, Chf. Pharmacist, Univ. of Mich. Hosp., Ann Arbor, Mich. **PHARMACY.**



b. Athens, Pa., Aug. 28, 1910. s. Edward O. and Margaret C. (Kinney) F. Edn.: B.S., Univ. of Mich. Coll. of Pharm., 1936; M.S., Univ. of Mich. Grad. Schl., 1948. Hon. Deg.: D.Sc., Purdue Univ., 1951. m. Maxine Hafey, Aug. 18, 1937. c.: Markay; Stephanie; David; Michele; Jon. Exp.: Chf. Pharmacist, Univ. of Mich. Hosp., Ann Arbor, Mich., 1944—; Asst. Prof. of Pharm., Univ. of Mich. Coll. of Pharm., Ann Arbor, Mich., 1951—; Lectr. in Hosp. Pharm., *ibid.*, 1948-51; Dir., Div. of Hosp. Pharm., Amer. Pharmaceutical Assn., Wash., D. C., 1950—; Editor, The Bull. of the Amer. Soc. Hosp. Pharmacists, 1944—; Editor, Formulary of Univ. of Mich. Hosp., Ann Arbor, Mich.; Assoc. Editor, Univ. of Mich. Med. Bull. Hon. Pos.: Pres., Amer. Pharmaceutical Assn., 1951-52; Pres., Amer. Soc. Hosp. Pharmacists, 1943-46; Lt. Cmdr., Res. Corp. U. S. P. H. S.; Consultant to Surgeon-Gen. of Army, 1947—; Consultant to Veterans Admin., 1951—; Delegate of Amer. Pharmaceutical Assn. to Internat. Pharmaceutical Federation, Rome, 1951 and Paris, 1953. Mem.: Amer. Soc. Hosp. Pharmacists; Amer. Coll. Apothecaries, Fellow; A.A.A.S., Fellow; Amer. Hosp. Assn.; Amer. Chem. Soc.; Amer. Inst. History of Pharm.; Rho Chi. Contrb. to: Jour. Amer. Pharm. Assn.; Amer. Professional Pharmacist; etc. Gen. Int.: Awarded H. A. K. Whitney Lecture Award, 1953; The J. Leon Lascoff Award, 1948; The J. Leon Lascoff Foundation Memorial Award, 1947.

FRANCK, James, Prof. of Physical Chem. Emer., Mem., Inst. of Radiobiol. and Biophysics, Univ. of Chicago, Chicago 37, Ill. **PHOTOSYNTHESIS; MOLECULAR AND ATOMIC PHYSICS; GENERAL PHYSICS.** b. Hamburg, Germany, Aug. 26, 1882. s. Jacob and Rebecca (Drucker) F. Edn.: Univ. of Heidelberg, 1901-02; Ph.D., Univ. of Berlin, 1906. Hon. Deg.: Nobel Prize Winner, Physics, 1925; LL.D., Univ. of Calif., 1928; Awarded Planck Medal, 1951. m. Ingrid Josefson, Dec. 23, 1907 (died 1942). 2nd m. Hertha Sporer, June 29, 1946. c.: Dagmar; Lise. Exp.: Privatdocent, Univ. of Berlin, 1911-16; Assoc. Prof. of Physics, *ibid.*, 1916-18; Chmn., Dept. of Physics, Kaiser Wilhelm Inst., Berlin-Dahlem, 1918-20; Prof. and Dir. II. Physical Inst., Univ. of Göttingen, Germany, 1920-33; Fall-Winter, 1933, Speyer Professorship, Johns Hopkins, Baltimore, Md.; Guest Prof., Univ. of Copenhagen, Denmark, 1934-35; Prof. of Physics, Johns Hopkins Univ., Baltimore, Md., 1935-38; Prof., Physical Chem., Univ. of Chicago, 1938-47; Hitchcock Prof., Univ. of Calif., Berkeley, Calif., Mar., 1941; Dir., Div. of Chem., Metallurgical Lab., Univ. of Chicago, 1942-43; Assoc. Dir., *ibid.*, 1943-45; Guest Prof., Iowa State Coll., Ames, Iowa, 1946; Prof. Emeritus, Dept. of Chem., Univ. of Chicago, 1947—; Mem., Inst. of Radiobiol. and Biophysics, Univ. of Chicago, 1949—. Mem.: Natl. Acad. Sci.; Amer. Philos. Soc.; Acad. Arts and Sci. in Boston; Wash. Acad. Sci.; Amer. Physical Soc.; Amer. Chem. Soc.; Botanical Soc. Amer.; A.A.A.S.; Sigma Xi; etc. Author: *Anregung von Quantensprünge*, 1926. Contbr. to: *Archives of Biochem. and Biophysics*; *Rev. of Modern Physics*; *Annalen der Physik*; *Science*; etc. Special Int.: Photosynthesis.

FRANDSEN, Julius Herman, Prof. and Hd., Dept. of Dairy Husbandry, Mass. State Coll., Amherst, Mass. **DAIRY INDUSTRY.**

FRANDSEN, Peter, Emeritus Prof. of Biology, Route 1, Box 148, Oroville, Calif. **ZOOLOGY.** b. September 27, 1876, Vilslev, Denmark. s. Samuel J. and Lena Marie (Buck) F. Edn.: A.B., Univ. of Nevada, 1895; A.B., Harvard Univ., 1898; A.M., *ibid.*, 1899; Honorary LL.D., Univ. of Nevada, 1924. m. first, Alice Moreland, June 10, 1902 (died March 7, 1907). m. 2nd, Jane E. Higham of Rome, New York, January 1, 1913. c.: Edith Moreland (by first Marriage); John Frandsen. Exp.: Tchng. Fellow, Asst. in Zool., Harvard Univ., 1899-1900; Asst. Prof. Zool., Univ. of Nev., 1900-02; Assoc. Prof., 1902-03; Prof., *ibid.*, 1903-06; Prof. Biol. and Hd. Dept., 1906-41; Emer. Prof., 1942—; Consulting Biol., Agri. Exp. Sta., Univ. of Nev., 1900-20; Dir., Union Fed. Savings and Loan Assn., Berkeley; Olive Assn. and Wyandotte Olive Growers Assn.; Fellow, A.A.A.S.; Western Soc. of Naturalists; Nev. Acad. of Sci.; Calif. Acad. of Sci.; Phi Kappa Phi; Rotary. Author: *Topical Outlines for Hygiene*; *Lab. Guides for Zool., Physiol. War Record*; Instr., S.A.T.C., 1918; *Ration Bd.*, 1942-45. Travel: Europe. Hobbies: Mountaineering; Fishing; Hunting; Tennis. Listed in: *Who's Who in Amer.*; A.M.S.; *Naturalists Dir.*; *Scandinavian Amer.* Special Int.: Animal Behavior.

FRANK, Bernard, Asst. Chf., Div. of Forest Influences, Forest Service, U. S. Dept. of Agri., Washington 25, D. C. **WATERSHED RESEARCH.** b. N. Y., N. Y., Mar. 7, 1902. s. Isaac and Rachel (Rabinowitz) F. Edn.: B.S., Cornell Univ., 1925; M.F., *ibid.*, 1929. m. Miriam Schlum, 1928. c.: Robert Irving. Exp.: Forest Ranger, Wayagamack Pulp and Paper Co., Quebec, Can., 1925-26; Instr., Forest Utilization, Cornell Univ., Ithaca, N. Y., 1926-27; Jr. Forester, U. S. Forest Service, Washington, D. C., 1927-29; Forest Econ., *ibid.*, 1929-34; Chf., Forest Investiga-



tions, Tenn. Valley Auth., 1934-36; Asst. Chf. Forester, *ibid.*, 1936-38; Silviculturist, U. S. Forest

Service, Washington, D. C., 1938-41; Prin., Forester, Office of Sec., U. S. Dept. of Agri., Washington, D. C., 1941-43; Forest Econ., *ibid.*, 1943-45; Asst. Chf., Div. of Forest Influences, *ibid.*, 1945—. Mem.: Amer. Geophys. Union; Soc. Amer. Forestry; Soil Cons. Soc. of Amer.; Fellow, A.A.A.S.; Gen. Semantics Club. Co-author: *Water, Land and People*, 1950. Contbr. to: *Jour. of Forestry*; *Scientific Monthly*; *Yale Rev.*; *Jour. of Soil and Water Conservation*; *Jour. of Land Econ.*; *Unasylyva*; *New Republic*; *Yearbook of Agri. Special Int.*: *Tech. Soc. and Econ. Aspects of Land and Water Conservation*; *Watershed Mgmt. Fundamentals*.

FRANK, Joseph Otto, Hd., Dept. of Chem., State Tchrs. Coll., Oshkosh, Wis. **CHEMISTRY.**

FRANK, Lawrence K., Dir., Carolyn Zachry Inst. Human Development, 17 E. 96th St., N. Y., N. Y. **PSYCHOLOGY.**

FRANK, Orlin Denton, Instr. Emer. in Sci., Univ. of Chicago, Chicago, Ill.; 1627 S. Pontus Ave., Los Angeles, Calif. **BOTANY, EDUCATION.**

FRANKE, Norman W., Group Leader, Gulf Rsch. and Development Co., 214 Orin St., Pittsburgh 35, Pa. **CHEMICAL ENGINEERING.** b. Pittsburgh, Pa., Aug. 21, 1912. s. William C. and Julia (Roehm) F. Edn.: B.S., Carnegie Inst. of Tech., 1933; M.S., *ibid.*, 1937. m. Ruth Wessel, Aug. 16, 1936. c.: Norman W. Jr.; Marilyn R. Exp.: Staff, Coal Rsch. Labs., Carnegie Inst. of Tech., 1933-36; 1943-48; Rsch. Chem. Engrn., Gulf Rsch. and Development Co., Pittsburgh, Pa., 1936-43, 1948—. Mem.: Amer. Inst. of Chem. Engrs.; Amer. Chem. Soc.; Pittsburgh Chem. Club; A.A.A.S.; Sigma Xi. Contbr. to: *Indus. and Engrng. Chem.*; *Chem. Engrng. Prog.*; *Chem. Indus. Special Int.*: *Rsch. and Development in Fields of Petrochem.*, *Controlled Oxidation of Hydrocarbons and Coal*; *Solvent Extraction of Coal*; *Liquid Extraction*; *Isomerization and Alkylation of Hydrocarbons*; *Petroleum Processing*.

FRANKEL, Edward T., Budget Analyst, Federation Social Agencies, 519 Smithfield St., Pittsburgh, Pa. **MATHEMATICS.**

FRANKFURTER, Felix, Justice, U. S. Supreme Court, Washington, D. C.

FRANKLIN, Henry James, Chf. Cranberry Station, Mass. Agri. Expt. Station, East Wareham, Mass. **ENTOMOLOGY.**

FRANKLIN, Philip, Prof. of Math., Mass. Inst. of Tech., Cambridge, Mass. **ANALYTICAL MATHEMATICS.**

FRANKLIN, W. B., Humble Oil Co., Baytown, Tex. **PETROLEUM REFINING.**

FRANZEN, Carl Gustave Frederick, Prof. of Secondary Edn., Ind. Univ., Bloomington, Ind. **EDUCATION.**

FRASER, Samuel, Secy., Internatl. Apple Assn., 154 East Ave., Rochester, N. Y. **AGRICULTURE, RURAL ECONOMY.**

FRAZER, John, Asst. Secy., Franklin Inst., 8015 Navajo St., Philadelphia, Pa. **CHEMISTRY.**

FRAZIER, C. E., Frazier-Simplex, Inc., 436 E. Beau St., Washington, Pa. **CERAMICS.**

FRAZIER, Chester North, Prof. of Dermatology and Syphilology, Univ. of Tex. Schl. of Med., Galveston, Tex. **DERMATOLOGY.**

FRAZIER, J. Earl, Frazier-Simplex, Inc., 436 E. Beau St., Washington, Pa. **CERAMICS.**

FRAZIER, John Carroll, Assoc. Prof. of Botany, Kans. State Coll., Manhattan, Kans. **PLANT PHYSIOLOGY.**

FRAZIER, Walter H., Chf. Pharmacist, Springfield City Hosp., Springfield, Ohio. **PHARMACY.**

FRAZIER, Robert E., Free Lance Writer, 5400 Fieldston Road, Riverdale 71, N. Y., Instr. in Sci. Fiction Writing, The City Coll., N. Y. C.



SCIENCE LITERATURE, b. N. Y., N. Y., Apr. 15, 1915. s. Louis and Rebecca (Epstein) F. Edn.: A.B., Brooklyn Coll., 1939. m. Frances Freed, April 15, 1952. Exp.: Physicist, Bur. of Ordnance, U. S. Navy Dept., Wash., D. C., 1941; Degaussing Engr., Ala. Drydock and Shipbldg. Co., Mobile, Ala., 1942; Elec. Engr., Gulf Shipbldg. Corp., Chickasaw, Ala., 1942; Elec. Engr., U. S. Maritime Comm., New Orleans, La., 1942; Universal Pictures, Universal City, Calif., 1943; Editorial Assoc., Popular Sci. Monthly, N. Y. City, 1943; Asst. Editor, Electronics, Pub. by McGraw-Hill Pub. Co., N. Y. C., 1943-44; Radio and Elec. Editor, Air Tech., Pub. by Philip Andrews Pub. Co., N. Y. C., 1944; Radio Talks, WQXR and CBS, 1944; Founder, Editor and Publisher, Sportswear Mag., Pub. by Fashion Pub., Inc., N. Y. C., 1944-45; Sci. Consultant, Parade Mag., N. Y. C., 1947-48; Advt. Mgr., Marlene Blouse Corp., N. Y. C., 1948-51; Author and Editor, 1951-53; New Products Editor, Aviation Age Magazine, 1953; Instr. in Sci. Fiction Writing, The City Coll., Schl. of Gen. Studies, 1953—. Mem.: Amer. Chem. Soc.; Amer. Rocket Soc.; Aux. Council to Assn. for Adv. of Psychonalysis; Amer. Geriatrics Soc.; Gerontol. Soc., Inc.; Fellow, A.A.A.S.; Mem. Bd. of Dirs., The Natl. Foundation for Anti-Aging Rsch., Inc. Listed in: Who's Who in the East; Who's Who in Commerce and Industry.

FRAZIER, William Carroll, Prof. and Chmn., Dept. of Agri. Bacteriol., Univ. of Wis., Madison, Wis. BACTERIOLOGY.

FRECHETTE, Howells, 52 Park Ave., Ottawa, Ont., Can. CERAMICS.

FRED, Edwin Broun, Univ. of Wis., Madison 6, Wis.

FREDERICKS, Carlton, Exec. Dir. Nutrition Surveys, Inc., 11 W. 42nd St., Room 1216, N. Y. 36, N. Y. NUTRITION. b. Oct. 23, 1910, U. S. s. David C. and Blanche (Goldsmith) F. Edn.: B.A., Univ. of Ala., 1931; M.A., N. Y. Univ., 1949. m. Betty Schacter of N. Y. City, Oct. 22, 1949. d. Leon and Rose Schacter. c.: April; Dana. Exp.: Pub. Health Educator, Sta. WMCA, WJZ, The Blue Network, WMGM; Lecturer, Nutrition, City Coll. of N. Y.; Ed., The Nutrition News. Mem.: A.A.-A.S.; N. Y. Acad. of Sci.; A.A.A.N.; A.A.D.M.; Phi Beta Kappa; Amer. Chem. Soc.; Int'l. Mark Twain Soc. Author: Lessons in Living, 1942; Living Should Be Fun, 1945; Eat, Live and Be Merry, 1951. Ph.D. Dissertation: A Study of the Responses of a Group of Adult Listeners to a Series of Educational Radio Programs. Travel: U. S. Hobbies; Exptl. Rsch. in Nutrition. Listed in: Who's Who in Amer., Supplement; Biog. Dir. of A.M.S.; Chem. Who's Who. Special Int.: Pub. Health Edn.; Communications.

FREDERICK, Julian Ross, Rsch. Physicist and Lectr. in Physics, Randall Lab. of Physics, Univ. of Mich., Ann Arbor, Mich. ACOUSTICS. b. Sioux Falls, S. Dak., June 10, 1913. s. Wellington G. and Mable (Beebe) F. Edn.: B.S., Iowa State Coll., 1935; M.S., ibid., 1936; Ph.D., Univ. of Mich., 1948. m. Merian Frederick, Feb. 27, 1944. c.: James R.; Richard D.; Constance. Exp.: Rsch. Assoc., Univ. of Mich., Ann Arbor, Mich., 1941-46; Asst. Prof. of Physics, Brown Univ., Providence, R. I., 1947-50; Rsch. Physicist and Lectr. in Physics, Univ. of Mich., Ann Arbor, Mich., 1950—. Mem.: Acoustical Soc.; Sigma Xi. Contrb. to: Phys. Rev.; Jour. Acoustical Soc. Special Int.: Ultrasonics; Sonar; Metallurgy; Solid State Physics.

FREDERICK, Halsey A., Dir., Switching Apparatus Development, Bell Telephone Labs., Inc., 463 West St., N. Y., N. Y. ELECTRICAL ENGINEERING.

FREEBORN, Stanley Barron, Prof. of Entomol., Asst. Dean Coll. of Agri. and Asst. Dir., Agri. Expt. Station, Univ. of Calif., Berkeley, Calif. ENTOMOLOGY.

FREEDMAN, Louis Mark, Consultant, Boston City Hosp. and Beth Israel Hosp., 475 Commonwealth Ave., Boston, Mass. OTOLARYNGOLOGY.

FREELAND, Ralph Orlando, Assoc. Prof. of Botany, Northwestern Univ., Evanston, Ill. PLANT PHYSIOLOGY, GENERAL BOTANY.

FREEMAN, Benjamin, Technical Dir., Advance Chemical Products Co., 2245 E. 19th St., Brooklyn, N. Y. PHYSICAL CHEMISTRY.

FREEMAN, Charles A., Freeman Fire Brick Co., Box 606, Canon City, Colo. CERAMICS.

FREEMAN, Chester Peter, Assoc. Prof. of Biol., Memphis State Coll., Memphis, Tenn. BIOLOGY.

FREEMAN, Edward Monroe, Dean and Prof. Emer., Univ. of Minn., Univ. Farm, 2196 Carter Ave., St. Paul, Minn. PLANT PATHOLOGY.

FREEMAN, Ira M., Assoc. Prof. of Physics, Rutgers Univ., New Brunswick, N. J. THEORETICAL PHYSICS.

FREEMAN, Joe Frank, Assoc. Agronomist, Ky. Expt. Station, 750 Rose St., Lexington, Ky. AGRONOMY.

FREEMAN, Otis W., Hd., Dept. of Physical Sci., Eastern Wash. Coll. of Edn., Cheney, Wash. GEOGRAPHY, GEOLOGY.

FREEMAN, Verne Crawford, Assoc. Dean, Schl. of Agriculture, Purdue Univ., Lafayette, Ind. ANIMAL HUSBANDRY AND AGRICULTURAL ECONOMICS. b. December 25, 1900, Bentonville, Ind. s. Charles Willard and Nettie May Crawford F. Edn.: B.S.A., Purdue Univ., 1923; M.S.A., ibid., 1926. m. Mary Phyllis Dean of Rushville, Ind., June 26, 1926. d. Dr. and Mrs. D. I. Dean. c.: Richard Dean. Exp.: Tchr. of Sci., High Schl., Fairview, Ind., 1923-25; Asst. to Dean, Instr. in Animal Husb., Schl. of Agri., Purdue Univ., 1926-35; Asst. Dean, Schl. of Agri., ibid., 1935-39; Asst. Prof. Animal Husb., ibid., 1938-42; Assoc. Dean, ibid., 1939—. Prof. of Animal Husb., ibid., 1942—. Mem.: A.A.U.P.; Amer. Farm Econ. Assn.; A.S.A.P.; N.E.A.; Alpha Gamma Rho; Alpha Zeta; 32 degree Mason; Kiwanis; Torch. Listed in: A.M.S.; Who's Who in Amer. Special Int.: Agricultural Administration.

FREEMONT-SMITH, Frank, Med. Dir., Josiah Macy Jr. Foundation, 565 Park Ave., N. Y., N. Y. NEUROPSYCHIATRY.

FREER, Ruskin Skidmore, Chmn., Div. of Natural Sci. and Hd., Dept. of Biol., Lynchburg Coll., Lynchburg, Va. PLANT TAXONOMY.

FREHAFAER, Mabel Katherine, Prof. of Physics, Goucher Coll., Baltimore, Md. PHYSICS.

FREIBERG, George William, Co-ordinator, Rsch. and Patent Information, Anheuser-Busch, Inc., 721 Pestalozzi St., St. Louis, Mo. MICROBIOLOGY, PLANT PHYSIOLOGY.

FRENCH, Charles Clement, Dean, Coll. and Hd., Chem. Dept., Randolph-Macon Woman's Coll., Lynchburg, Va. CHEMISTRY.

FRENCH, Charles Stacey, Carnegie Inst., Stanford Univ., Calif. PLANT PHYSIOLOGY.

FRENCH, Dexter, Iowa State Univ., Ames, Iowa. BIOCHEMISTRY AND ENZYMES.

FRENCH, Dudley K., Retired, 503 Hawthorn Lane, Winnetka, Ill. INDUSTRIAL WATER AND POWER PLANT CONSERVATION. b. Chicago, Ill., May 1, 1881. s. Harry Dudley and Ellen Mabel (Kimball) F. m. Helen M. Nind, Oct. 8, 1910. c.: Margaret; Katherine. Exp.: Chemist, Directing Chem. Dir. of Foreign Sales and Chem. Dir., Dearborn Chem. Co., Chicago, Ill., 1907-32; Consulting

Chemist and Engr., 1932-51; Retired, 1951. Mem.: Amer. Chem. Soc.; A.S.T.M.; A.S.M.E.; A.W.-W.A.; Amer. Inst. Chem. Engrs.; Sigma Alpha Epsilon; Rotary. Contrb. to: Chem. Abstracts. Special Int.: Industrial Water; Corrosion Control; Lubrication; Civil Defense.

FRENCH, G. Talbot, Chf., Div. Plant Indus. and Entomologist, Va. Dept. of Agri., 1112 State Office Bldg., Richmond, Va. ENTOMOLOGY.

FRENCH, Helen Somersby, Prof. of Chem., Wellesley Coll., Wellesley, Mass. ORGANIC AND PHYSICAL CHEMISTRY.

FRENCH, Myrtle M., 8301 S. Langley Ave., Chicago 19, Ill. CERAMICS.

FRENCH, Norman Richard, Mem., Technical Staff, Bell Telephone Lab., 463 West St., N. Y., N. Y. SPEECH AND HEARING.

FRENCH, Owen Bart, retired, 3420 36th St., N. W., Washington, D. C. CIVIL ENGINEERING.

FRENKIEL, François N., Hd., Theor. and Appl. Mechanics Group, Applied Phys. Lab., Johns Hopkins Univ., 8621 Ga. Ave., Silver Spring, Md. FLUID DYNAMICS; APPLIED MATHEMATICS. b. Warshaw, Poland, Sept. 19, 1910. s. Icek and Hinda (Eilenberg) F. Edn.: Mech. Engr., Univ. of Ghent, Belgium, 1933; Aero. Engrng., ibid., 1937; Ph.D., Univ. of Lille, France, 1946. Exp.: Tech. Service of Belgian Aeronautics, 1938-39; Received Belgian Scientific Interfaculty Prize Louis Empain, 1939; Staff of the Fluid Mech. Inst. of the Univ. of Lille, France, 1939-43; Aerodynamic Center of the French "Groupement des Recherches Aéronautiques," 1945-47; Rsch. Staff, Grad. Schl. of Aeronautical Engrng., Cornell Univ., Ithaca, N. Y., 1947-47; U. S. Naval Ordnance Lab., White Oak, Md., 1948-50; Visiting Lectr., Inst. for Fluid Dynamics and Applied Math., Univ. of Md., 1950; Physicist, Applied Phys. Lab., Johns Hopkins Univ., Silver Spring, Md., 1950—; Mem.: Amer. Phys. Soc., Secy. Treas., Fluid Dynamics Div., 1953—; Amer. Math. Soc.; Inst. of the Aeronautical Sci.; Royal Aeronautical Soc.; Amer. Geophys. Union. Contrb. to: Proc. Internat. Congress of Applied Mechanics; Proc. Internat. Congress of Mathematicians; Jour. of Meteorology; Phys. Rev.; Proc. Natl. Acad. of Sci. Special Int.: Fluid Dynamics; Applied Math.; Turbulence.

FRETZ, Augustus Henry, Assoc. Prof., Lehigh Univ. and Moravian Coll., Bethlehem, Pa. GEOLOGY.

FREUDENTHAL, Alfred M(artin), Prof. of Civil Engr., Columbia Univ., 716, Engineering, N. Y. 27, N. Y. MECHANICAL PROPERTIES OF MATERIALS. b. Feb. 12, 1906, Stryj, Poland. s. Simon and Gustafa (Mueller) F. Edn.: Civil Engr., Deutsche Technische Hochschule, Prague, Czechoslovakia, 1929; M.A., Charles Univ., Prague, 1930; Sc.D., Technische Hochschule, Prague, 1930, m. Mary Ann Freudenthal, 1939. Exp.: Lectr. to Prof. of Civil Engr., Hebrew Inst. of Tech., Haifa 1937-47; Visiting Prof. Theoretical and Applied Mechanics, Univ. of Ill., 1947-48; Spec. Lect. and Rsch. Consultant of Civil Engr., Columbia Univ., and Lectr. and Rsch. Consultant of Theor. and Appl. Mech., Univ. of Ill., 1948—; Prof. of Civil Engr., Columbia Univ., 1949—. Mem.: A.S.C.E.; A.I.M.E.; A.S.M.E.; Inst. Aeron. Sci.; Soc. Rheol.; A.S.A.; A.A.A.S.; Franklin Inst.; Sigma Xi; Columbia Faculty Club. Author: Verbundstudietzen f. hohe Lasten, Berlin, 1933; Inelastic Behavior of Engr. Materials and Structures, N. Y., 1950. Contrb. to: Sci. Jour. Sc.D. Dissertation: Problem of Local Pressure. Travel: Europe; Middle East. Hobbies: Music; Mountaineering; Riding. Listed in: Who's Who in Amer.; A.M.S. Special Int.: Fatigue of Metals, Theories of Inelasticity.

FREUND, Hugo Abraham, Clinical Prof. of Med., Wayne Univ., Coll. of Med., Detroit, Mich. INTERNAL MEDICINE.

FREUND, Jules, Chief, Div. of Applied Immunol. & Lecturer, Cornell Univ. Med. Schl., Public Health Inst., of the City of New York, Inc., E. 15th St., N. Y. 9, N. Y.

FREURE, Benjamin Townsend, Rsch. Chemist, Carbide and Carbon Chem. Co., 803 Churchill Dr., Charleston 4, W. Va. ORGANIC SYNTHESIS. b. Brooklyn, N. Y., Jan. 22, 1908. s. Richard Ellsworth and Cora (Townsend) F. Edn.: A.B., Cornell Univ., 1930; M.S., ibid., 1931. m. Mabel Craddock, 1936. Exp.: Analyst, Pittsburgh Plate Glass Co., Paint and Varnish Div., N. Newark, N. J., 1931-32; Rsch. Staff, Carbide and Carbon Chem. Co., Charleston, W. Va., 1932—. Mem.: Amer. Chem. Soc. Contrb. to: Indust. and Engrng. Chem.; Jour. Amer. Chem. Soc. Special Int.: Condensations, Dehydrogenations and Oxidations, Detergents and Surface Active Agents, Nitrogenous Compounds.

FREY, Charles N., Dir., Scientific Relations, Fleischmann Lab., Stanford Brands, Inc., 810 Grand Concourse, N. Y., N. Y. CHEMISTRY, MEDICINE.

FREYER, Egbert Barrows, In Chg. Technical Control, Spencer Kellogg and Sons, Inc., 98 Delaware Ave., Buffalo, N. Y. CHEMISTRY b. Marietta, Ga., July 25, 1902.



s. Egbert Barrows and Arnoldina (Reese) F. Edn.: B.S., Univ. of the South, 1924; M.S., La. State Univ., 1926; Ph.D., Johns Hopkins Univ., 1929. Exp.: Chf. Chemist, South Tex. Cotton Oil Co., 1929-36; In Chg. Technical Control, Spencer Kellogg and Sons, Inc. at present. Mem.: A.A.A.S.; Amer. Chem. Soc.; Amer. Inst. Chemists; Amer. Inst. Chem. Engrng.; Amer. Oil Chem. Soc.; Delta Tau Delta; Sopherim. Contrb. to: Jour. Amer. Chem. Soc.; Indus. and Engrng. Chem.; Jour. Physical Chem.; Jour. Amer. Oil Chem. Soc. Gen. Int.: Inventor of Micropenetrator. Special Int.: Chem. and Technology of Vegetable Oils and Oil Seed Meals and the Production Thereof.

FRIANT, Ray Jerome, Extension Agronomist, Agri. Extension Service, W. Va. Univ., Morgantown, W. Va. AGRONOMY.

FRICK, Childs, Hon. Curator Tertiary Mammals, Amer. Museum of Natural History, N. Y., N. Y. TERTIARY MAMMALS.

FRICK, Thomas Adam, Dean, Lincoln Mem. Univ. and Head Dept. of Biology, Harrogate, Tenn. ECOLOGY. b. August 11, 1901, Little Mountain, S. C. s. J. D. and Josephine (Stillwell) F. Edn.: A.B., Newberry Coll., 1923; A.M., Univ. of S. C., 1928; Ph.D., Peabody Coll., 1938. m. Olga Virginia Rodgers of Jackson, Miss., August 1921. d. L. B. Rodgers. c.: Willard Blair. Exp.: Dean, Hiwassee Coll., 1929-34; Prof. Biol., Ala. State Coll., Jacksonville, 1937-38; Pres., Hiwassee Coll., 1938-42; Dean and Hd. Dept. of Biol., Lincoln Mem. Univ., 1942—. Mem.: Ecol. Soc. of Amer.; Amer. Fern Soc.; Appalachian Bot. Club; Tenn. Acad. of Sci.; Pi Kappa Delta; Tau Kappa Alpha. Contrb. to: Jour. Tenn. Acad. of Sci. Ph.D. Dissertation: Slope Vegetation near Nashville, Tenn. Listed in: Who Knows—and What; Who's Who in South and Southwest.

FRICKE, Edwin Francis, Sr. Chemist and Staff Engineer, 4742 Forest Ave., Downers Grove, Ill. MOLACULAR PHYSICS. b. July 25, 1910, Mackay, Idaho. s. William and Blanche (Ewing) F. Edn.: B.S., Physics, Univ. of Idaho, 1935; M.A., Phys., Univ. of Calif., Los Angeles, 1937; Ph.D. Phys., ibid., 1940. m. Harriet Gronbeck of Boston, Mass., Dec. 26, 1942. d. Christian Gronbeck. c.: Kathleen Harriet; Wm. Christian; Robert Fredrick. Exp.: Stone and Webster Engr. Corp., 1940-43. Boston: The Kellogg Corp., Manhattan Project, Engr., N. Y. City, 1943-44; Sylvania Elec. Prod., Sr. Engr., N. Y. City, 1944-45; Republic Aviation Corp., Physicist, Wrote Book on Chem. Kinetics, N. Y. City, 1946-49; Gen. Chem. Co., Phys. Chem., 1945-46; Patent on Prep. Thionyl Chloride, N. Y. City;

Argonne Natl. Lab., Sr. Chem. Staff Engr., Nuclear Phys., Univ. of Chicago, 1949; Prof. of Microwave Engrng., Fournier Inst. of Tech. Mem.: Will Rogers Fellowship, Univ. of Calif.; Sigma Xi; Amer. Phys. Soc.; A.C.S.; A.A.A.S.; Ill. Acad. of Sci.; Acous. Soc. of Amer.; Amer. Museum of Nat. Hist. Geog. Soc.; Phi Delta Chi; St. Andrews Men's Club; Episcopal. Author: Statistical Thermodynamics Applied to Chem. Kinetics, 1947. Contrb. to: Acoustical Soc. Jour. Ph.D. Dissertation: Absorption of Sound in Five Triatomic Gases. Travel: N. Amer. Hobbies: Chess; Swimming; Gardening; Mechanical Toy Construction; Forums. Listed in: A.M.S. Special Int.: Reactor Engrng.

FRICKE, Howard Henry, Sr. Biochem., Dept. of Nutrition, Abbott Lab., North Chicago, Ill. BIOCHEMISTRY—ISOLATION WORK. b. Oct. 3, 1916, Idaho Falls, Idaho. s. Louis J. and Ida E. (Hoffman) F. Edn.: Wash. State Coll., B.S., 1937; M.S. in Pharm., ibid., 1938; Ph.D., Biochem., Univ. of Pittsburgh, 1943. m. Cora E. Cremin of Lake Villa, Ill., Oct. 3, 1947. d. Frank Cremin. c.: Paul Howard; Douglas Henry. Exp.: Tchng. Asst., Wash. State Coll., 1936-38; Received Blumauer-Frank Award and Lehn Fink Award, Grad. Tchng. Asst., Pittsburgh Coll. of Pharm., 1938-42; Registered Pharmacist, Hite's Friendly Drug Store, 1940-43; Sr. Rsch. Chem., Abbott Lab., 1943—; Received Award for Meritorious Rsch., 1950. Mem.: Pres., Rho Chi; Pres., Abbott Golf League; Sigma Xi; Pi Beta Upsilon; Phi Sigma; A.A.A.S.; A.C.S.; Kappa Psi; Round Lake Country Club; Grayslake Meth. Ch. Contrb. to: Jour. B. C.; Jour. A.C.S.; Proc. Soc. Exp. Biol. Med. Ph.D. Dissertation: Preparation and Properties of Some Synthetic Monounsaturated Fatty Acid Glycerides. Hobbies: Golf; Bowling; Fishing; Hunting. Listed in: A.M.S. Special Int.: Vitamin B₁₂ and Antibiotics.



42; Registered Pharmacist, Hite's Friendly Drug Store, 1940-43; Sr. Rsch. Chem., Abbott Lab., 1943—; Received Award for Meritorious Rsch., 1950. Mem.: Pres., Rho Chi; Pres., Abbott Golf League; Sigma Xi; Pi Beta Upsilon; Phi Sigma; A.A.A.S.; A.C.S.; Kappa Psi; Round Lake Country Club; Grayslake Meth. Ch. Contrb. to: Jour. B. C.; Jour. A.C.S.; Proc. Soc. Exp. Biol. Med. Ph.D. Dissertation: Preparation and Properties of Some Synthetic Monounsaturated Fatty Acid Glycerides. Hobbies: Golf; Bowling; Fishing; Hunting. Listed in: A.M.S. Special Int.: Vitamin B₁₂ and Antibiotics.

FRIDLEY, Harry Marion, Prof. of Geol., W. Va. Univ., Morgantown, W. Va. GEOLOGY.

FRIEDEL, Rev. Francis J., Pres., Trinity Coll., Sioux City, Iowa. SOCIOLOGY.

FRIEDEMANN, Theodore Edward, Assoc. Prof. of Physiol. and Dir. Lab. Abbott Fund, Northwestern Univ. Med. Schl., 303 E. Chicago Ave., Chicago, Ill. BACTERIOLOGY, BIOCHEMISTRY.

FRIEDEMANN, William Gustav, Consulting Chemist, 3246 Riviera Dr., Coral Gables, Fla. CHEMISTRY.

FRIEDEN, Alexander, Dir. of Rsch., Pabst Brewing Co., 917 W. Juneau St., Milwaukee, Wis. CHEMISTRY.

FRIEDENWALD, Harry, Prof. Emer. Ophthalmology, Johns Hopkins Univ., Baltimore, Md. OPHTHALMOLOGY.

FRIEDENWALD, Jonas Stein, Assoc. Prof. of Ophthalmology, Johns Hopkins Univ., Baltimore, Md. OPHTHALMOLOGY.

FRIEDGOOD, Harry Bernard, Rsch. Assoc., Univ. of Calif., Asst. Clinical Prof. of Med., Univ. of Southern Calif., 2942 Queensbury Dr., Los Angeles, Calif. ENDOCRINOLOGY.

FRIEDLINE, Cora Louise, Prof. of Psychol., Randolph-Macon Woman's Coll., Lynchburg, Va. PSYCHOLOGY.

FRIEDMAN, Emanuel David, Prof. and Chmn., Dept. of Neurol., N. Y. Univ. Coll. of Med., 1192 Park Ave., N. Y., N. Y. NEUROPSYCHIATRY.

FRIEDMAN, Joseph S., Sr. Chemist, Ansco, Binghamton, N. Y. CHEMISTRY.

FRIEDMAN, Maurice Harold, Instr. in Clinical Med., Georgetown Univ. Med. Schl., Washington, D. C. INTERNAL MEDICINE.

FRIEDMANN, Herbert, Curator, Div. of Birds, U. S. Natl. Museum, Smithsonian Inst., Washington, D. C. ORNITHOLOGY.

FRIEND, Albert W., Dir. of Engrng., Magnetic Metals Co., Hayes Ave. at 21st St., Camden 1, New Jersey. ELECTROMAGNETIC PHENOMENA AND MAGNETIC CIRCUITS. b. Morgantown, W. Va., January 24, 1910. Edn.: B.S., E.E., W. Va. Univ., 1932; M.S., ibid., 1936; S.D., Harvard Univ., 1948. m. Evelyn A. Hall of Morgantown, W. Va., August 6, 1931. c.: Albert Wiley, Jr.; Evelyn Joyce. Exp.: 1932-39, Engrng. Consultant, W. Va. and Ohio; 1933-34, Transmission and Distribution Engr., Ohio Power Co., Steubenville, Ohio; 1934-37, Instr., W. Va. Univ., Morgantown, West Virginia; 1937-44, Assistant Professor, ibid.; 1939-41, Instructor in Physics and Communication Engrng., Harvard Univ.; 1941-44, Staff Mem., Rad. Lab., Radar Schl., Dir., Heat Res. Lab., Mass. Inst. of Tech.; 1944-47, Engr., R.C.A. Victor Div., Radio Corp. of Amer., Camden, N. J.; 1946-48, Rsch. Engr., Electronics Lab., Cruft Lab., Harvard Univ.; 1947-51, Rsch. Staff Mem., R.C.A. Lab. Div., Princeton, N. J.; 1951, Dir. of Engrng., Daystrom, Inc., Elizabeth, N. J.; Dir. of Engrng. and Develop., Magnetic Metals Co., Camden 1, N. J., 1951—. Mem.: A.I.E.E.; I.R.E.; A.A.A.S.; Amer. Meteorol. Society; Acoustical Society of Amer.; Amer. Geophys. Society; Amer. Ord. Assn.; Electrochem. Society; Faraday Society; Registered Professional Engr.; Tau Beta Pi; Sigma Pi Sigma; Sigma Xi. Contrb. to: Approx. 60 Published Tech. Articles. Gen. Int.: 37 U. S. Patents issued and pending and Patents in 23 For. Countries. S.D. Dissertation: Reflections of Vertically Propagated Electromagnetic Waves from the Troposphere. Travel: U. S.; Canada. Hobby: Photography. Listed in: Who's Who in Engrng.; Who Knows— and What; A.M.S.; Supplement to Who's Who in Amer. Special Int.: Color Television, magnetic recording, magnetic materials and their processing, electromagnetic wave propagation, electric power distribution.



FRIEND, Roger Boynton, State Entomologist, Conn. Agri. Expt. Station, 34 Pickwick Rd., Hamden, Conn. ENTOMOLOGY.

FRIEND, William John, Partner, Friend's Shoe Store, 36 E. Main St., Norwalk, Ohio. PHYSICS, CHEMISTRY.

FRIES, Amos Alfred, Major Gen., U. S. Army, retired, 3305 Woodley Rd., N. W., Washington, D. C. CIVIL AND MILITARY ENGINEERING.

FRIES, Erik Fritiof Bjerkander, Asst. Prof., Dept. of Biol., City Coll. of N. Y., Convent Ave. at 139th St., N. Y., N. Y.

FRIESNER, Ray Clarence, Prof. of Botany and Dir. Grad. Instr., Butler Univ., Indianapolis, Ind. TAXONOMY.

FRISCH, Rev. John A., Prof. and Chmn., Dept. of Biol., Canisius Coll., Buffalo, N. Y. PROTOZOAN PHYSIOLOGY.

FRITZ, Clara W., Chf., Div. Timber Pathol., Forest Products Labs. of Can., Ottawa, Ont., Can. TIMBER PATHOLOGY.

FRITZ, E. H., 710 Walnut St., Latrobe, Pa. CERAMICS.

FROBISHER, Martin, Prof. and Hd. Dept. of Bacteriol., Univ. of Ga., Athens, Ga. MICROBIOLOGY.

DIPHTherIOLOGY; YELLOW FEVER; STREPTOCOCCI. b. N. Y. C., Jan. 17, 1896. s. Martin and Charlotte A. (Biggam) F. Edn.: D.Sc., Johns Hopkins Univ., 1925. m. Amy Westervelt Willis, June 3, 1922. Exp.: Scientific Aid, U. S. Dept. of Agri., Washington, D. C., 1921; Asst. Bacteriol., Md. State Health Dept., 1922-24; Chf., Div. of Chem., Baltimore City Health Dept., Baltimore, Md., 1924-25; Assoc. in Bacteriol., Johns Hopkins Univ., Baltimore, Md., 1925-28; Spec. Mem., Internatl. Health Div., Rockefeller Foundation, New York City and Bahia, Brazil, 1928-32; Editor, Amer. Jour. Hyg., 1938-48; Assoc., and Assoc. Prof. of Bacteriol., Johns Hopkins Univ., 1932-48; Consultant to Surg. Gen., U. S. Army, E. T. O., 1946; Assoc. Prof., Emory Univ., Atlanta, Ga., 1949—; Chf., Bacteriol. Sect., U. S. Pub. Health Serv., Coun. Dis. Center, Atlanta, Ga., 1948-52; Spec. Consult., U. S. P. H. S., 1952—; Prof. and Hd. Dept. of Bacteriol., Univ. of Ga., Athens, Ga., 1952—. Mem.: Soc. of Amer. Bacteriol.; Amer. Public Health Assn.; Soc. for Exptl. Biol. and Med.; Sigma Xi; Gamma Alpha; A.A.A.S.; R.E.S.A.; Sigma Phi Epsilon. Author: Fundamentals of Microbiol., (5th ed.), 1953. Microbiol. for Nurses, (8th ed.), 1951. Contrb. to Jour. of Bacteriol.; Amer. Jour. Pub. Health; Jour. Exptl. Med.; Amer. Jour. of Hyg.; Jour. Inf. Diseases; Sci.; Proc. Soc. of Exptl. Biol. and Med.; Basil Medico. Special Int.: Microbiol.-Diphtheriol.; Yellow Fever; Streptococci.

FROCHT, Max Mark, Rsch. Prof. of Mechanics and Dir. Expt. Stress Analysis, Ill. Inst. of Tech., Chicago, Ill. **ENGINEERING MECHANICS, STRENGTH OF MATERIALS.**

FROEBERG, Sven, Hd. Master, Fountain Valley Schl., Colorado Springs, Colo. **EDUCATION.**

FROEMKE, John A., Prof. of Nat. Sci., Augustana Coll., 1815 S. Prairie, Sioux Falls, S. Dak. **PHYSICAL CHEMISTRY.** b. Marion, N. Dak., Nov. 12, 1893. s. K. Ludwig and Rosa (Schoen) F. Edn.: B.A., Univ. of N. Dak., 1924; M.S., ibid., 1927; Ph.D., ibid., 1931. m. Mary Sidlo, May 25, 1929. c.: Donald; John. Exp.: Prin., Grade Schls., Temvik, N. Dak., 1915-17; ibid., Wales, N. Dak., 1917-18; Prin. of Schls., Perth, N. Dak., 1920-22; Grad. Asst., Univ. of N. Dak., 1923-30; Prof. of Natural Sci., Augustana Coll., Sioux Falls, S. Dak., 1930—. Hon. Pos.: Pres., S. Dak. Acad. Sci.; Chmn., Sioux Valley Section, Amer. Chem. Soc. Mem.: Amer. Chem. Soc.; A.A.A.S.; Sigma Xi; A.A.U.P.; S. Dak. Acad. of Sci. Contrb. to: S. Dak. Acad. of Sci. Proc.; etc. Special Int.: Condensation of Gases of Mixed Liquid in Air; Variation of Viscosity of Chemically Reacting Associated Liquids; Investigations of Effects of pH on Gen. Qualitative Analysis.

FROESCHELS, Emil, **SPEECH AND HEARING.**

FROHRING, William Otto, Rsch. Assoc. in Pediatrics, Western Reserve Univ. Schl. of Med., Cleveland, Ohio; Box 232, Chagrin Falls, Ohio. **BACTERIOLOGY.**

FROSCH, Herman L., Physician, Private Practice, 1882 Grand Concourse, N. Y., N. Y. **MEDICINE.**

FROST, Douglas Van Anden, Hd., Nutritional Rsch. Abbott Lab., N. Chicago, Ill. **BIOCHEMISTRY, NUTRITION.** b. Pittsburgh, Pa., Oct. 31, 1910. s. Donald Karne and Amy Lella (Craig) F. Edn.: B.A., Univ. of Ill., 1933; M.A., Univ. of Wis., 1938; Ph.D., Univ. of Wis., 1940. m. Muriel N., Aug. 10, 1940. c.: Nancy, Melodie, Roy, Constance. Exp.: Analytical Chemist, Pacini Labs., Chicago, Ill., 1934-35; Chief Chem., Rival Packing Co., Chicago, Ill., 1935-36; Rsch. Asst. in Biochem., Univ. of Wis., Madison, Wis., 1936-38; Instr., ibid., 1938-40; Rsch. Chem., Abbott Labs., N. Chicago, Ill., 1940-46; Head, Nutritional Rsch., ibid., 1946—. Mem.: Amer. Inst. Nutrition; Amer. Soc. Biochem.; A.C.S.; Soc. Exp. Biol. Med.; Poultry Sci. Assn.; Assn. Vit. Chem.; Animal Nutr. Council. Author: Protein and Amino Acid Requirements of Mammals, 1950. Contrb. to: Jour. Nutrition; Jour. Biol. Chem.; Amer. Jour. Physiol.; Jour. A.C.S.; Ind. Engr. Chem.; Arch. Biochem. and Biophys.; Jour. Appl. Physiol.; Poultry Sci.; Jour. Amer. Pharm. Assn. Special Int.: Intravenous Nutrition of Amino Acids and Fats; Vitamins (Nutrition, Assay, Stability); Protein Evaluation Methods, Trace Elements, Role

of Iron, Copper and Cobalt, Role of Arsonic Acids in Nutrition.

FROST, Florence M., 1376 Shattuck Ave., Berkeley, Calif. **ENTOMOLOGY.**

FROST, Stuart Ward, Prof. of Econ. Entomol., Pa. State Coll., State College, Pa. **ENTOMOLOGY.**

FROTHINGHAM, Earl Hazeltine, retired, 4702 Village Rd., Long Beach, Calif. **FORESTRY.**

FRUTH, Hal F., Consultant Physicist, 5032 W. Morse Ave., Skokie, Ill. **INDUSTRIAL PHYSICS.**

FRUTON, Joseph Stewart, Yale Univ. Schl. of Med., 333 Cedar St., New Haven 11, Conn.

FRY, Arthur James, Asst. Prof. of Chem., Univ. of Ark., Fayetteville, Ark. **ORGANIC CHEMISTRY.** b. Dodson, Mont., March 10, 1921. s. Sidney W. and May L. (Brown) F. Edn.: B.S., Mont. State Coll., 1943; Ph.D., Univ. of Calif., 1951. m. Lois M., Nov. 16, 1947. c.: Gene Richard; Brian Douglas; Marian Gail. Exp.: Assoc. Chemist, Oak Ridge Natl. Lab., Oak Ridge, Tenn., 1946-48; Grad. Fellow, Radiation Lab., Univ. of Calif., Berkeley, Calif., 1948-51; Asst. Prof. of Chem., Univ. of Ark., Fayetteville, Ark., 1951—. Mem.: Amer. Chem. Soc.; Sigma Xi; Alpha Chi Sigma; Phi Kappa Phi; Phi Eta Sigma. Contrb. to: Jour. of the Amer. Chem. Soc.; Jour. of Organic Chem.; Jour. of Physical Chem. Special Int.: Organic Reaction Mechanisms, Isotope Effects on Rate of Chem. Reactions.

FRY, Harry Shipley, Prof. Emer. Chem., Univ. of Cincinnati, 6371 Grand Vista Ave., Cincinnati, Ohio. **CHEMISTRY.**

FRY, Thornton Carl, Dir., Switching Rsch., Bell Telephone Labs., 463 West St., N. Y., N. Y. **MATHEMATICS.**

FRYE, John C., Exec. Dir., and State Geologist, State Geol. Survey of Kans., and Prof., Univ. of Kan., Lawrence, Kan. **GEOLOGICAL SURVEY, PLEISTOCENE STRATIGRAPHY, GEOMORPHOLOGY, AND GROUND WATER GEOLOGY.** b. July 25, 1912, Marietta, Ohio. s. Harley E. and Maud (Chapman) F. Edn.: A.B., Marietta Coll., 1934; Grad. Study, Ohio State Univ., 1934-35; M.S., State Univ. of Ia., 1937; Ph.D., ibid., 1938. m. Ruth Heizer of Columbus, Ohio, Aug. 29, 1936. d. Rev. and Mrs. G. H. Heizer. c.: Sally Jean; John Douglas; Terri Ruth. Exp.: Grad. Asst., Tchng., Ia., 1935-37; Rsch. Asst., Ia., 1937-38; Ia. and Ill. Geol. Surveys, 1937; U. S. Geol. Survey, July, 1938-41; Asst. State Geol. and Asst. Dir., State Geol. Survey of Kan., 1942-45; in Chg., ibid., 1942-45; Exec. Dir., 1945—; Asst. Prof., Univ. of Kan., 1942-45; Assoc. Prof., 1945-52; Prof. Geol., ibid., 1952—; State Geologist, ibid., 1952—. Mem.: Geol. Soc. of Amer.; Amer. Assn. Petr. Geol.; Amer. Geophysical Union; Kan. Geol. Soc.; Kan. Acad. of Sci.; Soc. of Economic Paleontologists and Mineralogy; Sigma Xi; Alpha Sigma Phi; Sigma Gamma Epsilon. Contrb. to: Jour. Geol.; Jour. Geomorphology; Amer. Jour. Sci.; State Geol. Survey of Kan. Ph.D. Dissertation: Additional Studies on the Hist. of Miss. Valley Drainage. Listed in: A.M.S.; A.A.A.S.; Summarized Proceedings.

FRYE, Royal Merrill, Prof. of Physics and Hd. of Physics Dept., Simmons Coll., 11 Whitcomb St., Belmont 79, Mass. **RELATIVITY AND SPECTROSCOPY.** b. Milford, N. H., May 27, 1890. s. Frank B. and Elsie W. (Merrill) F. Edn.: A.B., Boston Univ., 1911; A.M., ibid., 1912; Ph.D., ibid., 1914. m. Louise Alexander of Boston, Mass., June 11, 1915. d. Geo. and Annie K. Alexander. Exp.: Instr. Boston Univ., 1913-15; Instr., M.I.T., 1915-31; Instr. of Physics, Boston Univ., 1932-36; Asst. Prof., 1936-42; Prof., ibid., 1942-50; Chmn., Boston Univ. Grad. Schl., 1942-49; Prof. of Physics and Hd. Physics Dept., Simmons Coll., 1950—. Scientific Consultant, Operation Crossroads, 1946. Hon. Pos.: Pres., Boston Ctr. for Adult Edn. Mem.: Phi Beta Kappa; A.A.A.S.; Amer. Physical Soc.; Amer. Assn. of Phys. Tchrs.; A.A.U.P. Author: Essentials of Applied Physics, 1947, and several other books. Contrb. to: Astrophysical Jour.; Physical Rev. and other tech. journals. Ph.D. Dissertation: A Modification of Minkowski's four-dimen-

sional space-time Continuum Consistent with the Results of Dayton C. Miller's Repetition of the Michelson-Morley Experiment. Travel: Can.; Mex.; Pacific. Listed in: Who's Who in Amer.; Who's Who in the East; Who's Who in N. Eng.; A.M.S.; Who's Who in Methodism. Special Int.: Fire Structure, Infra red, Molecular Spectra.

FRYE, William Emerson, Physicist, 11244 Franklin Ave., Culver City, Calif. **PHYSICS**. b. June 20, 1917, Detroit, Mich. s. Nela and Lillie (Hagman) F. Edn.: A.B., Univ. of Ill., 1937; M.S., *ibid.*, 1938; Ph.D., Univ. of Chicago, 1941. m. Elizabeth Saylor of Chicago, Ill., June, 1942. d. Mr. and Mrs. James Saylor. c.: Ann Hagman; James Saylor. Exp.: Naval Rsch. Lab., Wash., D. C., 1942-46; N. Amer. Aviation, Inc., Los Angeles, 1946-48; Rand Corp., Santa Monica, 1948—, Physicist; Lectr., Engr., Univ. of Calif. at Los Angeles, 1948—. Mem.: Amer. Phys. Soc.; Sigma Xi; Phi Beta Kappa; Gamma Alpha. Ph.D. Dissertation: A Determination of the Atomic Field of Bromine from Electron Scattering. Hobbies: Photography; Radio. Listed in: A.M.S. Special Int.: Navigation and Guidance, Theory of Scattering.

FRYER, Douglas Henry, Assoc. Prof. of Psychol., N. Y. Univ., N. Y., N. Y. **PSYCHOLOGY**.

FRYER, James Robert, Prof. of Genetics and Plant Breeding, Univ. of Alberta, Edmonton, Alta., Can. **GENETICS**.

FRYKLUND, Verne Charles, Pres., Stout Inst., 102 Fourth Ave., W., Menomonie, Wis.

FRYXELL, Fritiof Melvin, Chmn., Natural Sci. Div. and Prof. of Geol., Augustana Coll., Rock Island, Ill. **GEOLOGY**.

FUDGE, Joseph Franklin, Chf., Div. of Chem., Tex. Agri. Expt. Station, College Station, Tex. **SOIL FERTILITY AND CHEMISTRY**.

FUELLEMAN, Robert F., Assoc. Prof. of Agron., Univ. of Ill., Urbana, Ill. **AGRONOMY**.

FUGUITT, Robert Eugene, Supt., Naval Stores Div., The Glidden Co., P. O. Box 389, Jacksonville 1, Fla. **PHYSICAL ORGANIC CHEMISTRY**. b. Boone Grove, Ind., July 17, 1917. s. Greene V. and Surrilda (Holliday) F. Edn.: B.S., Univ. of Fla., 1937; B.A., *ibid.*, 1938; M.S., *ibid.*, 1940; Ph.D., *ibid.*, 1943. m. Gertrude Linton (dec.), Aug. 26, 1939. c.: Hilda Gertrude. Exp.: Rsch. Asst. in Naval Stores, Univ. of Fla., 1939-43; Rsch. Chemist, Distillation Products, Inc., Rochester, N. Y., 1943-47; Asst. Dir. of Rsch., Naval Stores Div., The Glidden Co., Jacksonville, Fla., 1947-49; Supt., *ibid.*, 1949—. Hon. Pos.: Chmn., Fla. Section, Amer. Chem. Soc., 1952-53. Mem.: Amer. Chem. Soc.; Gamma Sigma Epsilon; Sigma Xi. Contrb. to: Jour. Amer. Chem. Soc.; Industrial and Engrng. Chem. Special Int.: Reaction Kinetics; Distillation; High Vacuum Techniques; Terpenes.

FULCHER, Henry Emmett, Prof. and Chmn., Dept. of Physics, Davidson Coll., Davidson, N. C. **PHYSICS**.

FULLER, Charles Edward, Prof. Emer. Theoretical and Applied Mechanics, Mass. Inst. of Tech., Cambridge, Mass., P. O. Box 144, Wellesley, Mass. **MECHANICAL ENGINEERING**.

FULLER, Frederick Driggs, Supvr. Feed Inspectors, Tex. Agri. Expt. Station, Tex. A. and M. Coll., College Station, Tex. **AGRICULTURAL CHEMISTRY**.

FULLER, George Damon, Prof. Emer. Plant Ecology, Univ. of Chicago, Chicago, Ill. **PLANT ECOLOGY**.

FULLER, Harry J., Dept. of Botany, Univ. of Ill., BOTANY.

FULLER, John J., Dean of Coll., Winona State Tchrs. Coll., Winona, Minn. **EDUCATION**.

FULLER, Leonard Franklin, Acting Prof. of Elec. Engrng., Stanford Univ., Stanford, Calif.; 2345 Waverley St., Palo Alto, Calif. **ELECTRICAL ENGINEERING**.

FULLER, Myron Leslie, retired, 4 Rhode Island Ave., Fort Myers, Fla. **GEOLOGY**.

FULLER, Richard Eugene, Rsch. Prof. Geol., Univ. of Wash., 1642 Federal Ave., Seattle, Wash. **PETROLOGY**.

FULLER, Wallace Hamilton, Assoc. Prof., Assoc. Biochemist, Univ. of Ariz., 2304 E. Lind Road, Tucson, Ariz. **BIOCHEMISTRY**.



BIOCHEMISTRY IN THE FIELD OF AGRICULTURE. b. Old Hamilton, Alaska. Apr. 15, 1915. s. Henry Ray and Bessie V. (Gaines) F. Edn.: B.S., Wash. State Coll., 1938; M.S., *ibid.*, 1939; Ph.D., Iowa State Coll., 1942. m. Winifred Dow, Dec. 23, 1939. c.: Pamela Elizabeth. Exp.: Rsch. Asst., Wash. State Coll., 1938-39; Soil Surveyor, U. S. D. A., 1939-40; Rsch. Assoc., Iowa State Coll., 1940-45; Bacteriologist and Soil Scientist, Bureau of Plant Indus., Soils and Agril. Engrng., Beltsville, Md., 1945-48; Assoc. Prof. and Assoc. Biochemist, Agril. Chem. Dept., Univ. of Ariz., Tucson, Ariz., 1948—. Mem.: Sigma Xi; Phi Sigma; Phi Lambda Upsilon; Alpha Zeta; Amer. Soc. Agron.; Soil Sci.; A.A.U.P.; Alpha Gamma Rho. Contrb. to: Jour. Bacteriol.; Botanical Gazette; Soil Sci.; Pros. Soil Sci. Soc. Amer.; etc. Gen. Int.: Fundamental Studies on Cellulose Decomposition. Special Int.: Cellulose Decomposition; Cellulose Decomposing Organisms; Bacteriophage of Rhizobia; Controlled Hemp Retting; Soil Organic Matter; Soil Microbiol. and Chem.; Soil Phosphorus; Soil Fertility; Radioactive Tracer. in Agri.

FULLMER, Edward L., Prof. Emer. Biol., Baldwin-Wallace Coll., Berea, Ohio.

FULMER, Ellis Ingham, Prof. of Chem., Iowa State Coll., Ames, Iowa. **BIOCHEMISTRY**.

FULMER, Hugh Lehman, retired, 62 Oxford St., Guelph, Ont., Can. **ORGANIC AND BIOCHEMISTRY**.

FULTON, Bentley Ball, Prof. of Entomol., N. C. State Coll., Raleigh, N. C. **ENTOMOLOGY**.

FULTON, George Pearman, Jr., Prof. of Biol., Boston Univ., Boston, Mass. **VASCULAR PHYSIOLOGY**.



b. Milton, Mass., June 3, 1914. s. G. Pearman and Lottie (Fulton) F. Edn.: B.S., Boston Univ., 1936; M.A., *ibid.*, 1938; Ph.D., *ibid.*, 1941. m. Miriam Alice Hunt, Aug. 1, 1942. c.: Margaret Linda; Susan Jean and Peter Herrick. Exp.: Instr. in Biol., Boston Univ., Boston, Mass., 1941-42; Aviation Physiologist, U. S. Army Air Forces, 1942-46; Indus. Physiol., Arthur D. Little, Inc., Boston, Mass., 1946-47; Asst. Prof. of Biol., Boston Univ., Boston, Mass., 1947-49;

Assoc. Prof., *ibid.*, 1949-53; Prof., *ibid.*, 1953—. Mem.: A.A.A.S.; Amer. Physiol. Soc.; A.A.U.P.; Soc. for Exptl. Biol. and Med.; Amer. Soc. of Zool.; Phi Beta Kappa; Sigma Xi. Contrb. to: Anat. Record; Proc. Soc. of Exptl. Biol. and Med.; Amer. Jour. Physiol.; Fed. Proc.; Exptl. Med and Surgery. Special Int.: Vascular Physiol.; Biol. Effects of Radiation; Anat. and Function of Blood Capillaries; Cinemotomographic and Micromanipulative Tech.; Intravascular Congulation.

FULTON, Harry Rascoe, Prin. Plant Pathologist, Plant Indus. Station, Beltsville, Md. **PLANT PATHOLOGY**.

FULTON, John Farquhar, Sterling Prof. and Chmn., Dept. of Physiol., Yale Univ. Schl. of Med., New Haven, Conn. **PHYSIOLOGY**.

FUNCHESS, M. J., Dean, Schl. of Agri. and Dir., Ala. Expt. Station, Ala. Poly. Inst., Auburn, Ala. **AGRICULTURE**.

FUNKE, John, Pathologist, Ga. Baptist and Crawford Lang Memorial Hosps., 712 Durant Pl., N. E., Atlanta, Ga. **PATHOLOGY**.

FUNKHOUSER, Howard Gray, Instr. in Math. and Dir., Summer Session, Phillips Exeter Acad., Exeter, N. H. **HISTORY OF MATHEMATICS**.

FUNKHOUSER, William Delbert, Dean, Grad. Schl., Univ. of Ky., Lexington, Ky. **ENTOMOLOGY**.

FUOSS, Raymond Matthew, Sterling Prof. of Chem., Yale Univ., New Haven, Conn. **PHYSICAL CHEMISTRY**. b. Sept. 28, 1905, Bellwood, Pa. s. Jacob Z. and Bertha (Zimmermann) F. Edn.: Sc.B., Harvard Univ., 1925; Ph.D., Brown Univ., 1932. Hon. Deg.: M.A., Yale Univ., 1945. Exp.: Graduation from Harvard, received the Sheldon Fellowship, and spent the following academic year at the Univ. of Munich, worked with Fajans and Lange on Thermochem.; Spent one semester as Austin Techn. Fellow at Harvard, and in the winter of 1927 joined the staff of Skinner, Sherman and Esselen, consulting Chemists in Boston; Rsch. Instr., Brown Univ., 1932, and later, Asst. Prof. of Chem. for Rsch.; Leave of Absence during the academic year 1933-34, as Internatl. Rsch. Fellow with Debye at Leipzig, with Max Wien at Jena, and with Fowler at Cambridge; Joined the Staff of the Rsch. Lab., General Electric Co., Schenectady, 1936; Appointed Sterling Prof. of Chem., Yale Univ., New Haven, Conn., 1945—. Hon. Pos.: Received the Amer. Chem. Soc. Award in Pure Chem. for work on electrolytes, 1935. Mem.: Amer. Chem. Soc.; Sigma Xi; Phi Beta Kappa; Natl. Acad. Sci. Special Int.: Electrolytes; Dielectrics and Polymers.

FURIA, John Joseph, Chf., Professional and Scientific Examining Bureau, Civil Service Commn., 299 Broadway, N. Y., N. Y. **INDUSTRIAL ENGINEERING**.

FURMAN, N. Howell, Princeton Univ., Princeton, N. J. **ANALYTICAL CHEMISTRY**.

FURNAS, Clifford Cook, Dir. and Exec. Vice-Pres., Cornell Aeronautical Lab., Inc., 4455 Genesee St., Buffalo 21, New York. **CHEMICAL ENGINEERING**. b. October 24, 1900, Sheridan, Ind. s. T. Chalmers and Clara E. (Spray) F. Edn.: B.S., Purdue Univ., 1922; Ph.D., Univ. of Mich., 1926; Hon. Dr. Engr., Purdue Univ., 1946. m. Sparkle Moore of Zionsville, Ind., Apr. 12, 1925. d. Mr. and Mrs. Allen Moore. c.: Beatrice Louise. Exp.: Instr. of Math., Shattuck Schl., Faribault, Minn., 1922-24; Phys. Chem., U. S. Bur. of Mines, 1926-31; Assoc. Prof., Yale Univ., New Haven, Conn., 1931-42; Consultant, Bur. of Edn. Rsch., Tehrs. Coll., Columbia Univ., 1937-39; Dir. Rsch., Rsch.

Lab., Curtiss-Wright Corp., Buffalo, N. Y., 1942-46; Dir., Cornell Aeronautical Lab., Inc., 1946—; Mem. Bd. Dirs., Irving Airchute Co., 1951—. Mem.: Fellow, Inst. of Aero. Sci.; Comm. on Aircraft Con., N.A.C. for Aero.; A.C.S.; A.I.Ch.E.; I.A.S.; A.A.A.S.; Theta Chi; Tau Beta Pi; Sigma Xi; Phi Lambda Upsilon; Saturn Club, Buffalo; Buffalo Athletic Club; Chem., N. Y.; Statler Club, Ithaca, Author: America's Tomorrow, 1932; The Next Hundred Years, 1936; Man, Bread and Destiny, 1937; The Storehouse of Civilization, 1939; Ed., Sixth Ed., Rogers Manual Indus. Chem., 1942; Indus. Rsch.—Its Organization and Management, 1948. Contrb. to: Readers Digest; Rev. of Rev.; Sci. Monthly. Ph.D. Dissertation: The Thermo Properties of Ferric Oxide. Travel: Europe; Canada; Central Amer. Hobby: Mt. Climbing. Listed in: Who's Who in Amer.; A.M.S.; Who's Who in Engr.; Who's Who in New Eng. Special Int.: Heat Transfer; Fluid Flow; Distillation and Process Metallurgy.

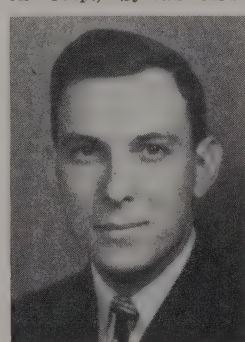
FURR, Joe R., Supt., U. S. Date Garden, Indio, Calif. **SUBTROPICAL FRUIT PRODUCTIONS**.

FURROW, Clarence Lee, Clara A. Abbott Prof. of Biol., Knox Coll., Galesburg, Ill. **BIOLOGY, EMBRYOLOGY**.

FURRY, Wendell Hinkle, Assoc. Prof. of Physics, Harvard Univ., Cambridge, Mass. **THEORETICAL PHYSICS**.

FUSON, Reynold Clayton, 263 Noyes Lab., Univ. of Ill., Urbana, Ill.

FUZEK, John Frank, Rsch. Chemist, N. Amer. Rayon Corp., Sylvan Hill Rd., Elizabethton, Tenn.



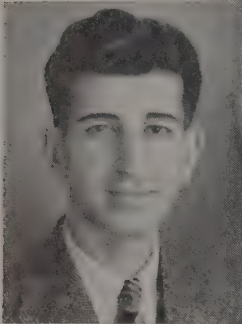
PHYSICAL CHEMISTRY. b. Knoxville, Tenn., Dec. 21, 1921. s. John and Maria (Pucher) F. Edn.: B.S., Univ. of Tenn., 1943; M.S., ibid., 1945; Ph.D., ibid., 1947. m. Bettye Lynn Bean, May 31, 1943. c.: Mary Ann; Margaret Lynn; Martha Elizabeth. Exp.: Chem. Engr. Aide, Tenn. Valley Authority, Knoxville, Tenn., 1940-42; Chemist, Hercules Powder Co., Wilmington, Del., 1943-44; Rsch. Fellow, Univ. of Tenn., Knoxville, Tenn., 1944-47; Post-doctoral Fellow, ibid., 1947-48; Rsch. Chemist, N. Amer. Rayon Corp., Elizabethton, Tenn., 1948—. Mem.: Amer. Chem. Soc.; A.A.A.S.; Amer. Crystallographic Assn.; Sigma Xi; Alpha Chi Sigma; Phi Eta Sigma; Tau Beta Pi; Phi Kappa Phi. Contrb. to: Jour. Amer. Chem. Soc. Award: Sci. Rsch. Award (1949) given by Oak Ridge Institute of Nuclear Studies. Special Int.: Reaction Kinetics; Adsorption; Heterogeneous Reactions; X-ray Diffraction of Fibers; Cellulose Chem.

GABA, Meyer Grupp, Prof. of Math., Univ. of Nebr., Lincoln, Nebr. **MATHEMATICS**.

GABBERT, M. R., Prof. and Hd., Dept. of Philos., Univ. of Pittsburgh, Pittsburgh, Pa. **PHILOSOPHY**.

GABEL, Arthur B., Hd. Dept. and Darby Prof. Operative Dentistry, Univ. of Pa. Dental Schl., Philadelphia, Pa. **DENTISTRY**.

GABRIEL, Arthur E., Rsch. Plastics Chem., 35 W. 33rd St., Chicago 16, Ill. **WOOD PRODUCTS AND PLASTICS CHEMICAL RESEARCH**. b. Union City, N. J. s. E. H. and Louise B. (Seraydarian) G. Edn.: Lafayette Coll., 1936; Stevens Inst., 1940; Wis. Univ., 1942-45. Exp.: U. S. Forest Prod. Laboratory. Affiliated with Univ. of Wis., 1942-48; Pub. Papers on Adhesives for Plywood, Synthetic Resin Coatings, Wood-Waste Boards, and Sawdust-binder Molding Compositions; A. R. M. O. U. Rsch. Foundation of Ill. Inst. of Tech., 1948—.

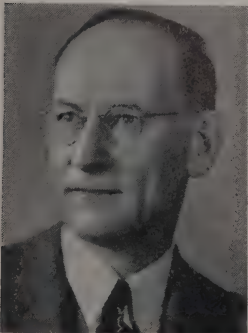


Mem.: A.A.A.S.; A.C.S.; A.S.T.M.; Northeastern Wood Utilization Coun.; Philharmonic Choral Soc. of Madison, Wis.; Geol. Club of Madison, Wis. Contrb. to: Mod. Plastics; Pkg. Parade and Frontier. War Record: Govt. Rsch. Hobbies: Choral Singing; Reading; Hiking; Geol. Listed in: A.M.S.; Who Knows—and What. Special Int.: Resin Adhesives, Molding compounds (esp. from wood waste), emulsion paints, laminated wood and glass.

GABRIEL, Mordecai L., Asst. Prof. of Biol., Brooklyn Coll., Brooklyn 10, N. Y. **COMPARATIVE ANATOMY, EMBRYOLOGY OF VERTEBRATES**. b. N. Y., N. Y., Mar. 18, 1918. s. Joseph and Bertha (Fram) G. Edn.: B.A., Yeshiva, 1938; M.A., Columbia Univ., 1938; Ph.D., ibid., 1944. m. Elinor Rosenstein on Nov. 11, 1945. c.: Alisa Michele. Exp.: Asst. in Zool., Columbia Univ., 1938; John S. Newberry Prize, ibid., 1942; Lectr. in Zool., ibid., 1942; Univ. Fellow, ibid., 1943; Instr. in Genetics, Univ. of Conn., 1943-45; Instr. in Biol., Brooklyn Coll., 1945-50; Asst. Prof., ibid., 1950—. Mem.: A.A.A.S.; Amer. Soc. Zoologists; Sigma Xi; Amer. Assn. Anatomists; N. Y. Acad. of Sci.; Soc. for the Study of Evolution; Soc. of Vert. Paleontol. Contrb. to: Jour. Exp. Zool. Special Int.: Meristic variation; polydactylism.

GADEKAR, Shreekrishna M., 4300 Penhurst Ave., Baltimore, Md. **PHARMACY**.

GAEBLER, Oliver Henry, Hd. Biochem. Dept., Edsel B. Ford Inst. for Med. Rsch., Henry Ford Hosp., Detroit 2, Mich. **BIOCHEMISTRY AND MEDICINE**. b. Nov. 14, 1895, Swiss, Mo. s. Franklin G. and Louisa F. (Grauer) G. Edn.: A.B., Central Wesleyan Coll., 1917; A.M., Anat., Univ. of Mo., 1920; Ph.D., Pathol. Chem., Univ. of Toronto, 1922; M.D., Cornell Univ., 1923; Hon. Highest Standing in Coll. Rollins Scholarship for Highest Standing in First Year of Med., Univ. of Mo. m. Charlotte M. Stroetker of Pierce City, Mo., Sept. 17, 1923. d. John Herman and Amalie Stroetker. c. Ella Louise;



John Franklin. Exp.: Asst. in Anat., Univ. of Mo., 1918-20; Tehng. Fellow, Univ. of Toronto, 1920-22; Asst. in Physiol., Univ. of Rochester, N. Y., 1923-24; Assoc. in Biochem. and Asst. Pathol. Chem.

to Univ. Hosp., State Univ. of Ia., 1924-25; Asst. Prof., Biochem., ibid., 1925-27; Assoc. in Chg. Chem., Henry Ford Hosp., 1928-47; Hd., Dept. Biochem., Edsel B. Ford Inst. for Med. Rsch., 1947—; Prof. Lectr. in Biochem., Wayne Univ., 1934—. Mem.: Pres., Detroit Physiol. Soc., 1942; Amer. Bd. of Clin. Chem., Vice-Pres., 1952; Med. and Sci. Adv. Comm., Detroit Chapt., Arthritis and Rheumatism Found.; A.S.B.C.; Soc. for Exptl. Biol. and Med.; Fellow, A.I.C.; Fellow, A.A.A.S.; The Endocrine Soc.; A.C.S.; A.A.C.C.; Can. Physiol. Soc.; Sigma Xi. Author: Assoc. Ed. in Chg. of Biochem., Cyclopedia of Med., Surgery and Specialties, 1950. Contrb. to: Sci. Jour. Ph.D. Dissertation: Creatine and Creatinine. War Record: M. R. C., 1917-18. Travel: N. Amer. Gen. Int.: Improvement of Standards Required of Clin. Chem., and Participation in Trng. of Biochem. and Others Engaged in Med. Rsch. Hobbies: Tennis; Swimming; Music; Movies. Listed in: Chem. Who's Who. Special Int.: Hormones, Vitamins, energy Metabolism, protein metabolism, blood chem.

GAFAFER, William McKinley, Chf., Statistical Section, Ind. Hygiene Div., U. S. Public Health Service, 5516 Moorland Lane, Bethesda, Md. **BIOSTATISTICS**.

GAGE, Otis Amsden, retired, 115 Steuben St., Painted Post, N. Y. **PHYSICS**.

GAGER, William Atkins, Prof. of Math., Univ. of Fla., Gainesville, Fla. **SANITARY ENGINEERING AND MATHEMATICS**.



b. Dec. 23, 1897, Cold Springs, Pa. s. David Decatur and Mary (Atkins) G. Edn.: B.S., Pa. State Coll., 1919; M.S., ibid., 1923; Alexander Hamilton Inst., Certificate, 1925; Ph.D., Peabody Coll., 1940; Univ. of Fla., Extension Study, 1927-32. m. N. Marie Bemiss of N. E. Pa., Aug. 17, 1921. d. Thomas H. and Melissa C. Bemiss. c.: Wm. Atkins, Jr. Exp.: Chief of Surveying Party, Camp Abraham, Eustis, Va., 1918; Rsch., Sanitary Engr., Instr. in Civil Engrng., Pa. State Coll., 1919-23; Sanitary Engr., Johnstown Water Co., Pa., 1923-26; Tehr., Math. and Sci., St. Petersburg, Sr. H. S., 1926-27; Hd., Dept. of Math., St. Petersburg Jr. Coll., 1927-42; Sanitary Engr., Pa. Health Dept., summers, 1927-29; Instr., Peabody Coll., summers, 1936-39; Consultant in Math., Dir. of Bulletin No. 40, Univ. of Fla., summers, 1940, 42; Act. Assoc. Prof. of Math., ibid., 1942-45; Assoc. Prof. of Math., ibid., 1945-49; Prof. of Math., Univ. of Fla., Gainesville, Fla., 1949—; Dir. of Polk Co. Pub. Schl. Workshop, Bartow, Fla., summer, 1944. Mem.: State Chmn., Alumni Assn., Peabody Coll., Three Yrs.; M.A.A.; Central Assn. of Sci. and Math. Tehrs.; N.C.T.M.; Fla. Acad. of Sci.; Sec., Natl. Comm. for the Preparation of Math. Tehrs.; Chmn., State Comm. on Revision of Secondary Math.; Dir., Revision of Secondary Math. for Fla., 1948-49; Bd. of Dirs., Fla. Coun. Tehrs. of Math., 1950-51; Editor-in-Chief, *Mathematics at Work* (Duke) 1948, 49, 50, 51, 52; Consultant in Math., Duval County Schl., 1949-50; Consultant in Math., Dade County Workshop, 1950; Delegate, Natl. Coun. Tehrs. of Math., 1950-52; Bd. of Dirs., Natl. Coun. Tehrs. of Math., 1951-54; Assoc. Editor, Math. Tehr., 1950, 51, 52; Consultant, U. S. Office of Edn. and A.A.A.S. in "Gifted Child Conference." 1952; Regional Dir., Natl. Coun. Tech. of Math. Affiliated Groups in 12 Southeastern States, 1952-53; Program Chmn. of N.C.T.M. Sect. of N.E.A. at Miami Beach, 1953; A.A.U.P.; Tau Beta Pi; Phi Kappa Phi; Kappa Delta Pi; Phi Delta Kappa; Chi Upsilon; Theta Chi; Mason. Ph.D. Dissertation: Terminal Bus. Math. in the Jr. Coll., 1940; Math. Essentials for the War Effort, 1942. Author: "Computations with Approximate Numbers," 1947; Math. for the Other Eighty-five Per Cent, 1948; Functional Math. in the Sec. Schl., 1949; Aiding the Student in Acquiring Basic Concepts,

1949; Quality Control in Secondary Math., 1950; Functional Math.—Grades Seven through Twelve, 1951; Functional Math., Grade 9, 1953; Functional Math., Grade 10, 1953. War Record: S.A.T.C., 1918. Travel: N. Amer. Gen. Int.: Promotional Edn.; Church Work. Hobbies: Sports; Reading; Church. Special Int.: Curriculum Changes to Improve Secondary Mathematics for Life and for Coll.

GAGGE, A. Pharo, Dir. of Rsch., Aero-Medical Lab., Air Material Command, Wright Field, Dayton, Ohio. BIOPHYSICS, PHYSIOLOGY.

GAGNON, Paul Edouard, Prof. and Dir., Dept. of Chem., Laval Univ., 127 Grand Allee, Quebec City, Que., Can.

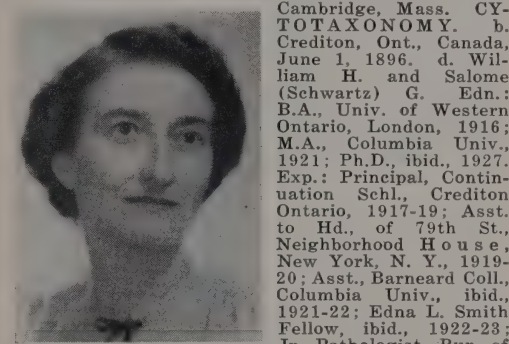
GAINES, J. Gordon, Coastal Plain Expt. Station, Tifton, Ga. BOTANICAL SCIENCES.

GAINES, Newton, Hd., Physics Dept., Tex. Christian Univ., Fort Worth, Tex. PHYSICS.

GAINES, Robert Edwin, Prof. of Math., Univ. of Richmond, Richmond, Va. MATHEMATICS.

GAINES, Walter Lee, Prof. of Milk Production, Univ. of Ill., Urbana, Ill. LACTATION.

GAISER, Lulu Odell, Rsch. Asst. to the Hd. of Gray Herbarium, Biological Lab., Harvard Univ., Cambridge, Mass. CYTOTAXONOMY.



b. Crediton, Ont., Canada, June 1, 1896. d. William H. and Salome (Schwartz) G. Edn.: B.A., Univ. of Western Ontario, London, 1916; M.A., Columbia Univ., 1921; Ph.D., ibid., 1927. Exp.: Principal, Continuation Schl., Crediton Ontario, 1917-19; Asst. to Hd., of 79th St., Neighborhood House, New York, N. Y., 1919-20; Asst., Barnard Coll., Columbia Univ., ibid., 1921-22; Edna L. Smith Fellow, ibid., 1922-23; Jr. Pathologist, Bur. of Plant Industry, Dept. of Agriculture, Wash., D. C., 1924-25; Lectr., Asst. Prof., Assoc. Prof., Prof., McMaster Univ., Hamilton, Ontario, 1925-36; Acting Hd. of Dept. of Biol., ibid., 1937-41; Hd. Dept. of Botany, ibid., 1942-46; Senior Prof., ibid., 1946-49; Research Fellow, Harvard Univ., Cambridge, Mass., 1949-50; Research Assistant to the Head of Gray Herbarium Biological Laboratory, Harvard Univ., Cambridge, Mass., 1950—. Mem.: Amer. Botanical Soc.; Amer. Soc. of Taxonomy. Contrb. to: Genetica; Bibliographic Genetica; Amer. Jour. Botany; Rhodora; Evolution; Lloydia; Amer. Mid Naturalist; Jour. of Agri. Rsch.; Bull. of Torrey Botanical Club; Transactions of the Royal Soc. of Can.

GALAMBOS, Robert, Walter Reed Hosp., Washington, D. C. NEUROPHYSIOLOGY.

GALDSTON, Iago, Exec. Secy., Com. Med. Information, N. Y. Acad. Med., 2 East 103rd St., N. Y., N. Y. MEDICINE.

GALE, Arthur Sullivan, Prof. Emer. of Math., Univ. of Rochester, 93 Bellevue Dr., Rochester, N. Y. GEOMETRY.

GALE, Hoyt Rodney, Visiting Asst. Prof. of Geol. and Paleontol., Univ. of Southern Calif., Los Angeles, Calif., 669 Sturtevant Dr., Sierra Madre, Calif. GEOLOGY.

GALE, William Alexander, Dir. of Rsch. and Development, Amer. Potash and Chemical Corp., Box 84, Trona, Calif. ALKALI INDUSTRY.

GALLAHUE, James Thomas, Assoc. Instr. and Sr. Instr., Synthetic Trainer Div., U. S. Army Air Force, Chanute Field, Ill.; 617 E. Congress St., Rantoul, Ill. PHYSICS, NAVIGATION.

GALL, Lorraine Sibley, Rsch. Microbiol., Natl. Dairy Rsch. Lab., 127 Biltmore Ave., Oakdale, L. I., N. Y. RUMEN BACTERIOLOGIST: RUMINANT NUTRITION.



b. June 16, 1915, Binghamton, New York. d. Otto W. and Vida (Sibley) G. Edn.: B.S., Cornell Univ., 1938; Ph.D., ibid., 1946; Yale Univ., 1946-47. Exp.: Lederle Lab., Pearl River, N. Y., 1938-41; Binghamton City Hosp., Biochem., 1942; Borden Rsch. Lab., Bainbridge, N. Y., 1943; Cornell Univ., Grad. Student, Rsch. on Rumen Bacteriol., 1944-46; Yale Univ., Rsch. on Intestinal Flora of Mice, 1946-47; Ohio Agri. Expt. Sta., 1947-48; Natl. Dairy Research Lab., Oakdale, L. I., N. Y., Rumen Bacteriologist, 1948—. Mem.: Sigma Xi; Phi Kappa Phi; Sigma Delta Epsilon; Soc. of Amer. Bacteriol.; Soc. Animal Production; A.A. A.S.; N. Y. Acad. of Sci. Contrb. to: Sci. Jours. Ph.D. Dissertation: Some Studies on the Rumen Micro-organisms of Cattle and Sheep. Hobbies: Bridge; Amateur Nature Study. Listed in A. M. S. Special Int.: Rumen Bacteriol. and Animal Nutrition; Intestinal Flora of Mice.

GALLIE, John Francis, Geologist, Cabot Carbon Co., P. O. Box 1101, Pampa, Tex. PETROLEUM GEOLOGY.

GALLO, Joaquin, Dir. of Astronomical Observatory, Ave. Observatorio 170, Tacubaya, D. F., Mex. ASTRONOMY.

GALLOWAY, Jesse James, Prof. of Geol. and Paleontol., Ind. Univ., 420 E. Sixth St., Bloomington, Ind. PALEONTOLOGY.

GALT, William Egleston, Scientific Assoc., Lifwynn Foundation, S. Morningside Dr., Westport, Conn. PSYCHOLOGY.

GALTISOFF, Paul Simon, Rsch. Biol., Shellfish Lab., U. S. Fish and Wildlife Service, Woods Hole, Mass. MARINE BIOLOGY, PHYSIOLOGY OF MOLLUSKS AND SPONGES.



b. Simon P. and Sophia (Poletae) G. Edn.: Ph.D., Columbia Univ., 1925. m. Eugenia Trussov, Oct. 23, 1911. Exp.: Fellow, Imperial Moscow Univ. and Instr. in Zool., 1910-13; Dir., Biol. Sta., Kossino, Russia, 1911-14; Sr. Zool., Imperial Russia Acad. of Sci. in Chg. of Sebastapol Marine Biol. Lab., Russia, 1914-17; Biol., U. S. Bur. of Fisheries, Washington, D. C., 1921-23; Chf., Sect. of Shellfishery, ibid., 1923-

29; Rsch. Biol., Fish and Wildlife Service, Woods Hole, Mass., 1949—. Mem.: Amer. Soc. of Zool.; Amer. Naturalists Soc. of Gen. Physiol.; Amer. Soc. of Limnol. and Oceanography; Wash. Acad. of Sci.; Atlantic Estuarine Soc.; Sigma Xi. Author: Limnol. Observations in the Miss. River, 1924; Pearl and Hermes Reef, Hawaii, 1933; Culture Methods for Invertebrates, 1937; Regeneration After Dissociation, 1924; Red Tide, 1948; Pearl Oysters of Panama, 1950; Pearl Fishery of Venezuela, 1950. Contrb. to: Biol. Bull.; Jour. of Exptl. Zool.; Fishery Bull.; U. S. Fish and Wildlife Service; Physiol. Zool.; Bull. Bishop Museum, Honolulu. Special Int.: Physiol. and Biol. of Sponges; Physiol., Biol. and Cultivation of Oyster; Pearl Oysters, Their Biol. and Cultivation; Effect of Indus. Pollution on Aquatic Animals.

GAMBLE, James Lawder, 33 Edge Hill Rd., Brookline, Mass.

GAMBLE, William Gadsten, Jr., Med. Dir., Mercy Hosp., and Pathologist, Bay City, Mich. **CLINICAL**



PATHOLOGY. b. Kings-tree, S. C., Apr. 2 1897. s. William Gadsten and Cornealia Boyd (Gourdin) G. Edn.: M.D., Med. Coll. of the State of S. C., 1924; Military Coll., Charleston, S. C., 1913-15; Charleston Coll., 1918-19; Univ. of Chicago, 1919. m. 1st. Lucy Hammond, 1918 (Dec.). m. 2nd. Frances K. Kingsting, 1950. c.: William Gadsten, III, (Dec.); Theodore Gourdin (Dec.); Hammond Randall and Lucien Cornelius. Exp.: Dir. of Labs., McLeod Hosp., Florence, S. C., 1924-

26; Asst. Dir. of Labs., Roper Hosp., Charleston, S. C., 1926-28; Instr. Pathol., Med. Coll. State of S. C., Charleston, S. C., 1927-28; Assoc. Dir., Ives Labs., St. Louis, Mo., 1928; Instr. in Parasitol., Wash. Univ. Med. Schl., St. Louis, Mo., 1929; Asst. Pathol. and Parasitol., Natl. Pathol. Labs., Wash., D. C., 1929; Pathol., Mercy Hosp., Cadillac, Mich., 1930-40; Pathol., Mercy Hosp., Manistee, Mich., 1932-33; Pathol., Alpena Hosp., Alpena, Mich., 1938-41; Dir., Northeastern Mich. Blood Banks, Bay City, Mich.; Pathol., Mercy Hosp., ibid., Pathol., General Hosp., ibid.; Dir. of Labs., 2010 Fifth Ave., ibid.; Pathol., Marlette Community Hosp., Marlette, Mich.; Pathol. to Omer and Standish Hosp., Omer and Standish, Mich.; Med. Dir. of Hosp. and Pathologist of Mercy Hosp., Bay City, Mich., 1924—. Hon. Pos.: Chmn., Disaster Comm., Bay Co. Chap., Amer. Red Cross, 1940-51; Dir. of Emergency Med. Service for Civil Def., Northeastern Mich., 1944-46; Mem.: Ad. Bd. of Gen. Hosp., Med. Staff, Bay City, Mich.; Pres. Bay Co. Chap., Amer. Cancer Soc.; Bd. of Dir. of Mich. Div. of Amer. Cancer Soc.; Bd. of Dir., Bay Co. Chap., Amer. Soc. for Infantile Paralysis. Mem.: Bay Co. Med. Soc.; Mich. State Med. Soc.; Amer. Med. Assn.; Charter Mem. Mich. State Allergic Soc.; Charter Mem., Mich. Pathol. Soc.; Fellow, Amer. Soc. of Clin. Pathol.; Assoc. Fellow, Amer. Coll. of Phys.; Fellow, Amer. Amer. Geriatrics Soc.; Charter Mem., Amer. Blood Bank Assn.; Rotary; Elks; Mich. Crippled Children's Soc.; Commnr. of Tuberculosis, State of Mich., 1949—. Contrb. to: S. C. Med. Jour.; Amer. Jour. of Tuberculosis; A.M.A.; Jour. of Clin. Pathol. War Record; Mexican Border, 1916-17; Second S. C. Infantry Corps, U. S., Europe and Germany, 1917-18; Chf. Ordnance Sgt., 55th Field Artillery. Special Int.: Blood Chem., Blood Typing and Transfusion.

GAMBRILL, Bessie Lee, Assoc. Prof. of Elem. Edn., Yale Univ., New Haven, Conn. **ELEMENTARY EDUCATION.**

GAMMON, Nathan, Jr., Soil Chemist, Fla. Agri. Expt. Station, Univ. of Fla., Gainesville, Fla. **AGRONOMY.**

GAMRATH, Harry Randolph, Rsch. Chemist, Monsanto Chemical Co., St. Louis, Mo. **CHEMISTRY.**

GAMSON, Bernard W., Dir. of Rsch. and Development, Great Lakes Carbon Corp., 6753 N. Artesian Ave., Chicago, Ill. **CHEMICAL ENGINEERING.** b. Chicago, Ill., Aug. 18, 1917. s. Max and Fannie (Shere) G. Edn.: B.S., Armour Inst. of Tech., 1938; M.S., Univ. of Mich., 1939; Ph.D., Univ. of Wis., 1943. Exp.: Development Engr., Socony-Vacuum Oil Co., Paulsboro, N. J. 1939-41; Group Leader, Great Lakes Carbon Corp., Morton Grove, Ill., 1943-49; Chf., Process Engr., Great Lakes Carbon Corp., Chicago, Ill., 1949-51; Dir. of Rsch. and Development, ibid., 1951—. Mem.: Amer. Inst. of Chem. Engrs.; Amer. Chem. Soc.; Internatl. Acetylene Assn.; Phi Lambda Upsilon; Iota Alpha; Pi Mu Upsilon; Sigma Xi. Contrb. to: Chem. Engrng. Progress; Trans. of Amer. Inst. of Chem. Engrs.; Indus. and Engrng. Chem. Special Int.: Petroleum Refining; Petro and Heavy Chem.; Metallurgy of Iron; Aluminum and Light Metals and Carbon Tech.

GANTT, William Andrew Horsley, Schl. of Med., Johns Hopkins Univ., Baltimore, Md. **MEDICAL SCIENCES.**

GAPOSHKIN, Sergei I., Harvard Coll. Observatory, Cambridge, Mass. **ASTRONOMY.**

GARABEDIAN, Carl Arshag, Prof. of Math., Organist and Choir Dir., Wheaton Coll., Norton, Mass. **MATHEMATICS.**

GARBAT, Abraham Leon, Dir. of Med., Lenox Hill Hosp. and Prof. of Clinical Med., N. Y. Univ., 103 E. 78th St., N. Y., N. Y. **INTERNAL MEDICINE.**

GARBER, Ralph John, Dir., U. S. Regional Pasture Rsch. Lab., 613 W. Park Ave., State College, Pa. **AGRONOMY AND PLANT BREEDING.**

GARBRIELSON, Ira Noel, Pres., Wildlife Management Institute, 709 Wire Bldg., Wash. 5, D. C. **ORNITHOLOGY.** b.



Sioux Rapids, Iowa, Sept. 27, 1889. s. Frank August and Ida (Jansen) G. Edn.: B.A., Morningside Coll., 1912. Hon. Deg.: LL.D., Morningside Coll., 1941; D.Sc., Ore. State Coll., 1936. m. Clara Speer on Aug. 7, 1912. c.: Clara June; Iris Virginia; Dorothy Jean; Grace Gail. Exp.: Tchr. of Biol., Marshalltown, Iowa, H. S., 1912-15; Food Habits Rsch., 1918; Rodent Control in N. Dak., S. Dak., Iowa, Ore., 1918-30; Pacific Coast Regional Supvr., Rodent and Predatory Control, 1930-34; Game Management Dir., ibid., 1934-35; Asst. Div. Chf., Div. of Wildlife Rsch., 1935; Chf. of Biol. Survey, 1935-40; Dir., Fish and Wildlife Service, 1940-46; Pres., Wildlife Management Inst., Washington, D. C., 1946—. Mem.: Amer. Ornithologists Union; Wash. Biologists Field Club; Pacific Northwest Bird and Mammal Club; Cosmos Club. Author: Western Amer. Alpines, 1932; Birds of Ore., co-author, 1940; Wildlife Conservation, 1941; Wildlife Refuges, 1943; Wildlife Management, 1951. Contrb. to: Wilson Bull.; Condor; Canadian Field Naturalist; Jour. of Mammology.

GARDEN, Nelson, Univ. of Calif., Berkeley, Calif. **TECHNIQUES OF RADIOCHEMISTRY.**

GARDINER, Mary Summerfield, Assoc. Prof. of Biol., Bryn Mawr Coll., Old Gulph Rd., Bryn Mawr, Pa. **CYTOLOGY.**

GARDNER, Eldon John, Prof. of Zool., Utah State Agril. Coll., Logan, Utah. **GENETICS, CYTOLOGY AND EVOLUTION.** b. June 5, 1909,



Logan, Utah. s. John W. and Cynthia (Hill) G. Edn.: B.S., Utah State Agril. Coll., 1934; M.S., ibid., 1935; Ph.D., Univ. of Calif., 1939. m. Helen Richard of Salt Lake City, Utah, Aug. 21, 1939. d. Heber Greene and Nora Noall Richards. c.: Patricia; Donald; Betty Ann; Cynthia; Alice. Exp.: Instr. in Biol., Salinas Jr. Coll., 1939-42; Instr. in Biol. and Dean, Lower Div., ibid., 1942-46; Asst. Prof., Biol., Univ. of Utah, 1946-47; Assoc. Prof., Biol., 1947-49; Prof., Zool., Utah Agril. Coll., 1949—. Mem.: Sigma Xi; Phi Kappa Phi; Phi Sigma; Utah Acad. of Sci.; Western Soc. of Naturalists; Genetics Soc. of Amer.; Amer. Soc. of Human Genetics; A.A.A.S.; Utah Edn. Assn.; A.A.U.P. Contrb. to: Sci. Jours. Ph.D. Dissertation: The Influence of the Internal Environment on the Pat-

tern of the Wing in *Drosophila Melanogaster*. Listed in: A.M.S. Special Int.: Genetics; Cytol.

GARDNER, Frank Easter, Prin. Pomologist, Bureau of Plant Indus., U. S. D. A., 415 N. Parramore, Orlando, Fla. **POMOLOGY**.

GARDNER, Irvine Clifton, Chf., Optical Instrument Section, Natl. Bureau of Standards, Washington, D. C.; 12 Shepherd St., Chevy Chase, Md. **OPTICS**.

GARDNER, James Linton, Soil Conservationist, U. S. Dept. of Agri., Soil Conservation Service, Rsch. Div., P. O. Box 35, State Coll., N. Mex. **PLANT ECOLOGY**. b. Rural Henry Co., Ind., Jan. 10, 1901. s. Laurence and Ruby Amanda (Goodwin) G. Edn.: A.B., Colo. Coll., 1927; A.M., Univ. of Colo., 1930; Ph.D., Univ. of Tex., 1935. Exp.: Soil Conservationist, U. S. Dept. of Agri., Soil Conservation Service, Rsch. Div., 1935—. Mem.: A.A.A.S.; Amer. Soc. Plant Physiol.; Amer. Soc. Range Mgt.; Botanical Soc. Amer.; Ecol. Soc. Amer.; Soil Conservation Soc. of Amer.; Sigma Xi; Delta Epsilon; Phi Sigma. Contrb. to: Jour. Amer. Soc. Agron.; Soil Sci. Soc. of Amer. Proc.; Ecology; Ecol. Monographs. Special Int.: Effects of Sediment Laden Waters on Native Grasslands; Physiol. and Ecology of Tillering; Ecology of Desert Grasslands; Effects of Protection from Grazing.

GARDNER, Julio Anna, Geologist, U. S. Natl. Museum, Washington, D. C. **PALEONTOLOGY**.

GARDNER, Max William, Prof. of Plant Pathol., Hilgard Hall, Univ. of Calif., Berkeley, Calif. **PLANT PATHOLOGY**.

GARDNER, Milton Eugene, Asst. Prof. of Physics, Univ. of Calif., Davis, Calif. **PHYSICS**.

GARDNER, Murray Frank, Prof. of Elec. Engrng., Mass. Inst. of Tech., Cambridge, Mass. **ELECTRICAL ENGINEERING**.

GARDNER, Walter Hale, Assoc. Prof. of Soils, Dept. of Agron., State Coll. of Wash., Pullman, Wash. **SOIL PHYSICS**. b. Beaver, Utah, Feb. 24, 1917. s. Willard and Viola (Hale) G. Edn.: B.S., Utah State Agri. Coll., 1939; M.S., *ibid.*, 1947; Ph.D., *ibid.*, 1950. m. Barbara Brown, Aug. 11, 1948. c.: Jeanne; Marolyn. Exp.: Rsch. Fellow, Central Scientific Co., 1939-40; Rsch. Asst., Cornell Univ., 1940-41; Major, U. S. Air Force, 1941-46; Rsch. Fellow, Utah State Agri. Coll., 1946-50; Asst. Prof. of Soils, State Coll. of Wash., 1950-53; Assoc. Prof., *ibid.*, 1953—. Mem.: Sigma Xi; Soils Sci. Soc. of Amer. Contrb. to: Soil Sci.; Proc. Soil Sci. Soc. of Amer. Special Int.: Soil Phys. with emphasis on the Unsaturated Flow of Soil Moisture.

GARDNER, Warren H., **SPEECH AND HEARING**.

GARDNER, Willard, Prof. of Physics, Utah State Agri. Coll., Logan, Utah. **PHYSICS SOIL**.

GARDNER, W(illiam) Howlett, 29 Merriam Ave., Bronxville, New York. **CHEMICAL ENGINEERING**. b. September 25, 1902, N. Y. City. s. Wm. and Julia (Palmer) G. Edn.: Ph.D., Cornell Univ., 1927; M.S., Dartmouth Coll., 1925; B.Chem., Cornell Univ., 1923. m. Katharine van Nest Post of N. Y. C., Nov. 26, 1932. d. Wm. Merritt and Katharine van Nest Post. c.: Merritt Post; Frances Howlett; Priscilla Alden. Exp.: Instr. in Chem., Dartmouth Coll., 1923-26; Chem., Viltreous Enameling Co., Cleveland, Ohio, 1927; Ind. Fellow, 1928-31, Poly.



Brooklyn, N. Y.; Rsch. Asst. Prof. of Chemical Engrng., *ibid.*, 1931-34; Rsch. Prof., Chem. Engrng., *ibid.*, 1934-42; Supvr., Shellac Rsch. Bur.,

ibid., 1931-42; Chief, Specifications Sect. on Chem., Cons. Div., W.P.B., Wash., D. C., 1942; Chief, Chem. Materials Br., *ibid.*, 1943-44; Asst. to Dir., New Products Div., Natl. Aniline Div. of Allied Chem. and Dye Corp., 1944—. Mem.: A.C.S.; Chmn., Paint, Varnish and Plastic Div.; Fellow, A.I.C.; A.I.C.E.; A.S.T.M.; Fellow, A.A.A.S.; Fellow, Royal Sci. Arts; N. Y. Acad. of Sci.; N. H. Acad. of Sci.; A.A.U.P.; Sigma Xi; Phi Lambda Upsilon; Sigma Phi Sigma; Alpha Chi Sigma; Gamma Alpha; Gallows Birds. Author: Maleic Anhydride Derivatives, 1951; Indus. Lacquers in Encyclopaedia Americana, 1940; etc. Many Articles in Sci. Jours. Ph.D. Dissertation: Some Reactions of Azidocarbonylsulfide-Reactions with the Halogens. Gen. Int.: U. S. Patents Obtained; Organized and Directed Grad. Courses in Paint, Varnish, Resin and Plastic Techs. Hobbies: Water Color and Oil Painting; Hort.; Iris Hybridizing. Listed in: Who Knows—and What, Chem. W. W.; Internatl. Who's Who; Who's Who in Engrng.; Who's Who in N. Y.; A.M.S. Special Int.: Nature and Constitution of Shellac, Maleic Anhydride.

GARDNER, William Ullman, Prof. and Chmn., Dept. of Anatomy, Yale Univ. Schl. of Med., 333 Cedar St., New Haven, Conn. **ANATOMY, ENDOCRINOLOGY**.

CARLOUGH, Francis Earl, retired, 672 S. Eighth Ave., Hillsboro, Ore. **MAMMALOLOGY**.

CARLOUGH, Leslie Nathan, Prof. of Biol. and Hd. Dept. of Sci., Univ. of Omaha, Omaha, Nebr. **BIOMETRY**.

GARNER, James Bert, Dir., Rsch. Dept., Pittsburgh-Des Moines Steel Co., 54 Lebanon Hills Dr., Pittsburgh, Pa. **CHEMICAL ENGINEERING**.

GARNER, R. L., Dept. of Biol. Chem., Med. Schl., Univ. of Mich., Ann Arbor, Mich. **CHEMISTRY**.

GARRELS, R. M., Northwestern Univ., Evanston, Ill. **GEOCHEMISTRY**.

GARRETT, Albert Osburn, 791 Ninth Ave., Salt Lake City, Utah. **BOTANY**.

GARRETT, Alfred B., Prof. of Chem., Ohio State Univ., Columbus, Ohio. **CHEMISTRY**.

GARRETT, George A., Schl. of Forestry, Yale Univ., New Haven, Conn. **WOOD TECHNOLOGY AND FORESTRY EDUCATION**.

GARRETT, Henry E., Prof. of Psychol.; Chmn. of Dept., Columbia Univ., N. Y. C. **PSYCHOLOGY**. b. Jan. 27, 1894, Clover, Va. s. John Thomas and Virginia (Heidelberg) G. Edn.: A.B., Richmond Coll., 1915; M.A., Columbia Univ., 1921; Ph.D., *ibid.*, 1923. m. Mildred Graham Burch of Montgomery, Ala., June 5, 1924. d. Wm. and Mildred Burch. Exp.: Asst. Psychol., Columbia, 1923-24; Instr., *ibid.*, 1924-26; Asst. Prof., *ibid.*, 1926-35; Assoc., *ibid.*, 1935-43; Prof., 1943—; Chmn. of Dept., *ibid.*, 1941—. Mem.: Amer. Psychol. Assn.; A.A.A.S.; E.P.A.; Psychometric Soc.; Phi Beta Kappa; Sigma Xi; Columbia Faculty Club. Author: Statistics in Psychol. and Edn., 1926, 1937, 1947; Great Exp. in Psychol., 1930, 1941; Psychol. Tests, Methods, and Results (with M. R. Schneek), 1933; Psychol., 1950. Ed.: Amer. Psychol. Series. Mem.: Pres., Amer. Psychol. Assn., 1946; Assoc. Ed., Jour. Abn. and Soc. Psychol.; Pres., N. Y. Assn. of Applied Psychol., 1940. Ph.D. Dissertation: The Relation of Accuracy to Speed in Judgment. War Record: Master Gunner, C. A. Corps, 1917-19; Expert Consultant, Sec. of War, 1940-45. Travel: Asia; Europe; Africa; Hawaii; Mexico; Canada. Listed in: A.M.S.; Who's Who.

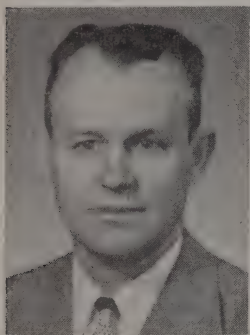
GARRETT, Melvin M., Consulting Geologist, 1423 Republic Bank Bldg., Dallas, Tex. **GEOLOGY, GEOGRAPHY**.

GARRETT, William Trago, Prof. and Chmn., Dept. of Biology, State Thrs. Coll., Maryville, Mo. **ECOLOGY, ZOOLOGY**.

GARRIGUS, Wesley Patterson, Assoc. Dir., Ky. Agril. Expt. Sta., Univ. of Ky., 227 Shady Lane,

Lexington, Ky. **ANIMAL HUSBANDRY.** b. Storrs, Conn., June 16, 1909. s. Harry and Bertha (Patterson) G. Edn.: B.S., Univ. of Conn., 1931; M.S., Univ. Ill., 1933; Ph.D., *ibid.*, 1935. m. Helen Robbins of Urbana, Ill., 1933. d. Mr. and Mrs. E. T. Robbins. c.: Robert Robbins; Elizabeth Ann; James Patterson. Exp.: Asst., Animal Husbandry, Univ. of Ill., 1931-35; Agron., Soil Conserv. Serv., U.S.D.A., 1935-37; Instr., Univ. of Ky., 1937-38; Asst. Prof., *ibid.*, 1938-39; Assoc. Prof., *ibid.*, 1939-41; Prof. and Chmn. of Animal Ind. Group, 1941-51; Assoc. Dir., Ky. Agril. Expt. Sta., 1951—. Hon. Pos.: Chairman Pasture Rsch. Comm., Amer. Soc. Animal Prod.; Chmn., Beef and Sheep Sect. of Feed Survey Comm., Amer. Feed Mfgs. Assn.; Chmn., Forage Utilization Sect., 6th Internat. Grasslands Conf. Mem.: Rotary; Sigma Xi; Amer. Soc. An. Prod.; Alpha Zeta; Phi Kappa Phi; Lambda Gamma Delta; Gamma Sigma Delta; Alpha Gamma Rho; Theta Sigma Chi; Omicron Delta Kappa. Author: Introduction An. Sci., 1951. Contrb. to: Jour. of An. Sci.; Jour. Agri. Rsch. Ph.D. Dissertation: Some Effects of Plant Species and Stage of Maturity on the Forage Consumption of Grazing Steers of Various Weights. Hobbies: Handicraft; Gardening. Listed in: Who's Who in Amer.; A.M.S.

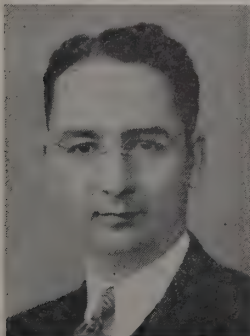
GARRISON, Olen Branford, Prof. of Horticulture and Horticulturist, Clemson Coll., 122 N. Clemson Ave., Clemson, S. C.



VEGETABLE CROPS. b. Columbia, S. C., May 31, 1910. s. Thomas B. and Fairy (Belle) G. Edn.: B.S., Clemson Coll., 1933; M.S., La. State Univ., 1934; Ph.D., Cornell Univ., 1939. m. Dorothy McKissock, Jan. 27, 1939. c.: Doralynn E.; Margaret A.; Jean F. Exp.: Grad. Asst., L. S. U., 1933-34; Tchng. Asst., *ibid.*, 1934-35; Asst. to Dean of Schl. of Agri. and Dir. of S. C. Expt. Sta., Clemson Coll., S. C., 1935-36; Fellowship Student, Cornell Univ.,

1936-39; Asst. Horticulturist, Edisto Expt. Sta., Blackville, S. C., 1939-42; U. S. Army, 1942-45; Assoc. Prof. of Horticulture, Clemson Coll., 1945-49; Prof. of Horticulture and Horticulturist, *ibid.*, 1949—. Hon. Pos.: Exec. Com., Southern Section of Amer. Soc. for Horticultural Sci. Mem.: S. C. Acad. of Sci.; Amer. Soc. for Horticultural Sci.; Alpha Zeta; Blue Key. Contrb. to: Proc. Amer. Soc. for Horticultural Sci.; Proc. Assn. Southern Agril. Workers; etc. War Record: 1st Lieut., 1942; served in African, Sicilian and Italian Campaigns; Released to organized reserves as Major in Dec., 1945. Special Int.: Plant Breeding; Plant Physiol.; Vegetable Corps.

GARRISON, Lester Moffett, Assoc. Prof. of Math., La. Polytechnic Inst., Box 67, Technical Sta., 901



Hergot, Ruston, La. **MATHEMATICS.** b. Mar. 11, 1903, Republican C., Neb. s. Dr. Wm. Henry and Fannie Elgin (Moffett) G. Edn.: B.S., Central Mo. State Coll., 1926; M.A., Mo., 1929; M.Ed., Peabody Coll., 1939. m. Stella Mae Whaley of Ozark, Ala., May 19, 1937. d. Mr. and Mrs. M. L. Whaley. c.: Nancy Elgin. Exp.: Rural Schl. Tchr., Mo., 1922-24; Prin. and Tchr., Renick, Mo., H. S., 1925-27; H. S. Prin. and Tchr., Frankford, Mo., H. S., 1927-30; Hd. of Math. Dept., Hurst-

Bush Community High Schl., 1930-32, Hurst, Ill.; Prin. and Tchr., Sheldon, Mo., H. Schl., 1933-35; Head of Mathematics Department and Registrar, Snead Jr. Coll., Boaz, Ala., 1935-40; Hd. of Math.

Dept. and Act. Dean, 1940-41, *ibid.*; Pres., Ala. Assn. of Coll. Registrars, 1940-41; Secy.-Treas., Math. Dept., Ala. Edn. Assn., 1941-42; Instr., Math., Ala. Poly. Inst., 1941-42; Instr. of Phys., *ibid.*, 1942-43; Pres., Math. Dept., Ala. Edn. Assn., 1942-43; Asst. Prof. of Math., La. Poly. Inst., 1943-44; Assoc. Prof. of Math., *ibid.*, 1944—; Vice-Chmn., La.-Miss. Branch of Natl. Council of Tchrs. of Math., 1950-51; Chmn., La.-Miss. Branch of Natl. Council of Tchrs. of Math., 1951-52; High Priest of Palestine Chapter, Royal Arch Masons, Ruston, La., 1951; Chmn., Faculty Com. on Student Org., La. Poly. Inst., 1949—; Faculty Advisor to Interfraternity Council, 1944—. Mem.: M.A.A.; A.A.U.P.; N.C.T.M.; Pres., N. La. Math. Tchrs. Assn., 1947-48; La. Tchrs. Assn.; Phi Delta Kappa; Mason; Rotary; Men's Garden Club. War Record: Taught Phys., A.S.T.P., Ala. Poly. Inst., Taught Math. in Navy V-12 Program, La. Poly. Inst. Hobbies: Tennis; Gardening. Listed in: Who's Who in South and Southwest.

GARVE, T. Walter, 69 W. Weisheimer Rd., Columbus 14, Ohio. CERAMICS.

GARVIN, Sister Mary Cleophas, Hd., Sci. Dept., Notre Dame Coll., South Euclid, Ohio. MATHEMATICS, ANALYSIS.

GASKILL, Harold Vincent, Dean of Sci. and Dir., Sci. Rsch. Inst., Iowa State Coll., Ames, Iowa. PSYCHOLOGY.

GASSER, H. S., Rockefeller Inst., New York, N. Y. PHYSIOLOGY.

GASSNER, Frank X., Assoc. Pathologist, Colo. A. and M. Coll. Expt. Station, Fort Collins, Colo. ENDOCRINOLOGY.

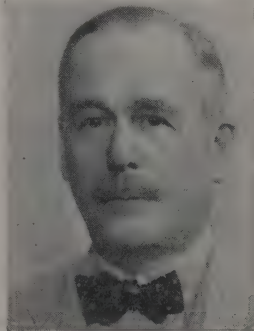
GAST, J. H., Baylor Med. Coll., Houston, Tex. CLINICAL CHEMISTRY.

GAST, Paul Rupert, Harvard Biol. Labs., Cambridge, Mass. BOTANICAL SCIENCES.

GATES, Arthur Irving, Dir., Dept. of Ednl. Rsch. and Hd. Dept. of Ednl. Psychol., Tchrs. Coll., Columbia Univ., N. Y., N. Y. PSYCHOLOGY.

GATES, Frank Caleb, Prof. of Taxonomy and Ecol., Dept. of Botany, Kans. State Coll., Manhattan, Kans. **BOTANY, TAXONOMY AND ECOLOGY.** b. Chicago, Ill., Sept. 12, 1887. s. William S. and Lillian (Pillsbury) G. Edn.: A.B., Univ. of Ill., 1910; Ph.D., Univ. of Mich., 1912. m. Margaret Thompson, June 11, 1915. c.: David Murray and Margaret E. Exp.: Instr. in Botany, Univ. of Philippines, Philippines Islands, 1912-15; Prof. of Biol., Carthage Coll., Ill., 1916-19; Prof. of Botany, Kans. State Coll., Manhattan, Kans., 1919—. Hon. Pos.: Pres., Kans. Acad. of Sci., 1941; Pres., Ecol. Soc. of Amer., 1952. Mem.: Botanical Soc. of Amer.; Ecol. Soc. of Amer.; Soc. of Amer. Taxonomists; A.A.A.S.; State Acad. of Ill.; Gamma Sigma Delta. Author: Field Manual of Plant Ecol., 1949; Flora of Kans., 1940. Contrb. to: Botanical Gazette; Ecol.; Ecol. Monographs, Amer. Jour. of Botany; Philippine Jour. of Sci. War Record: U. S. Army, 1918. Special Int.: Taxonomy and Ecol. of Kans. and Northern Mich.

GATES, Reginald Ruggles, Emeritus Prof. of Botany, Univ. of London, Peabody Museum, Cambridge 38, Mass. **BOTANY; CYTOLOGY; GENETICS; ANTHROPOLOGY AND EVOLUTION.** b. Middleton, N. S., Can., May 1, 1882. s. Andreas B. and Elizabeth (Ruggles) G. Edn.: B.A., Mt. Allison, 1903; M.A., *ibid.*, 1904; B.Sc., McGill, 1906; Ph.D., Chicago Univ., 1908; D.Sc., London. Hon. Deg.: LL.D., Mt. Allison, 1927. Exp.: Demon. in Biol., McGill Univ., Montreal, Que., Can., 1905-06; Asst. in Botany, Univ. of Chicago, 1908-09; Asst. in Algae, Woods Hole, Mass., 1908; Ex-



perimenter, Mo. Bot. Garden, St. Louis, Mo., 1909-

11; Lectr. in Biol., St. Thomas' Hospital, London, England, 1912-14; Reader in Zool., Bedford Coll., London, England, 1913-14; Assoc. Prof. of Zool., Univ. of Calif., Berkeley, Calif., 1915-16; Reader in Botany, King's Coll., Univ. of London, London, England, 1919-21; Prof., *ibid.*, 1921-42; Fellow in Biol., Harvard Univ., Cambridge, Mass., 1946-50; Mem.: Royal Soc. of Arts; Fellow, Royal Soc.; Fellow, Linn. Soc.; Royal Anthropol. Inst.; Royal Microscopic Soc.; Biol. Inst.; Athenaeum; Harvard Club. Author: The Mutation Factor in Evolution, 1915; Mutations and Evolution, 1921; Heredity and Eugenics, 1923; Russian Edition, *ibid.*, 1925; Heredity in Man, 1929; Human Genetics (2 vols.), 1946; Human Ancestry, 1948; Pedigrees of Negro Families, 1949. Contrb. to: Royal Soc. Proc. and Trans.; Ann. Botany; Quarterly Jour. Micro. Sci.; Jour. of Genetics; Jour. Royal Micro. Soc.; Botanical Rev.; Bot. Gazette; Current Sci.; Human Biol.; Amer. Jour. of Botany; Amer. Jour. Phys. Anthropol.; etc. Special Int.: Plant Cytol. and Genetics; Nucleoli; Mutations; Human Genetics; Human Evolution; Phys. Anthropol.; Race Crossing; Blood Groups and Racial Genetics in Cuba.

GAUFIN, Arden R., In Chg. of Stream Sanitation and Sewage Treatment Unit, Environmental Health Center, 1014 Broadway, Cincinnati, Ohio. **LIMNOLOGY; AQUATIC ENTOMOLOGY.** b. Salt Lake City, Utah, Dec. 25, 1911. s. Rupert and Tressa (Stewart) G. Edn.: B.S., Univ. of Utah, 1935; M.S., *ibid.*, 1937; Ph.D., Iowa State Coll., 1951. m. Ruth Lund, Sept. 4, 1936. c.: Richard F.; Marilyn. Exp.: Sci. Tchr., Salt Lake City H. S., 1936-43; Inspector, Salt Lake Mosquito Abatement, 1935-43; Entomologist, Sanitary Corps, U. S. Army, 1943-46; Instr. in Zool., Univ. of Utah, 1946-49; Aquatic Biologist, U. S. Pub. Health Service, 1950—. Mem.: Amer. Fisheries Soc.; Amer. Soc. of Limnology and Oceanography; Amer. Microscopical Soc.; Ecological Soc.; Sigma Xi; Phi Kappa Phi. Contrb. to: Amer. Midland Naturalist; Sewage and Industrial Wastes Jour.; Jour. Amer. Soc. Limnol. and Oceanography; Jour. Amer. Microscopical Soc.; Jour. Ecological Soc.; Jour. Amer. Fisheries Soc. Gen. Int.: Awarded Bronze Star, U. S. Army, 1945. Special Int.: Stream Limnology and Sanitation; Taxonomy of the Plecoptera; Mosquito Control and Taxonomy; Termite Control.

GAULT, Arthur Eugene, Hd., Dept. of Math. and Dean, Bradley Coll., Peoria, Ill. **MATHEMATICS.**

GAUMNITZ, Walter Herbert, Prin. Specialist, Rural Secondary Edn., Office of Edn., 1740 Taylor St., N. W., Washington, D. C. **EDUCATION.**

GAW, Esther Allen, Dean of Women Emer., Ohio State Univ., Columbus, Ohio; 1190 Shattuck Ave., Berkeley, Calif. **PSYCHOLOGY.**

GAY, Leslie N., Asst. Prof. of Med., Johns Hopkins Univ., Baltimore, Md. **INTERNAL MEDICINE.**

GAY, Malcolm Welles, Lab. Technician, Gulf Rsch. and Development Co., 700 Delaware Ave., Oakmont, Pa. **GEOPHYSICS.**

GAYLOR, Walter, Editor, The Technical Survey, Broad St., Newark 2, N. J. **TECHNICAL EDITING.** b. Nov. 23, 1913, Scranton, Pa. s. John and Michaelina (Shemis) G. Edn.: B.S., Pa. State Coll., 1935; M.A., Harvard Univ., 1938. m. Marjory Stephenson of Altoona, Pa., 1938. d. Thomas and Ruth Stephenson. c.: Wayne Thomas; Michael Stephen. Exp.: Chem. in Tech. Lab., Tide-Water Oil Co., Bayonne, N. J., 1935-86; Instr., Act. Headmaster, U. S. Naval Prep. Schl., 1938-41; Maj., U.S.A.F. (Commanding Officer, HDG Det., 22nd Bomb Group), 1941-45; Reserve Officer, Entered Active Duty, 1941; With

22nd Bomb. Group in Australia, New Guinea, Dutch E. Indies; etc.; Instr. in Eng., Wheelock Coll., Boston, Mass., 1945-47; Assoc. Prof. of Eng., Ill. Coll., 1947-50; Asst. Ed., The Tech. Survey, 1950-51; Editor, *ibid.*, 1951—; Assoc. Editor, Pa. Road Builder, 1952—. Mem.: M.L.A. Ph.D. Dissertation: Reading Background of John Donne (in preparation). War Record. (See above). Hobbies: Annapolis Singles and Doubles Tennis Champ, 1939-40; Tri-State 3-Weapon Fencing Champ., 1940. Listed in Who's Who in Ill. Special Int.: The Reading of Major U. S. and Selected Foreign Tech. Jour. and Periodicals, Analyzing Their Contents, Selecting the Outstanding Developments, and Reporting These Concisely and Clearly, Every Week to Executives and Key Tchr. Personnel in Ind., Govt., Libraries, and Ednl. Inst. in the U. S. and Abroad.

GDALMAN, Louis, Asst. Dir., Pharmacy Dept., St. Luke's Hosp., 3rd Apt., 1114 E. 52nd St., Chicago, Ill. **PHARMACY.**

GEALY, Wendell Baum, Geologist, Gulf Oil Corp., Box 1166, Pittsburgh, Pa. **GEOLOGY.**

GEAR, Harry Barnes, retired, Apt. 2, 10018 S. Bell Ave., Chicago, Ill. **ENGINEERING.**

GEARY, James Aloysius, Assoc. Prof. of Celtic Languages and Comparative Linguistics, Catholic Univ. of Amer., Washington, D. C. **ALGONQUIAN LINGUISTICS.**

GEBHARD, Bruno, Cleveland Museum Health and Hygiene, 8911 Euclid Ave., Cleveland, Ohio. **MEDICAL SCIENCES.**

GEDDES, W. F., Chief, Div. of Agril. Biochem., Univ. of Minn., Minneapolis, Minn., **CEREAL CHEMISTRY.**

GEER, Willard, Assoc. Prof. of Phys., Univ. of Southern Calif., 4519 Pepperwood, Long Beach, Calif. **COLOR TELEVISION AND SURVEY PHYSICS.** b. Kellogg, Kans., Nov. 14, 1902. s. Charles Willard and Gertrude Irene (Hawkins) G. Edn.: B.S., Univ. of Washington, 1927; M.S., *ibid.*, 1930; Ph.D., Univ. of Calif., 1939. m. Mary S. Wells, June 17, 1930. c.: Richard Lansing; Charles Willard. Exp.: Elem. Schl. Tchr., Naches, Wash., 1924-25; Prin., *ibid.*, 1925-26; Lab. Inst., Univ. of Wash., Seattle, Wash., 1927-28; 1929-30; Sci. Instr. H. S. Pendleton, Ore., 1928-29; Phys. Instr., Reedley Jr. Coll., Calif., 1930-37; Phys. Instr., Long Beach City Coll., Calif., 1938-43; Asst. Prof., Visiting, Univ. of Southern Calif., 1943-47; Asst. Prof., *ibid.*, 1947-51; Assoc. Prof. of Phys., *ibid.*, 1951—. Hon. Pos.: Pres., Southern Calif. Section, A.A.P.T., 1948-49; Exec. Coun., Amer. Phys. Tchr., 1950; Color T.V. Consultant, Hoffman Radio Corp., 1953—. Mem.: Phi Beta Kappa; Sigma Xi; Sigma Pi Sigma Natl. Assn. for Rsch. in Sci. Tchng.; A.A.P.T. Contrb. to: Amer. Jour. Phys.; Sci. Edn.; Schl. Sci. and Math. Gen. Int.: Inventor of Color Television Receiving Tubes. Special Int.: Color Television; Trng. of Tchr. of Phys.

GEER, William Chauncey, Owner, Wm. C. Geer Lab., 624 Highland Rd., Ithaca, N. Y. **RUBBER RESEARCH.**

GEGENHEIMER, Vida, Prof. of Chem., Russell Sage Coll., 132 Third St., Troy, N. Y. **CHEMISTRY.**

GEHMAN, Harry Merrill, Prof. of Math., Univ. of Buffalo, 163 Winspear Ave., Buffalo, N. Y. **MATHEMATICS.**

GEIGER, Beatrice Jane, Chmn. Dept. of Home Econ., Ind. Univ., Bloomington, Ind. **NUTRITION.** b. Oshkosh, Wis., Feb. 7, 1895. d. John and Lucy (Poorman) G. Edn.: S.B., Univ. of Chicago, 1919; M.S., Columbia Univ., 1926; Ph.D., Univ. of Wis., 1932. Exp.: Instr. and Asst. Prof. of Chem., Colo. A. and M. Coll., 1919-25; Asst. Prof. of Home Econ., Ore. State Coll., 1926-30; Prof. and Hd. of Home Econ., Ia. State Tchr. Coll., 1932-39; Prof. and Hd. of Home Econ., Ind. Univ., 1939—. Mem.: Sigma Xi; Amer. Home Econ. Assn.; Amer. Dietetic Assn.; A.A.U.P.; Gamma Phi Beta. Contrb. to: Jour. of Home Econ. Ph.D. Dissertation: Vitamin



serve Officer, Entered Active Duty, 1941; With

Requirements in Unusual Diets. Travel: Mexico; Canada; Hawaii. Listed in: Who's Who. Special Int.: Nutrition; Vitamins.

GEHMAN, Samuel Dwight, Sec. Hd., Physics Rsch., Goodyear Tire and Rubber Co., Akron 16, Ohio.



PHYSICS. b. Altoona, Pa., Dec. 7, 1903. s. A. E. and Mabel (Difenderfer) G. Edn.: A.B., Univ. of Pa., 1924; A.M., ibid., 1925; Ph.D., ibid., 1928. m. Helen McCaughey, June 23, 1934. c.: Bruce L.; Gerald P. Exp.: Rsch. Physicist, Goodyear Tire and Rubber Co., Akron 16, Ohio, 1929-36; Sect. Hd., Physics Rsch., ibid., 1936—. Mem.: Amer. Physical Soc.; Amer. Chem. Soc.; Phi Beta Kappa. Contrb. to: Jour. Applied Physics; Review of Scientific Instruments; Indus. and Engrng. Chem.; A.S.T.M. Bull. Special Int.: Physical Properties of Rubber and Plastics; Relationship of Molecular Structure of Rubber to Physical Properties; X-Ray Diffraction.

GEIGER, Charles F., Carborundum Co., Box 268, Perth Amboy, N. J. CERAMICS.

GEIGER, Ernest, Dir. of Rsch., Van Camp Lab., Terminal Island, Calif. PHARMACOLOGY.

GEIGER, Jacob Casson, Dir. of Public Health, San Francisco Public Health, 101 Grove St., San Francisco, Calif. PUBLIC HEALTH AND BACTERIOLOGY.

GEIL, Milton George, Hd. Dept. of Psychol., Dir. Psychol. Clinic, Albright Coll., Reading, Pa. PSYCHOLOGY.



b. Drew Station, Ont., Can., June 3, 1893. s. Henry and Margaret (Domm) G. Edn.: B.A., North Central Coll., 1918; M.A., Northwestern Univ., 1928; Ph.D., ibid., 1930. m. Louise Breithaupt (dec.), Sept. 6, 1930. Exp.: Asst. Prof., Northwestern Univ., Evanston, Ill., 1930-32; Asst. Psychol. Clinic, ibid., 1928-32; Hd. Dept. of Psychol.; Dir. Psychol. Service Center, Albright Coll., Reading, Pa., 1937—; Taught Natl. Univ., Seoul, Korea; also Univ. of the Philippines, Manila, P. I., 1950-51. Mem.: A.A.A.S.; A.P.A.; Eastern Psychol. Assn.; A.A.U.P.; Amer. Coll. Personnel Assn.; Natl. Council on Family Relations; A.P.O.; Pi Gamma Mu. Contrb. to: Numerous magazine articles. Special Int.: Conduct Private Psychol. Clinic; Lecture engagements.

GEIGER, Marlin George, Vice-Chairman of the Board and Director, The Davison Chemical Corp., 101 N. Charles St., Baltimore 3, Md. CHEMICALS.



b. Nov. 15, 1897, Harrisburg, Pa. s. John A. and Laura Margaret (Stouffer) G. Edn.: B.S., Pennsylvania State Coll., 1921. m. Marie J. Owens, Oct. 29, 1925. c.: Marlin G., Jr., and William Thom. Exp.: Chemical Engineer, 1921, with Westvaco Chlorine Products Corp.; Foreman, 1921-25; Asst. Mgr. until 1928; Resident Mgr., 1928-40; Vice-Pres. and Dir., 1940-47; Former Vice-Pres. and Dir., United

Chemicals, Inc.; Former Pres. and Dir., W. Va. Charcoal Co.; Pres. and Dir., First National Bank of South Charleston, 1932-36; Former Dir., W. Va. Manufacturers Assn.; Resident Mgr., Magnesol Co., 1939-47. Present Vice-Pres. and Dir., G. Ober & Sons Co.; Dir. Sylox Corp.; Dir., South Baltimore General Hosp.; Dir., Southern States Industrial Council; Md. Soc. of the Blind. Clubs: Baltimore Country; Merchants; Newcomen Soc. in North Amer.; Rotary, Md.; Mason; Shriner; Amer. Chem. Soc.; Amer. Inst. Chem. Engrs.; Sigma Tau; Phi Lambda Upsilon; Alpha Chi Sigma; Amer. Assn. for Adv. of Science. Hobbies: Golf and Fishing.

GEIMAN, Quentin Monroe, Asst. Prof. of Tropical Diseases, Dept. of Comparative Pathol. and Tropical Med., Harvard Univ. Med. Schl., Boston, Mass. PARASITOLOGY.

GEISER, Samuel Wood, Prof. and Chmn., Dept. of Biol., Southern Methodist Univ., Dallas, Tex. HISTORY OF SCIENCE, ANIMAL BEHAVIOR.

GEISINGER, E. E., Pfaunder Co., 1000 West Ave., Rochester 3, N. Y. CERAMICS.

GEIST, Frederick D., Assoc. Prof. of Anatomy, Univ. of Wis., Madison, Wis. NEUROLOGY.

GEIST, Robert Miller, Prof. of Biol. and Chmn., Dept. of Biol., Capital Univ., 2269 E. Mount St., Columbus, Ohio. ZOOLOGY.

GELBACH, Ralph Warren, Assoc. Prof. of Chem., State Coll. of Wash., College Station, Box 135, Pullman, Wash. CHEMISTRY.

GELDARD, Frank Arthur, Prof. of Psychol. and Dir., Psychol. Lab., Univ. of Va., Charlottesville, Va. PSYCHOLOGY.

GELLER, Roman F., Chf. Porcelain and Pottery Section, Natl. Bureau of Standards, Washington, D. C. CERAMIC TECHNOLOGY.

GELLHORN, Ernst, Prof. of Neurophysiol., 116 Med. Sci. Bldg., Univ. of Minn., Minneapolis, Minn. NEUROPHYSIOLOGY.

GELSTHARP, Frederick, 1134 Park St., Tarentum 1, Pa. CERAMICS.

GEMANT, Andrew, Sr. Rsch. Engr., Detroit Edison Co., 4501 W. Outer Dr., Detroit, Mich. APPLIED PHYSICS.

GEMMER, Eugene William, R. W. Hillcoat Co., P. O. Box 246, White Springs, Fla. FORESTRY.

GEMMILL, Anna M., retired, 16 Lewis Ave., Batavia, N. Y. CHEMISTRY.

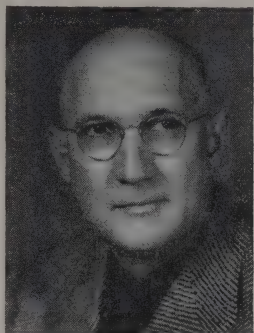
GEMMILL, Chalmers Laughlin, Prof. of Pharmacol., Univ. of Va. Med. Schl., Charlottesville, Va. PHARMACOLOGY.

GENTRY, Charles Burt, Prof. of Edn. and Dean, Univ. of Conn., Storrs, Conn. EDUCATION.

GENTRY, Franklin Marion, 215 Manhasset Woods Rd., Manhasset, N. Y.

GENTRY, George Vincent, Prof. of Phil., Rsch. Psychol., Univ. of Tex., Austin, Tex. SYMBOLIC PROCESS AND LEARNING THEORY. b. Center Point, Tex., Jan. 19, 1899. s. Guy Henry and Helen Lamar (Tiffen) G. Edn.: B.A., Univ. of Ariz., 1926; Ph.D., Univ. of Chicago, 1931. m. Elizabeth Marie Gentry, Feb. 29, 1930. Exp.: Instr., Stanford Univ., Calif., 1929-30; Instr., Univ. of Minn., Minneapolis, Minn., 1930; Instr. to Prof. of Phil., Univ. of Tex., Austin, Tex., 1931—. Mem.: Amer. Phil. Assn.; Amer. Psychol. Assn.; Amer. Men of Sci.; Delta Chi; Delta Chi; Delta Sigma Rho; Phi Kappa Phi; Phi Delta Kappa. Contrb. to: Ethics; Jour. of Phil.; Phil. of Sci.; Phil. Rev.; Jour. of Comparative and Physiol. Psychol. Special Int.: Symbolic Process; Psychol. of Primate; Design of Experiments.

GEORGIA, Frederick Raymond, Supvr. of Water Works, Cornell Univ., 103 Caldwell Rd., Forest Home, Ithaca, N. Y.



SANITARY CHEMISTRY AND WATER PURIFICATION. b. Sayre, Pa., Sept. 24, 1892. s. Daniel Cory and Elizabeth (Stewart) G. Edn.: B.S., Cornell Univ., 1915; Ph.D., *ibid.*, 1922. m. Lolita Healey, Aug. 20, 1920. c.: Nathalie Elizabeth; Daniel Carver. Exp.: Instr., Sanitary Chem., Cornell Univ., 1915-17, 1919-26; Prof. of Chem., Rollins Coll., 1926-33; Prof. of Chem., Black Mt. Coll., 1933-37; Rector, *ibid.*, 1933-34; Sec., *ibid.*, 1933-37; Supvr. of

Water Works, Cornell Univ., Ithaca, N. Y., 1938—. Hon. Pos.: Secy., Div. of Water, Sewage and Sanitation Chem., Amer. Chem. Soc., 1924; Chmn., Cornell Section, *ibid.* Mem.: Fellow, A.A.A.S.; Fellow, Amer. Public Health Assn.; Amer. Chem. Soc.; Amer. Water Works Assn.; Sigma Xi; Ithaca Civic Opera Group. Contbr. to: Indus. and Engrng. Chem.; Jour. Amer. Water Works Assn.; Jour. Bacteriol.; Water Works Engrng.; Water and Sewage Works; Coll. and Univ. Business. War Record: First Lt., Sanitary Corps, 1917-19; Div. Sanitary Inspector of Water, First Depot Div., A.E.F. Special Int.: Water Purification, Water Bacteriol., Beverages.

GEORGE, Roscoe Henry, 703 N. Main St., West Lafayette, Ind. **PHYSICS.**

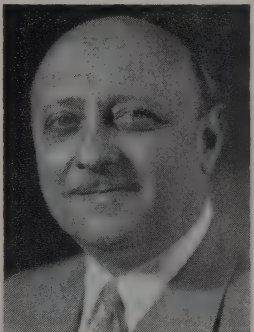
GEORGE, Wesley Critz, Prof. and Hd., Dept. of Anatomy, Univ. of N. C. Med. Schl., Chapel Hill, N. C. **ANATOMY.**

GEORGI, Carl Eduard, Assoc. Prof. of Bacteriol., Univ. of Nebr., Lincoln, Nebr. **BACTERIAL PHYSIOLOGY.**

GEORGIA, Frederick Raymond, Water Works Supvr. and Sanitary Chemist, Cornell Univ., Forest Home, Ithaca, N. Y. **SANITARY CHEMISTRY.**

GERALD, Herbert F., Prof. and Hd., Dept. of Pharmacol. and Physiol., Creighton Schl. of Med., 2871 Newport Ave., Omaha, Nebr. **MEDICINE.**

GERARD, Ralph Waldo, Prof. of Neurophysiol., Dept. of Psychiatry and Prof. of Physiol., Univ. of Ill., Neuropsychiatric Inst., 912 S. Wood St., Chicago 12, Ill. **NEUROPHYSIOLOGY.** b. Harvey, Ill., Oct. 7, 1900. s. Maurice and Eva (Teitelbaum) G. Edn.: B.S., Univ. of Chicago, 1919; Ph.D., *ibid.*, 1921; M.D., Rush Med. Coll., 1925. Hon. Deg.: D.Sc., Univ. of Md., 1952. m. Margaret Wilson, 1922. c.: James Rowley. Exp.: Prof. of Physiol., S. Dak. Univ., 1921-22; Natl. Rsch. Fellow, Europe, 1925-27; Asst. Prof. of Physiol., Univ. of Chicago, 1928-29; Assoc.



Prof., *ibid.*, 1929-41; Prof., *ibid.*, 1941-52; Prof. of Neurophysiol. and Physiol., Univ. of Ill. Coll. of Med., Chicago, Ill., 1952—. Hon. Pos.: Dir. Special War Rsch.; Chmn., Physiol. Adv. Panel, Office Naval Rsch., Office of the Surgeon General, Institutes of Health, U. S. P. H. S.; Mem., Tchng. Mission to Czechoslovakia, 1946; Govt. Advisor, Visiting Prof., Australian Natl. Univ., 1947; Mem., Med. Tchng. Mission to Greece, 1948. Mem.: A.A.U.P.; Hon. Mem., Panhellenic Med. Assn.; Amer. Physiol. Soc.; Chicago Inst. Med.; British Physiol. Soc.; Biochem. Soc.; Amer. Neurol. Assn. Assn. for Rsch. in Nervous and Mental Diseases; Amer. Naturalists;

A.A.A.S.; Phi Beta Kappa; Sigma Xi; Alpha Omega Alpha; Quadrangle Club; Chicago Literary Club. Author: *Unresting Cells*, 1940; *The Body Functions*, 1941; *Methods in Med. Rsch.*, 1950; *Food for Life*, 1952. Contbr. to: Amer. Jour. Physiol.; Jour. Neurophysiol.; Proc. Soc. Exptl. Biol. and Med. Gen. Int.: James Arthur Lectr., 1938; Menas Gregory Lectr., 1948; Eastman Lectr., 1952; Medal of Charles Univ., Prague, 1946; Order of the White Lion (4th Class) of Czech Govt., 1946. Special Int.: Chemical and Electrical Phenomena in Muscle, Nerve and Brain; Neural Mechanism of Behavior.

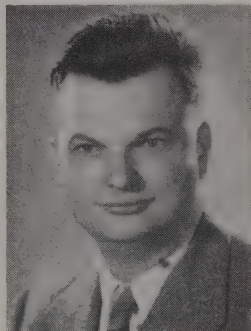
GERHARD, William Josiah, Curator of Insects, Chicago Natural History Museum, 8037 Kumbark Ave., Chicago, Ill. **ENTOMOLOGY.**

GERMANN, Albert Frederick Ottomar, Pres. and Chmn., Bd. of Dirs., Nutritional Rsch. Associates, Box 205, South Whitley, Ind. **CHEMISTRY.**

GERMANN, Frank E. E., Prof. of Chem., Univ. of Colo., Boulder, Colo. **CHEMISTRY.**

GERMANN, George B., retired, 167 Rutland Rd., Brooklyn, N. Y. **PSYCHOLOGY.**

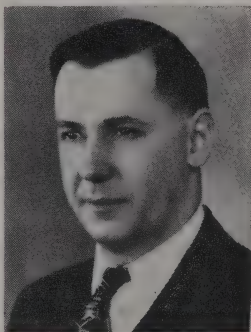
GERMANN, Richard Paul, Rsch. Development Chemist, 195 Pocahontas Dr., Governor Francis



Farms, Providence 5, R. I. **PHARMACEUTICAL CHEMISTRY.** b. Ithaca, N. Y., Apr. 3, 1918. s. Frank E. E. and Martha (Kenchtel) G. Edn.: B.A., Colo. Univ., 1939. m. Malinda Jane Plietz, Dec. 11, 1942. c.: Cheranne Lee. Exp.: Rsch. Fellow, Naval Rsch. Lab., Western Reserve Univ., Cleveland, Ohio, 1941-43; Chf., Analytical Chem., Butadiene Div., Taylor Refining Co., Corpus Christi, Tex., 1943-44; Rsch. Development Chemist, Pharmaceutical Dept., Calco Chem.

Div., Amer. Cyanamid Co., Bound Brook, N. J., 1944-52; Rsch. Development Chemists in Chg. of Pilot Plant, Alrore Chem. Co., Providence, R. I., 1952—. Mem.: Amer. Chem. Soc.; A.A.A.S.; Sigma Xi; Alpha Chi Sigma. Special Int.: Sulfur Drugs; Vapor Phase Halogenation Reactions; Catalytic Hydrogenation; Low Temp. Gas Rsch.

GEROULD, Charles Henry, Rsch. Engr. and Electron Microscopist, Dow Chem. Co., 3314 Maryland



St., Midland, Mich. **ELECTRON MICROSCOPY, PARTICULARLY THE STUDY OF METALLURGICAL SPECIMENS AND TOOTH AND BONE STRUCTURES.** b. Athens, Pa., Nov. 14, 1914. s. Truman W. and Bessie (Gerould) G. Edn.: Pa. State Coll., 1934-36. m. Zaida Parks, July 2, 1938. c.: Gary Lee. Exp.: Rsch. Work, Dow Chemical Co., 1937—. Hon. Pos.: Dir., Electron Microscope Soc. of Amer., 1951-53. Mem.: Dow Male Chorus. Contbr.

to: Jour. Applied Physics; Jour. Dental Rsch.; Pa. State Dental Jour. Gen. Int.: Work with Midland Dental Soc. in Pioneering in Fluoridation of Municipal Water Supply. Special Int.: Electron Microscopy, particularly Electron Metallography, Electron Microscopy of Tooth and Bone Structures and Effect of Fluorine on Teeth. (Died 1953).

GEROULD, John Hiram, Prof. Emer. Biol., Dartmouth Coll., 36 Occom Ridge, Hanover, N. H. **ZOOLOGY, GENETICS, ENTOMOLOGY.**

GERRY, Eloise, Microscopist Forest Products, U. S. Forest Products Lab., 1105 Dartmouth Rd., Shorewood Hills, Madison, Wis. **BOTANICAL SCIENCES.**

GERSHENFELD, Louis, Prof. and Hd., Dept. of Bacteriol., Philadelphia Coll. of Pharmacy and Sci., 281 S. 63rd St., Philadelphia, Pa. **BACTERIOLOGY.**

GESCHICKER, Charles F., 1834 Connecticut Ave., N. W., Washington, D. C. **MEDICAL SCIENCES.**

GESELL, Arnold, Yale Univ., Schl. of Med., 14 Davenport Ave., New Haven, Conn.

GESELL, Robert, Prof. and Dir., Dept. of Physiol., Univ. of Mich., 3 Ridgway St., Ann Arbor, Mich. **MEDICAL SCIENCES.**

GESTER, Stephen Howell, Asst. Chf. Geologist, Standard Oil Co. of Calif., 225 Bush St., San Francisco, Calif. **PETROLEUM GEOLOGY.**

GETTING, Ivan Alexander, Assoc. Prof. of Elec. Engrng., Mass. Inst. of Tech., Cambridge, Mass. **PHYSICS.**

GETTINGER, Raymond, Pathologist and Dir. Lab., St. John's Hosp., Brooklyn, N. Y. **PATHOLOGY.**

GETTLER, Alexander Oscar, Prof. of Chem. and Toxicology, N. Y. Univ. Med. Coll., 144 Penn St., Brooklyn, N. Y. **TOXICOLOGY.**

GETZENDANER, Charles Wilber, Entomologist, U. S. Dept. of Agri., P. O. Box 218, Union Gap Station, Yakima, Wash. **ENTOMOLOGY.**

GEVECKER, Vernon Arthur Charles, Assoc. Prof., Mo. Schl. of Mines, Rolla, Mo. **SOIL MECHANICS AND FLUID MECHANICS.** b. Jan. 19, 1909, St. Mo. Schl. of Mines, Rolla, Mo. b. Jan. 19, 1909, St. Louis, Mo. s. Harry and Louise (Meirose) G. Edn.: B.S., Mo. Schl. of Mines, 1931; M.S., Calif. Inst. of Tech., 1937; C.E., Mo. Schl. of Mines, 1950. m. Mildred Twellman of St. Louis, Nov. 23, 1932. d. Dr. and Mrs. G. A. Twellman. c.: Carol Ann and Karl Richard. Exp.: St. Louis Office, U. S. Engr. Dept., 1931-34; Grad. Studies, 1934-37; Procter & Gamble Mfg. Co., St. Louis, Mo., 1937-38; W. W. II, U. S. Army 1941-46, Lt. Col., C. E.; Dept. C. E. Mo. Schl. of Mines, 1938-41; 1946—. Mem.: Mason; Licensed Engineer, State of Mo.; M.S.P.E.; A.S.C.E.; A.S.E.E.; Pi Kappa Alpha; Alpha Phi Omega; Phi Kappa Phi; Chi Epsilon. Travel: U. S. Listed in: Who's Who in Engrng. Hobbies: Crafts. Special Int.: Open channel flows, shear studies.

GEVORKIANTZ, Suren R., Silviculturist in Chg. Forest Measurements, Lake States Forest Expt. Station, 2121 Scudder St., St. Paul, Minn. **FORESTRY.**

GHERING, Leonard G., Preston Labs., Box 149, Butler, Pa. **CERAMICS.**

GHIORSO, Albert, Radiation Lab., Univ. of Calif., Berkeley 4, Calif. **NUCLEAR CHEMISTRY.**

GIANELLA, Vincent Paul, Prof. and Hd., Dept. of Geol., Univ. of Nev., Reno, Nev. **GEOLOGY.**

GIAUQUE, William Francis, Univ. of Calif., Berkeley 4, Calif.

GIBBONS, Vernet L., Emeritus Prof. of Chem., Mills Coll., 1201 Oakes Blvd., San Leandro, Calif. b. Franklin, N. Y., Jan. 5, 1874. s. Marshville and Augusta (Foote) G. Edn.: B.S., Mount Holyoke Coll., 1896; A.B., ibid., 1899; M.S., Univ. of Chicago, 1907; M.S., Univ. Cape of Good Hope, 1908; Ph.D., Bryn Mawr Coll., 1914. Exp.: Tchr., Bernardston, Mass., 1896-97; Asst. in Chem., Mount Holyoke Coll., 1897-99; Instr., ibid., 1899-1901; Instr., Wells Coll., 1902-04; Asst. Prof., ibid., 1904-06; Prof., Huguenot Coll., S. Africa, 1907-11; Prof., Mills Coll., 1915-17; Chemist, Natl. Carbon Co., 1918; Chemist, Natl. Aniline and Chem. Co., 1918-19; Prof., Mills Coll., 1919-39; Emeritus Prof., ibid., 1939—. Mem.: Fellow, A.A.A.S.; Amer. Chem. Soc.; Fellow, Amer. Inst. of Chemists; Phi Beta Kappa. Contrb. to: Amer. Chem. Jour.; Jour. Amer. Chem. Soc.

GIBBONS, Charles Crew, Industrial Program Dir., Upjohn Inst. for Community Rsch., 709 S. Westnedge, Kalamazoo, Mich. **INDUSTRIAL PSYCHOLOGY.** b. Lost Springs, Wyo., June 21, 1916. s. F. E. and Kathleen (Crew) G. Edn.: B.S., Ohio Univ., 1937; M.A., ibid., 1938; Ph.D., Ohio State Univ., 1942. m. Wilma Householder on Sept. 13, 1949. Exp.: Tchng. Asst. in Psychol., Ohio State Univ., 1938-42; Dir. of Personnel Rsch., Owens-Illinois Glass Co., 1942-45; Industrial Program Dir., Upjohn Inst. for Community Rsch., Kalamazoo, Mich., 1945—. Mem.: Amer. Psychol.



Assn.: Midwestern Psychol. Assn.; Sigma Xi; Phi Beta Kappa; Kappa Delta Pi. Co-author: Full Employment in Your Community, 1947; Program for Reinstatement of Veterans, 1944. Contrb. to: Jour. Applied Psychol.; Personnel; Jour. Ednl. Psychol.; Schl. and Soc.; Jour. Exptl. Edn. Special Int.: Personnel Rsch.; Indus. Communications; Stabilization of Bus.

GIBBONS, Willis Alexander, Assoc. Dir. of Rsch., U. S. Rubber Co., 1230 Ave. Americas, N. Y., N. Y. **CHEMISTRY.**

GIBBS, Gordon Everett, Assoc. Prof. of Clin. Rsch., Univ. of Md. Hosp., Baltimore, Md. **PHYSIOLOGY**



AND PEDIATRICS. b. Cordova, Ill., Sept. 25, 1911. s. Geo. and Mabel (Ewell) G. Edn.: A.B., Univ. of Redlands, 1932; M.A., Univ. of Calif., 1935; Ph.D., Univ. of Calif., 1939; M.D., ibid., 1942. m. Gertrude Fleischmann of Forest Grove, Ore., 1941. d. Lionel Fleischmann. c.: Gale; Gwen; Gerald. Exp.: Intern in Ped., Univ. of Calif. Hosp., San Francisco; Asst. Res., ibid.; Sr. Fellow in Ped., Natl. Rsch. Coun. Mem.: Sigma Xi; A.A.A.S.; Phi Chi; Soc. for Exptl. Biol. and Med.; A.M.A.; Soc. for Pediatric Rsch. Certified by Amer. Bd. of Pediatrics, 1950. Contrb. to: Ped.; Jour. of Ped.; Jour. of Biol. Chem. Ph.D. Dissertation: Blood Lipids in Experimental Pancreatic Diabetes. War Record: European Theatre of War. Listed in: A.M.S. Special Int.: Pancreatic disease in childhood.

GIBBS, Owen Stanley, Rsch. Consultant, 1544-46 Netherwood Ave., Memphis, Tenn. **PHARMACOLOGY.**

GIBBS, William Francis, Naval Architect and Marine Engineer, One Broadway, N. Y. 4, N. Y. b. Philadelphia, Pa., Aug. 24, 1886. s. William Warren and Frances Ayers (Johnson) G. Edn.: LL.B. and M.A., Columbia Univ., 1913. Hon. Deg.: Dr. of Engrng., Stevens Inst. of Tech., 1938; Dr. Sc., Harvard Univ., 1947. m. Vera Cravath Larkin, 1927. c.: Francis C.; Christopher L.; Adrian C.; Larkin (stepson). Exp.: Organized Gibbs Bros., Inc., 1922; Organized Gibbs & Cox, Inc., 1929; Controller of Shipbuilding (War Production Bd.), 1942-43; Chmn., Combined Shipbldg. Comm. of Combined Chfs. of Staff, 1943; Represented Office War Mobilization on Procurement Review Bd. of Navy, 1943; Naval Architect, Marine Engr., 1943—. Hon. Pos.: Vice-Pres., Soc. Naval Architects and Marine Engrs. Mem.: Fellow, Amer. Soc. Mechanical Engrs.; Assoc. Fellow, Inst. Aeronautical Sci.; Amer. Soc. Naval Engrs.; Technical Com., Amer. Bureau of Shipping; N. E. Coast Inst. of Engrs. and Shipbuilders; U. S. Naval Inst., Natl. Acad. Sci.; N. Y. Bar; N. Y. Yacht Club. General

Int.: Amer. Design Award, 1943; David W. Taylor Gold Medal, Soc. Naval Architects and Marine Engrs., 1946; In 1946 the Harvard Chapter of Phi Beta Kappa conferred Honorary Membership; Presidential Certificate of Merit, 1947; Holland Soc. of N. Y. Distinguished Service Gold Medal, 1951.

GIBBS, William Merriott, Physician and Surgeon, M.D., 231 N. Central Ave., Glendale 3, Calif. **GENERAL PRACTICE**. b. Versailles, Mo., Mar. 24, 1892. s. John Franklin and Hannah (Merriott) G. Edn.: B.S., Univ. of Mo., 1915; M.S., Univ. of Wis., 1916; Ph.D., *ibid.*, 1918; M.D., Northwestern Univ., Md. Schl., 1930. c.: Marian Frances Binkley. Exp.: Rsch. Scholar of Bacteriol., Univ. of Wis., Madison, Wis., 1915-16; Rsch. Fellow, Bacteriol., *ibid.*, 1916-17; Rsch. Chemist, Wis. Geol. Survey, *ibid.*, 1917-18; Lieut., Sanitary Corps, U. S. Army, 1918-19; Prof. of Bacteriol., Univ. of Idaho, Moscow, Idaho, 1919-26; Paton Rsch. Fellow, Northwestern Univ. Med. Schl., Chicago, Ill., 1926-30; Intern, Los Angeles Co. Gen. Hosp., Los Angeles, Calif., 1930-31; Physician on Exploration Trip to Central Amer., 1931; Instr. Med., Univ. So. Calif. Med. Schl., 1932-33; Gen. Practice of Med., Glendale, Calif., 1932—. Mem.: Sigma Xi; Gamma Alpha; Phi Sigma; A.A.-A.S.; Nu Sigma Nu. Contrb. to: Soil Sci.; Amer. Jour. of Bacteriol. Special Int.: Rsch. Limited to Bacteriol. and Chem.

GIBSON, Edward T., Clinical Prof. of Psychiatry, Univ. of Kans. Schl. of Med., Kansas City, Mo. **PSYCHIATRY**.

GIBSON, George E., Prof., Univ. of Calif., Berkeley, Calif. **THERMODYNAMICS**.

GIBSON, James J., Cornell Univ., Ithaca, N. Y. **PSYCHOLOGY**.

GIBSON, John G., II, Rsch. Assoc. in Med., Med. Schl., Harvard Univ., 25 Shattuck St., Boston, Mass. **HEMATOLOGY**.

GIBSON, Kasson Stanford, Physicist, Natl. Bur. of Standards, 4817 Cumberland Ave., Chevy Chase 15, Md. **SPECTROPHOTOMETRY, COLORIMETRY AND PHOTOMETRY**. b. Afton, N. Y., Jan. 7, 1890. s. Stanford Jay and Gertrude (Sage) G. Edn.: A.B., Cornell Univ., 1912; Ph.D., *ibid.*, 1916. m. Mildred Brown, 1917. c.: Gilbert Lewis. Exp.: Instr. of Physics, Cornell Univ., Ithaca, N. Y., 1912-16; Physicist of Varying Grades, Natl. Bur. of Standards, Washington, D. C., 1916—; Chf. of Colorimetry and Spectrophotometry Section, *ibid.*, 1933-41; Chf. of Photometry and Colorimetry Section, *ibid.*, 1941—; Asst. Chf. of Optics Div., Electricity and Optics Div., Optics and Metrol., *ibid.*, 1941—. Mem.: Amer. Phys. Soc.; Illuminating Engrng. Soc.; Optical Soc. of Amer.; Amer. Oil Chem. Soc.; Amer. Inst. of Physics; Wash. Acad. of Sci.; Phil. Soc. of Wash.; A.A.A.S.; Sigma Xi; Phi Beta Kappa. Author: Chapters in Photoelectric Cells and Their Applications, 1930; Dictionary of Applied Physics, 1923; Analytical Absorption Spectroscopy, 1950. Contrb. to: Over 40 Papers Published in Natl. Bur. of Standards Jours., In Proc. of Internatl. Commn. of Illumination, and other journals. Special Int.: Spectrophotometry, Colorimetry, Photometry, Spectral Luminosity Factors; Optical Filters, Railroad Signal Color Standardization, Analysis of Lovibond and Munsell Color Systems.

GIBSON, Ralph Edward, Dir., Applied Physics Lab., The Johns Hopkins Univ., 8621 Ga. Ave., Silver Spring, Md. **PHYSICAL CHEMISTRY**. b. King's Lynn, Norfolk, Enkland, Mar. 30, 1901. s. John and Jane (Ferry) G. Edn.: B.Sc., Univ. of Edinburgh, 1922; Ph.D., *ibid.*, 1924. m. Elizabeth Derby, Apr. 4, 1927. d. Elmer and Alice D. c.: John Douglas; Ann Katharine; Ronald Malcolm. Exp.: 1924-46, Mem. of Staff of Geophys. Lab., Carnegie Inst. of Wash.; 1929-32, Lectr. in Chem., The Geo. Wash. Univ.; 1932-45, Adjunct Prof. of Chem., *ibid.*; 1941-44, Vice-Chmn., Section H., Div. 3, Natl. Defense Rsch. Com.; 1944-46, Dir. of Rsch., Allegany Ballistics Lab.; 1946—, Mem. of Staff, Applied Physics Lab. and Prof. of Chem., Johns Hopkins Univ., 1946-47, Acting Dir., 1948; Dir., 1948—. Hon. Pos.: Chmn., Rocket Propellant Panel, Joint Chf. of Staff. Mem.: A.C.S.; Philos. Soc. of Wash., Pres., 1940; Amer. Phys. Soc.; Amer.

Geophys. Union; Sigma Xi; Cosmos Club. Author: Author of a number of articles in scientific publications. Ph.D. Dissertation: I. Electrolysis of Mixtures of Acetates and Trichloroacetates. II. The Mechanisms of Kolbe's Electrosynthesis. War Record: Nat. Defense Rsch. Comm. Gen. Int.: Organist and Choir Dir., St. Columbas' Episcopal Church, 1935. Listed in: A.M.S.; Who Knows—and What; W.W.A. Special Int.: Rockets, Guided Missiles.

GIBSON, Robert B., Univ. Hosp., Iowa City, Iowa. **CLINICAL CHEMISTRY**.

GIBSON, Theodore Whidden, Roanoke Coll., Salem, Va. **METEOROLOGY**.

GICLAS, Henry Lee, Rsch. Asst., Lowell Observatory, Box 1640, Flagstaff, Ariz. **ASTRONOMY**.

GIDDENS, Paul Henry, Pres., Hamline Univ., St. Paul 4, Minn. **PETROLEUM HISTORY**. b. Bellflower, Mo., Feb. 3, 1903. s. Jackson and Bertha A. (Patterson) G. Edn.: A.B., Simpson Coll., 1924; A.M., Harvard Univ., 1926; Ph.D., State Univ. of Iowa, 1930. m. Marie J. Robins, Mar. 18, 1927. c.: Jackson Alfred; Thomas Robins; Judith Ann. Exp.: Inst. Hist., Univ. Kans., 1926; Instr. in Hist. and Govt., Iowa State Coll., 1926-28; Fellow Hist., State Univ. Iowa, 1929; Instr. in Hist., State Univ. of Iowa, summer 1929-31; Asst. Prof. of Hist., Ore. State Coll., 1930-31; Asst. Prof. of Hist. and Political Sci., Allegheny Coll., 1931-37; Assoc. Prof. of Hist. and Political Sci., *ibid.*, 1937-38; Prof. of Hist. and Political Sci., and Hd. of Dept., *ibid.*, 1938-53; Guggenheim Fellow, 1945-46; Pres., Hamline Univ., 1953—. Mem.: Amer. Historical Assn.; Miss. Valley Historical Soc.; Pa. Historical Assn.; A.A.U.P.; Alpha Tau Omega; Pi Delta Kappa; Pi Gamma Mu; Phi Alpha Theta. Author: Birth of the Oil Industry, 1938; Beginnings of the Petroleum Industry, 1941; Pa. Petroleum, 1750-1872: A Documentary History; Early Days of Oil, 1948; A History of the Standard Oil Co. (Ind.), 1954. Special Int.: History of the Petroleum Industry.

GIDDINGS, Glenn Ward, Personnel, General Electric Rsch. Lab., 726 DeCamp Ave., Schenectady, N. Y. **PHYSICS**.

GIDDINGS, James Louis, Jr., Asst. Prof. of Anthropology, Univ. of Pa., Phila. 4, Pa. **ANTHROPOLOGY**. b. Caldwell, Tex., April 10, 1909. s. James Louis and Maude (Matthews) G. Edn.: B.S., Univ. of Alaska, 1931; M.A., Univ. of Ariz., 1941; Ph.D., Univ. of Pa., 1951. m. Ruth Elizabeth Warner of Tucson, Ariz., Dec. 10, 1943. d. Dr. and Mrs. Earle H. Warner. c.: James Louis, III; Edith Ann; John Russell. Exp.: U. S. Smelting, Refining and Mining Co., Alaska, 1932-37; Rsch. Assoc., Univ. of Alaska, 1938-40; Instr., *ibid.*, 1940-42; Rsch. Assoc., Univ. of Ariz., 1943—; U. S. Navy, 1943-46; Asst. Prof., Univ. of Alaska, 1947-48; Assoc. Prof., *ibid.*, 1948-50; Rsch. Assoc., Univ. Museum, Univ. of Pa., 1950-51; Asst. Curator, *ibid.*, 1951—; Visiting Lectr., Univ. of Pa., 1950-51; Asst. Prof., *ibid.*, 1951. Mem.: Amer. Anthropological Assn., Fellow; Soc. for Amer. Archaeol., Fellow; Amer. Geographical Soc., Fellow; Tree-Ring Soc.; Sigma Xi; Arctic Inst. of N. Amer. Author: Dendrochronology in Northern Alaska, 1941. Ph.D. Dissertation: The Arctic Woodland Culture of the Kobuk River. Travel: Can.; Alaska; Pacific Areas. Listed in: Who Knows—and What; Who's Who on Pacific Coast.

GIDDINGS, Nahum James, Sr., Pathologist, U. S. D. A., P. O. Box 31, Riverside, Calif. **VIRUS DISEASES PLANTS**.

GIDLEY, William Francis, Prof. of Pharmacy, Univ. of Tex., 3105 Grooms St., Austin, Tex. **PHARMACY**.

GIER, Leland Jacob, Prof. of Biol. and Geol., William Jewell Coll., Liberty, Mo. **TAXONOMY AND ECOLOGY OF BRYOPHYTES**. b. Mar. 10, 1904, Hepler, Kans. s. Delta L. and Jennie Margaret (Smart) G. Edn.: B.S., Kans. S. T. C., 1928; M.S., *ibid.*, 1931; Ph.D., Duke Univ., 1940. m. Margaret Elizabeth Stewart of Pittsburg, Kans., Sept. 13, 1934. d. Mr. and Mrs. Ira Stewart. Exp.: Rural Schls., S. E. Kans., 1921-27; Rural H. S., Sci., Protection, Kans.,

1928-30; Foreman, CCC Camp, 1933; Counsellor, B.S.A. Camp, Joplin, Mo.; Sci. and Edn., Campbell Coll., N. C., 1934-41; Biol. and Geol., Wm. Jewell Coll., Liberty, Mo., 1941—. Mem.: Fellow, Univ. of Nebr., 1931-33; Regional V. P., Beta Beta Beta; Ecol. Society; Kappa Delta Pi; Theta Alpha Phi; Beta Beta Beta; Phi Sigma; Bot. Soc. Amer.; Amer. Bryol. Soc.; Torrey Bot. Club (life mem.); Amer. Soc. Plant Taxon.; Inst. Assn. Pl. Taxon.; Brit. Bryol. Soc.; R.E.S.A. of Sigma Xi; Life Mem., Kans. Acad. of Sci.; Fellow, A.A.A.S. Ph.D. Dissertation: Development and Distribution of Bright Belt Tobacco Roots. Hobbies: Photography; Philately; Plants. Listed in: A.M.S., Who Knows and What. Special Int.: Bryology, Ecology and Taxonomy of Local Flora.

GIES, William John, Prof. of Biol. Chem., Coll. of Physicians and Surgeons, Columbia Univ., N. Y., N. Y. **BIOCHEMISTRY.**

GIESECKE, Frederick Ernest, Cons. Engr., Box 417, New Braunfels, Tex. **ARCHITECTURE, ENGINEERING.**

GIESEKING, John Eldon, Prof. of Soil Physics, 654 Davenport Hall, Univ. of Ill., Urbana, Ill. **SOIL AGRICULTURE.** b. Altamont, Ill., Oct. 1, 1905. s. Henry and Melva Belle (Young) G. Edn.: B.S., Univ. of Ill., 1926; M.S., *ibid.*, 1927; Ph.D., *ibid.*, 1934. m. Flossie Mable Young of Urbana, Ill. Sept. 12, 1936. d. Leonard and Lucy Young. c.: Carl Wilbert. Exp.: Asst. in Agr., Univ. of Ill., 1927-29; Asst. in Agr., *ibid.*, 1930-32; Asst. in Soils, Univ. of Mo., 1932-34; Asst. Prof., Assoc. Prof., and Prof., Univ. of Ill., 1934—. Hon. Pos.: Past Pres. of Champaign-Urbana Toastmasters Club. Present Chmn. of the Soil Chem. Div. of the Soil Sci. Soc. of Amer. Mem.: Amer. Chem. Soc.; A.A.A.S.; Amer. Soc. of Agr.; Soil Sci. Soc. of Amer.; Internatl. Soc. of Soil Sci.; Alpha Tau Omega; Gamma Alpha; Sigma Xi; Alpha Zeta; Alpha Tau Alpha; Toastmasters Internatl., Champaign-Urbana Toastmasters Club; Torch Club. Contrb. to: Soil Sci.; Encyc. Britannica. Ph.D. Dissertation: Podsolis Features in Ill. Soils. Travel: Canada; Europe. Hobbies: Gardening; Flying; Travel. Listed in: W. W. in the Western Hemisphere; W. W. in Chicago and the State of Ill.; A. M. S. W. W. in Chicago and the State of Ill.; A.M.S. Special Int.: Physical and Colloid Chem. of Soils; Soil Mineralogy.

GIESY, Paul Miller, Prof. of Chem. Engrng., Newark Coll. of Engrng., 367 High St., Newark, N. J. **CHEMISTRY.**

GIFFIN, Herbert Ziegler, Sr. Consultant, Mayo Clinic and Prof. of Med., Mayo Foundation, Univ. of Minn. Grad. Schl., Rochester, Minn. **INTERNAL MEDICINE.**

GIFFORD, Edward Winslow, Prof. of Anthropol. and Curator, Anthropol. Museum, Univ. of Calif., Berkeley, Calif. **ANTHROPOLOGY.**

GIFFORD, J. F., General Electric Co., Richland, Wash. **TECHNIQUES OF RADIOCHEMISTRY.**

GIFFORD, John Clayton, Prof. of Tropical Forestry and Conservation, Univ. of Miami, Coral Gables, Fla. **TROPICAL FORESTRY.**

GIFFORD, Mabel F., **SPEECH AND HEARING.**

GIFFORD, Walter S., Pres., Amer. Telephone and Telegraph Co., 195 Broadway, N. Y., N. Y. **SOCIAL AND ECONOMIC SCIENCES.**

GILBERT, Alfred H., Work Unit Leader and Soil Conservationist, Graves Co., Ky., 205 W. North St., Mayfield, Ky. **SOIL CONSERVATION.**

GILBERT, Earl C., Prof. of Physical Chem. and Chmn. Dept., Ore. State Coll., Corvallis, Ore. **CHEMISTRY.**

GILBERT, Frederick C., 636 N. Warren St., Helena, Mont. **METALLURGY OF LEAD.**

GILBERT, Geoffrey Britton, Sr. Geologist, Consolidated Mining and Smelting Co. of Can., Ltd., Trail, B. C., Can. **MINING GEOLOGY.**

GILBERT, John Joseph, Submarine Cable Engr., Bell Telephone Labs., 463 West St., N. Y., N. Y. **ELECTRICAL ENGINEERING.**

GILBERT, Paul Thomas, Jr., Rsch. Engr., North American Aviation, Inc., Downey, Calif. **INSTRUMENT DESIGN; NUCLEAR REACTOR CHEMISTRY.** b. Chicago, Ill., July 29, 1914. s. Paul T. and Ilse (Forster) G. Edn.: B.S., Northwestern Univ., 1936; M.A., Univ. of Minn., 1940. m. Phyllis Simons, Oct. 17, 1942. c.: Susan; John; Brian; Wendy. Exp.: Instr. in Math., Univ. of Minn. and Utah State Agri. Coll., 1939-44; Rsch. Chemist Metalloy Corp., Minneapolis, Minn., 1944-46; Rsch. Scientist, Beckman Instruments, Inc., S. Pasadena, Calif., 1946-52; Rsch. Engr., N. Amer. Aviation, Inc., Downey, Calif., 1952—. Mem.: Amer. Chem. Soc.; Amer. Math. Soc.; A.A.U.P.; A.A.A.S.; Sigma Xi; Phi Beta Kappa. Contrb. to: Analytical Chem.; Bull. Amer. Math. Soc.; Industrial Laboratories; Sci.; Sealacs. War Record: Army Air Corps, 1941-43. Special Int.: Rare Earths; Lithium; Volumetric Analysis; Flame Spectrophotometry; Finite Geometry; pH and Glass Electrodes.

GILBERT, Ralph Wesley, Asst. Prof. of Psychol., N. Y. Univ., N. Y., N. Y. **PSYCHOLOGY.**

GILBERT, Ruth, Rt. 2, Altamont, N. Y. **MEDICAL SCIENCES.**

GILBERT, Walter M., 8420 Buckingham Dr., El Cerrito, Calif. **EDUCATION.**

GILBERT, William Paul, Prof. of Phys., Lawrence Coll., Appleton, Wis. **PHYSICS.** b. Centerburg, Ohio, Sept. 18, 1904. s. Frank David and Elbertine (Hawkins Pickering) G. Edn.: A.B., Oberlin Coll., 1929; Ph.D., Cornell, 1935. m. Margaret Mary Shea of Canton, Ohio, June 22, 1932. d. Mr. and Mrs. M. J. Shea. c.: Joan Paula; Judith Louise; Margaret Mary. Exp.: Asst. in Phys., Cornell Univ., 1929-35; Instr. in Phys., Oberlin Coll., 1935-37; Asst. Prof., Lawrence Coll., 1937-41; Assoc. Prof., *ibid.*, 1941-43; Prof., *ibid.*, 1943—. Mem.: A.A.U.P.; A.A.A.S.; Amer. Phys. Soc.; A.A.C.P.T.; Sigma Xi; Phi Kappa Phi; Phi Beta Kappa; Phi Kappa Tau. Ph.D. Dissertation: An Extension of the Silver II Spectrum and An Extension of the Rh-I-Like Isoelectronic Sequence to the Spectrum of Ag III. Hobbies: Music; Photography. Listed in: A.M.S. Special Int.: Optical Spectroscopy.

GILBOY, Glennon, Consulting Engr., Rt. 1, South Lincoln, Mass. **ENGINEERING.**

GILBRETH, Lillian, Founder, Motion Study, 130 The Crescent, Montclair, N. J. **MOTION STUDY ENGINEERING.**

GILCHRIST, Francis G., Prof. of Biol., Lewis and Clark Coll., Portland, Ore. **EXPERIMENTAL ZOOLOGY.**

GILCHRIST, Lachlan, Prof. Emer. of Geophysics, Univ. of Toronto, 8 Deer Park, Crescent, Toronto, Ont., Can. **GEOPHYSICS.**

GILCHRIST, Philippa Garth, Assoc. Prof. of Chem., Wellesley Coll., Wellesley, Mass. b. July 26, 1902. Courtland, Ala. d. Daniel and Katie Frank (Drake) G. Edn.: B.A., Agnes Scott C., 1923; M.S., Univ. of Wis., 1928; Ph.D., *ibid.*, 1931. Exp.: Instr. Agnes Scott C., 1923-27; Asst. Prof. Chem., *ibid.*, 1928-29; Assoc. Prof. Chem., *ibid.*, 1931-45; Assoc. Prof. Chem., Wellesley Coll., 1946—. Mem.: Phi Beta Kappa; Sigma Xi; A.C.S.; Ga. Acad. of Sci., Fellow. Contrb. to: Jour., A.C.S. Ph.D. Dissertation: Monoglycerides of the Lower Fatty Acids. Hobbies: Color Photography. Listed in: A.M.S.

GILDEA, Edwin F., Prof. and Hd., Dept. of Neuropsychiatry, Wash. Univ. Schl. of Med., St. Louis, Mo. **PSYCHIATRY.**

GILDERSLEEVE, Benjamin, Geologist, Tenn. Valley Authority, Knoxville, Tenn. **GEOLOGY.**

GILES, Albert William, Hd., Dept. Geol. and Geography, Univ. of Ark., Fayetteville, Ark. **GENERAL GEOLOGY.**

GILES, Norman Henry, Jr., Assoc. Prof. of Botany, Osborn Botanical Lab., Yale Univ., New Haven, Conn. **CYTOGENETICS**.

GILFILLAN, Francois Archibald, Dean, Schl. of Sci. and Dir., Ore. Inst. Marine Biol., Ore. State Coll., Corvallis, Ore. **CHEMISTRY**.

GILHOUSEN, Howard Clarke, Assoc. Prof. of Psychol., Univ. of Calif., 2216 Veteran Ave., Los Angeles, Calif. **PSYCHOLOGY**.

GILKEY, Helen Margaret, Assoc. Prof. of Botany, Ore. State Coll. Herbarium, Corvallis, Ore. **BOTANY**.

GILKEY, Herbert James, Prof. and Hd. of Dept., Theoretical and Applied Mechanics, Iowa State Coll., Rm. 212, Marston Hall, Iowa State Coll., Ames, Iowa. **ENGINEERING MATERIALS ESPECIALLY CONCRETE**. b. Montezano, Wash., Jan. 2, 1890. s. Herbert Luville and Mary Olive (Karr) Edn.: Ancestry: Scotch Irish and English. Edn.: Pub. Schls., Medford & Grants Pass, Ore.; B.S. (C.E.), Ore. State Agri. Coll., 1911; B.S. (C.E.), Mass. Inst. of Tech., 1916; B.S. (C.E.), Harvard Univ., 1916; M.S. (T.&A.M.) Univ. of Ill., 1923. Sc.D. (hon.), Buena Vista Coll., 1939. m. Mildred Virginia Talbot of Urbana, Ill., Aug. 18, 1923. d. Arthur Newell and Virginia Mann Hammet (Talbot). c. Herbert Talbot; Arthur Karr. Exp.: State Govt. and Pvt. Surveys, Ore. and Calif., 1911-12; Asst. Engr., Tumalo Irrig. Proj., Ore., 1913-14; Asst. Engr., Pa. R. R., Chicago, Ill., 1916-17; Structural Engr., A. R. Lord, Chicago, Ill., 1919-21; Rsch. and Tchng., Dept. T.&A.M., Univ. of Ill., under Talbot, 1921-23; Asst. Prof., Assoc. Prof., and Prof. of Civil Engrng., Univ. of Colo., 1923-31; Prof. and Hd., Dept. T.&A.M., Iowa State Coll., Ames, Iowa, 1931—. Hon. Pos.: Past Pres., Sigma Xi (local chapter); Tau Beta Pi; Phi Kappa Phi; Chi Epsilon. Mem.: Amer. Soc. of C. E.; Amer. Soc. for Engrng. Edn. (Mem., Natl. Coun., 1936-39; Chmn., Div. of Mechanics, 1936-39; Natl. Vice-Pres., 1943-44); Mem., Special Comm. on Aims and Scope of Engrng. Curricula, 1939-40; Amer. Concrete Inst. (Dir., 1937-39, 1945-46, Natl. Vice-Pres., 1947-48, Pres., 1949; Wason Medal for Most Meritorious Paper, 1939); Amer. Soc. Test. Materials; A.A.A.S. (Fellow); Soc. Amer. Mil. Engr. (Charter); Western Soc. Engr. (Life Mem.); Ia. Engrng. Soc. (Medal for Paper on Hoover (Boulder) Dam, 1937); Registered Engr., St. of Ia.; Osborn Rsch. Club, Ch., 1938; Highway Rsch. Bd. of Natl. Rsch. Coun., Amer. Relief Admin. Assn. Author: About 150 Titles Including: Engr. Foundation Arch Dam Report, Vol. II, 1934 (with J. L. Savage, I. E. Houk and Fredrik Vogt); A Manual of Materials Testing, 1939 (with Glenn Murphy and E. O. Bergman); Cement Products, Ency. Chem. Technol. (Kirk-Othmer), Vol III, pp. 438-500, 1949; Cement and Concrete, part 7, Urquhart's Civil Engrng. Handbook, 3rd Edition, 1950; Materials Testing, 1941. Contrb. to: Technical Pubs. such as Engrng. News-Record, Civil Engrng.; J.A. S.E.E.; Jour. Amer. Concrete Inst.; Technical Papers. War Record: 1st Lt., Engrs. (later Capt., Engrs. Res.); Service Medal with Star, 1917-18; Military Mapping, U. S. Borders in N. Mex. and Va., 1918, A.E.F. (G-2-C; 29th Engr.); Topog. Br. of Intelligence, 1919, with Herbert Hoover at Paris Hdq. (Amer. Relief Admin.). Travel: N. Amer.; England; Belgium; France. Achievements of Gen. Int.: Advised Informally with Lorado Taft on Construction of Fountain of Time, Chicago, 1920-21; Concrete Consultant, City of Denver on Eleven Mile Canyon Dam, 1930-31; Consultant U. S. Govt. on Concrete for Hoover (Boulder) Dam, 1931-33. Mem.: 3rd Joint Comm. on Specifications for Concrete, 1931-40. Recreation and Hobby: Rsch. in Materials. Listed in: Who's Who in Amer.; Who's Who in Engrng.; A.M.S. Special Int.; Engrng. Pedagogy, Curricula, Tchng. and Admin.

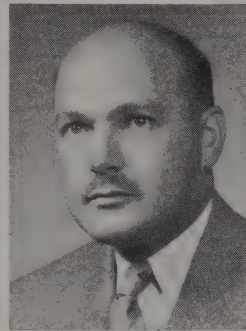
GILL, Bennington Pearson, Prof. of Math., City Coll. of the City of N. Y., N. Y., N. Y. **MATHEMATICS**.

GILLAN, Silas Lee, Consulting Mining Engr. and Geologist, 230 Webb Dr., Glendale, Calif. **MINING, GEOLOGY**.

GILLAND, Erna Grassmuck, Secy., Geography Section, World Federation Edn. Assn. and Assoc. Editor, Jour. Geography, 327 Wood St., California, Pa. **GEOGRAPHY**.

GILLASPY, Garrie C., Assoc. Prof., Chmn. Dept. of Anat., 1143 38th St., Des Moines, Ia. **GROSS AND NEURO-ANATOMY**. b. Lucas Co., Ia., Dec. 19, 1906. s. Thomas and Almeda (Smith) G. Edn.: B.A., I.S.T.C., 1928; M.S., Univ. of Okla., 1942. Exp.: Univ. of Minn., Gross Anat., Neuro Anat., 1936-38; Rsch., Washington Univ., 1938-39; Asst., Univ. of Okla. Med. Schl., 1939-41; Asst. Zool., Univ. of Kan., 1941-43; Fellow, Chicago Med. Schl., 1943-47; Chmn., Dept. Anat., Assoc. Prof., Des Moines Still Coll. of Osteopathy and Surgery, 1947—. Mem.: Ia. Acad. of Sci.; A.A.A.S. Ph.D. Dissertation: An Experimental Study of the Cranial Motor Nuclei in Reptilia. Author: A Case of Extreme Scoliosis with Associated Variations; Streamlined Rsch. Lab. Hobbies: Music; Cooking; Sewing; Gardening. Listed in: A.M.S. Special Int.; Chromatolysis, Neuro-Anatomy and Gross Anatomy.

GILLERMAN, Elliot, Geologist, U. S. Geol. Survey, Box 775, Silver City, N. Mex. **GEOLOGY**. b. St. Louis, Mo., July 21, 1913. s. Gus and Sophia (Sigan) G. Edn.: B.A., Wash. Univ. 1934; M.S., *ibid.*, 1937. m. Shirley Jo Hoffman, Sept. 23, 1951. Exp.: Topographic Engr., U. S. Coast and Geodetic Survey, 1943-44; Geologist, U. S. Geol. Survey, Silver City, N. Mex., 1944—. Mem.: Geol. Soc. of Amer.; A.A.A.S.; A.I.M.E.; Amer. Geog. Soc.; Geol. Soc. of Wash.; Sigma Xi. Contrb. to: Econ. Geol. Special Int.: Fluorspar Deposits.



GILLILAND, Edwin Richard, Mass. Inst. of Tech., Cambridge, Mass.

GILLIN, John (Philip), Rsch. Prof. of Anthrop., Univ. of N. C., Chapel Hill, N. C. **ANTHROPOLOGY**. b. Waterloo, Ia., Aug. 1, 1907. s. John Lewis and Etta (Shaffner) G. Edn.: B.A., Wis., 1927; M.A., *ibid.*, 1930; M.A., Harvard, 1931; Ph.D., Harvard, 1934. m. Helen Norgord of Albany, N. Y., 1934. d. Christian and Effie Norgord. c.: John Christian. Exp.: Asst., Wis., 1929-30; Asst., Harvard, 1931-32; Don., Sarah Lawrence, 1933-34; Staff, Peabody Mus., 1934-35; Asst. Prof. and Curator, Univ. of Utah, 1935-37; Asst. Prof. and Curator, Ohio State Univ., 1937-41; Assoc. Prof., Duke Univ., 1941-46; Res. Prof., Univ. of N. C., 1946—. Hon. Pos.: Chmn., Com. on Latin Amer., Natl. Rsch. Coun., 1945—; Pres., Arch. Soc. of N. C., 1946; Exec. Bd., Amer. Anthrop. Assn., 1949-52; Bd. of Dir., Human Rsch. Area Files, Inc. Mem.: Amer. Anthrop. Assn.; Amer. Sociol. Soc.; Sou. Sociol. Soc.; Soc. for Applied Anthrop.; Amer. Ethnological Soc.; N. C. Archaeological Soc.; Sigma Xi; Phi Kappa Phi; Alpha Kappa Delta; Alpha Kappa Lambda; Torch. Author: The Barama River Caribs of British Guiana, 1936, and many others. Contrb. to: Atlantic Monthly; Amer. Anthropologist; Amer. Sociol. Rev.; Sci. Monthly; Jour. of Personality. Ph.D. Dissertation: The Caribs. War Record: Mem., Bd. of Econ. Warfare, Attached to U. S. Embassy, Lima, Peru. Travel: Around the World; Europe; S. Amer. Hobby: Horse-back Riding. Listed in: Who's Who in Amer.; A.M.S.; Who Knows—and What; Who's Who in the South and Southeast. Special Int.: Modern Culture of Southern U. S.; Cultures and Peoples of Latin Amer.

GILLIS, Andrew Colin, Prof. of Neurol. and Hd. Dept., Univ. of Md. Schl. of Med., 1033 N. Calvert St., Baltimore, Md. **NEUROPSYCHIATRY**.

GILLSON, Joseph L., DuPont Co., Rm. D-8060 DuPont Bldg., Wilmington, Del. **INDUSTRIAL MINERALS**.

GILLULY, James, Rsch. Geologist, Geologic Div., U. S. Geol. Survey, Denver Fed. Center, Denver, Colo. STRUCTURAL GEOLOGY. b. Seattle, Wash., June 24, 1896. s. Charles Elijah and Louisa E. (Briegel) G. Edn.: B.S., Univ. of Wash., 1920; Ph.D., Yale, 1926. m. Enid A. Frazier, June 30, 1925. c.: Molly; Sally. Exp.: Jr. Geol. Natl. Refining Co., Lewistown, Mont., 1921; Geologic Aid to Rsch. Geol., U. S. Geol. Survey, Denver, Colo., 1921—; Prof. of Geol., Univ. of Calif., Los Angeles, Calif., 1938-50; Chmn. of Dept., ibid., 1945-47; Faculty Rsch. Lectr., ibid., 1948; Bownocker Lectr., Ohio State Univ., Columbus, Ohio, 1951. Hon. Pos.: Chmn., Cordilleran Sect., Geol. Soc. of Amer., 1940; Pres., Geol. Soc. of Amer., 1948; Councilor, Geol. Soc. of Amer., 1942-45; 1947-49; Councilor, Soc. of Econ. Geol., 1939-42; Chmn., Amer. Comm. on Stratigraphic Nomenclature, 1952—. Mem.: Natl. Acad. of Sci.; Amer. Acad. of Arts and Sci.; Wash. Acad. of Sci.; Natl. Rsch. Coun.; Geol. Soc. of Amer.; Mineralogical Soc. of Amer.; Soc. of Econ. Geol.; Amer. Assn. of Petroleum Geols.; Soc. of Econ. Mineralogists and Paleontol.; Amer. Geophys. Union; Amer. Geographic Soc.; Sigma Xi. Author: Principles of Geol. with A. C. Waters and A. O. Woodford, 1951. Contrb. to: U. S. Geol. Survey; Econ. Geol.; Amer. Mineralogist; Geologische Rundschau; Jour. of Geol.; Amer. Jour. of Sci. War Record: U.S.N.R.F., 1917-19. Special Int.: Copper Deposits; Petrol. and Tectonic Geol.; Geol. of the Great Basin.

GILMAN, Albert Franklin, Jr., Dir. of the Lab. of the Central Y.M.C.A. Schls., Chicago, Ill. CHEMISTRY. s. Albert Franklin and Agness Geneva (McGlynn) G. Edn.: Grad. of Keewatin Acad., St. Augustine, Fla.; Ph.B., Univ. of Chicago, 1925; A.M., ibid., 1927; M.S., ibid., 1938. m. Regina Rayman of Wash., Ind., 1930. c.: Albert Franklin, III; Regina Catherine. Exp.: Asst. Chem., Carnation Milk Products Co., 1922; Asst. Chem., Libby, McNeil and Libby, 1923; Chief Chem., Amer. Coconut Butter Co., 1924; Asst. Prof. of Chem., Central Y.M.C.A. Coll., 1925-43; Assoc. Prof., 1943-46; Hd., Dept. of Chem., Northern Ill. Coll. of Optometry, 1946-48; Dir., Lab., Central Y.M.C.A. Schls., 1948—. Fellow: A.A.A.S. Mem.: Amer. Chem. Soc.; A.A.U.P.; Delta Tau Delta; Union League Club of Chicago; Sons Amer. Revolution. Author: Inorganic Reaction; Organic Reactions; A Dictionary of Chem. Equations; Also Contributions to the Jour. on the Subjects of "Chem. Fluorescence" and "Contact Lens Solutions."



1925-43; Assoc. Prof., 1943-46; Hd., Dept. of Chem., Northern Ill. Coll. of Optometry, 1946-48; Dir., Lab., Central Y.M.C.A. Schls., 1948—. Fellow: A.A.A.S. Mem.: Amer. Chem. Soc.; A.A.U.P.; Delta Tau Delta; Union League Club of Chicago; Sons Amer. Revolution. Author: Inorganic Reaction; Organic Reactions; A Dictionary of Chem. Equations; Also Contributions to the Jour. on the Subjects of "Chem. Fluorescence" and "Contact Lens Solutions."

GILMAN, Alfred, Dept. of Pharmacol., Columbia Univ. Coll. of Physicians and Surgeons, N. Y., N. Y. PHARMACOLOGY.

GILMAN, Henry, Prof. of Organic Chem., Ia. State Coll., Ames, Ia. ORGANIC CHEMISTRY. b. Boston, Mass., May 9, 1893. s. David and Jane (Gordon) G. Edn.: B.S., Harvard, 1915; A.M., ibid., 1917; Ph.D., ibid., 1918. m. Ruth Shaw, July 20, 1929. c.: Jane; Henry. Exp.: Instr., Harvard, 1918-19; Assoc. in Chem., Univ. of Ill., 1919; Prof. of Organic Chem., Ia. State Coll., 1919—. Hon. Pos.: Fellow, A.A.A.S.; Chmn. Organic Div., A.C.S.; Consultant, Atomic Energy Comm.; Project Dir. of Chemical Corps. Mem.: Phi Beta Kappa; Sigma Xi; Phi Lambda Upsilon; Phi Kappa Phi; Natl. Acad. Sci. Author: Organic Chem.—An Advanced Treatise and others. Contrb. to: Jour. of A.C.S.; Jour. of Organic Chem. Ph.D. Dissertation: Beta-Ketonic Esters. War Record: With Chem. Warfare Service, World War I, Natl. Defense Rsch. work, 1940. Listed in: Who's Who in Amer.; Internatl. Who's Who; A.M.S.

GILMAN, Lauren Cundiff, Assoc. Prof. of Zool., Univ. of Miami, Coral Gables, Fla. GENETICS;

PROTOZOOLOGY, INVERTEBRATE ZOOLOGY. b. Bozeman, Mont., November 24, 1914. s. Ralph Webster and Pearl (Cundiff) G. Edn.: A.B., Baker Univ., 1936; Ph.D., Johns Hopkins Univ., 1940. Exp.: Asst. Prof. of Zool., Univ. of S. Dak., 1946-47; Assoc. Prof. of Zool., Univ. of Miami, 1947—. Mem.: Fla. Acad. of Sci.; A.A.A.S.; Assn. of Southeastern Biologists; Amer. Soc. of Protozoologists; Phi Beta Kappa; Sigma Xi; Beta Beta Beta; Gamma Alpha; Alpha Delta Sigma. Contrb. to: Amer. Naturalist; Biol. Bull. Ph.D. Dissertation: Mating Types in Diverse Races of Paramecium Caudatum. War Record: Inducted, 11 Aug., 1941; Discharged with Rank of Capt., 1946. Listed in: A.M.S.; Who Knows—and What. Special Int.: Protozoan Genetics.

GILMORE, Hugh Richmond, Jr., Curator, Army Med. Museum, Armed Forces Inst. of Pathol., Washington 25, D. C. PATHOLOGY. b. Emmlenton, Pa., Sept. 21, 1897. s. Hugh Richmond and Margaret Isabelle (Black) G. Edn.: M.D., Univ. of Pa., 1921. m. Edith Doebele, 1924. c.: Hugh Richmond, III; Edith Margaret. Exp.: Commissioned 1st Lieut., Regular Army Med. Corps, 1926; Served at General Dispensary, Washington, D. C., 1927-31; Served at Gorgas Hosp., Canal Zone, 1931-35; Served at Army Med. Museum, 1935-37; Served in Army Med. Center, 1937-39; Served at Gorgas Hosp., Canal Zone, 1940-41; C. O. Sixth Corps Area Lab., 1941-42; Served in North Africa and Italy, 1942-45; Promoted to Col., 1944; C. O., Second Army Area Lab., 1946-49; Chf., Pathol. and Allied Sciences Div., Office of the Surgeon General, 1949-53; Curator, Army Med. Museum, 1953—. Mem.: Fellow, A.M.A.; Fellow, Amer. Coll. Physicians; Fellow, Coll. Amer. Pathologists; Amer. Soc. of Clinical Pathologists; Amer. Assn. Pathologists and Bacteriologists; Assn. of Military Surgeons; Internatl. Assn. of Med. Museums; Soc. Amer. Bacteriologists; Phi Rho Sigma. Contrb. to: Amer. Jour. Pathol.; Annals of Internal Med.; Amer. Jour. Tropical Med. War Record: Awarded Legion of Merit and Bronze Star Medal by U. S.; Order of the Crown and Cross of Military Valor by Italy. Special Int.: Pathol.



1937-39; Served at Gorgas Hosp., Canal Zone, 1940-41; C. O. Sixth Corps Area Lab., 1941-42; Served in North Africa and Italy, 1942-45; Promoted to Col., 1944; C. O., Second Army Area Lab., 1946-49; Chf., Pathol. and Allied Sciences Div., Office of the Surgeon General, 1949-53; Curator, Army Med. Museum, 1953—. Mem.: Fellow, A.M.A.; Fellow, Amer. Coll. Physicians; Fellow, Coll. Amer. Pathologists; Amer. Soc. of Clinical Pathologists; Amer. Assn. Pathologists and Bacteriologists; Assn. of Military Surgeons; Internatl. Assn. of Med. Museums; Soc. Amer. Bacteriologists; Phi Rho Sigma. Contrb. to: Amer. Jour. Pathol.; Annals of Internal Med.; Amer. Jour. Tropical Med. War Record: Awarded Legion of Merit and Bronze Star Medal by U. S.; Order of the Crown and Cross of Military Valor by Italy. Special Int.: Pathol.

GILROY, Helen Turnbull, Asst. Prof. of Physics, Wilson Coll., Chambersburg, Pa. SPECTROSCOPY.

GILROY, John, Mgr., Equipment Rsch. and Development, Ohio Chem. and Surgical Equipment Co., 166 N. Prospect Ave., Madison, Wis. b. Hamilton, Ont., Can., Nov. 7, 1915. s. William E. and Elizabeth Anne (McKichan) G. Edn.: A.B., Harvard Univ., 1936; Ph.D., ibid., 1942. m. Ruth Anne Hussey, June 27, 1937. c.: Jean Mason and Gay Gilroy. Exp.: Rsch. Asst., Harvard Univ., Cambridge, Mass., 1936-38; Instr. in Physics, Optics, and Communication Engrng., ibid., 1938-42; Chief Inspector, Polarizing Instrument Co., New York City, 1942; Physicist, Air Reduction Co., Jersey City, N. J., 1943-46; Rsch. Mgr., Ohio Chem. and Surgical Equipment Co., Madison, Wis., 1946—. Mem.: Sigma Xi. Special Int.: Absorption of Extreme Ultra-Violet Radiation by Gases; Breathing Oxygen Regulators for High Altitude Aircraft; Surgical Equipment Design; Safety of Flammable Anesthetic Gases.

GILSON, Arthur Scott, Jr., Assoc. Prof. of Physiol., Wash. Univ. Schl. of Med., St. Louis, Mo. PHYSIOLOGY.

GILTNER, Ward, Dean, Veterinary Med., Mich. State Coll., East Lansing, Mich. BACTERIOLOGY.

GINGRICH, Wendell Daniel, Prof. of Bacteriol., Univ. of Tex. Med. Schl., Galveston, Tex. PARASITOLOGY, BACTERIOLOGY.

GINSBURG, Jekuthiel, Prof. and Hd., Dept. of Math., Yeshiva Coll., 186th St., N. Y., N. Y. MATHEMATICS.

GIRDEN, Edward, Asst. Prof., Dept. of Psychol., Brooklyn Coll., Brooklyn, N. Y. **PSYCHOLOGY**.

GIRTON, Raymond Elwood, Prof. of Plant Physiol., Purdue Univ., Lafayette, Ind. **PLANT PHYSIOLOGY**.

GISBORNE, Harry Thomas, Chf., Div. Forest Production Rsch., Northern Rocky Mountain Forest and Range Expt. Station, Missoula, Mont. **FORESTRY**.

GISH, Wesley Gibson, Vice-Pres. in Chg. Land and Exploration, Deep Rock Oil Corp., 241 E. 24th St., Tulsa, Okla. **PETROLEUM GEOLOGY**.

GITTER, A. Josephine, 330 W. 58th St., N. Y., N. Y. **CERAMICS**.

GIVEN, Guy Cumston, Patent Specialist, E. I. du Pont de Nemours and Co., Inc., 1300 N. Harrison St., Wilmington, Del. **CHEMISTRY**.

GIVENS, Maurice Hope, P. O. Box 116, Skyland, N. C. **CHEMISTRY**.

GJULLIN, Claude Melvin, Entomologist, Bureau Entomol. and Plant Quarantine, Box 332, Corvallis, Ore. **ENTOMOLOGY**.

GLADDEN, Sanford Charles, Asst. Prof. of Physics, La. State Univ., Baton Rouge, La. **ELECTRICITY**.

GLADDING, Ernest Knight, Dir. of Development Dept., E. I. du Pont de Nemours and Co., Inc., Wilmington, Del. **CHEMICALS**.

GLADFELTER, Millard Elwood, Provost and Vice-Pres., Temple Univ., Broad St. and Montgomery Ave., Philadelphia, Pa. **EDUCATION**.

GLANCY, Warren Eugene, Mgr. Labs., Hood Rubber Co., Watertown, Mass. **RUBBER, PLASTICS**.

GLASGOW, Hugh, Prof. and Hd., Div. of Entomol., N. Y. State Agri. Expt. Station, 665 Castle St., Geneva, N. Y. **ENTOMOLOGY**.

GLASGOW, Josephine Burns, 1013 Washington Ave., Albany, N. Y. **MATHEMATICS**.

GLASOE, P. Maurice, Prof. of Chem., St. Olaf Coll., Northfield, Minn. **CHEMISTRY**.

GLASS, Hiram Bentley, Dept. of Biol., Johns Hopkins Hosp., Baltimore, Md. **GENETICS**.

GLASS, Jewell Jeannette, Geologist, U. S. Geol. Survey, Dept. of Interior, 514 19th St., N. W., Washington, D. C. **GEOLOGY**.

GLASS, Leroy C., Calver-Stockton Pl., Canton, Mo. **BIOLOGY**.

GLASS, Stanley W., Rsch. Chemist and Engr., Natl. Carbon Co., 2619 Brookview Blvd., Parma, Cleveland, Ohio. **CHEMISTRY**.

GLASSER, Otto, Prof. of Biophysics, Frank E. Bunts Ednl. Inst., Cleveland Clinic, 2020 E. 93rd St., Cleveland 6, Ohio. **BIOPHYSICS**.



b. Saarbrücken, Germany, Sept. 2, 1895. s. Alexander and Lina (Gentsch) G. Edn.: Ph.D., Univ. of Freiburg, 1919. m. Emmy von Ehrenberg, July 19, 1922. c.: Hannelore. Exp.: Asst. and Instr., Radiological Institute, Univ. of Freiburg, 1919-21; Asst. and Instr., Institute Phys. Found. Med., Univ. of Frankfurt, 1921-22; Biophysicist, Howard Kelly Hosp., Baltimore, Md., 1922-23; Biophysicist, Cleveland Clinic, Cleveland, Ohio, 1923-25; Asst. Prof. of Biophysics, N. Y. Post-Grad. Med. Schl., Columbia Univ., N. Y., N. Y., 1925-27; Hd.,

Dept. of Biophysics, Cleveland Clinic, Cleveland, Ohio, 1927—; Consulting Physicist, U. S. Veterans Admin., Washington, D. C., 1946—; Special Examiner for Amer. Bd. of Radiology, 1936—. Mem.: A.A.A.S., Fellow; Amer. Coll. Radiol., Fellow; Amer. Physical Soc., Fellow; Amer. Radium Soc.; Amer. Roentgen Ray Soc.; Assn. History of Med.; Cleveland Acad. Med.; Cleveland Med. Lib. Assn.; Cleveland Physics Soc.; Cleveland Radiol. Soc.; Detroit Roentgen and Radium Soc.; Deutsche Röntgen Ges.; History of Sci. Soc.; Ohio Acad. Sci., Fellow; Radiation Rsch. Soc.; Radiol. Soc. of N. Amer.; Sigma Xi; Soc. Exptl. Biol. and Med. Author: Med. Physics, 1944; Physical Med., 1950; Physical Foundations of Radiology, 1952. Contrb. to: Amer. Jour. of Roentgenol. Radiology; Strahlentherapie; Sci.; Proc. Natl. Acad. of Sci.; Arch. Physical Med.; Amer. Jour. Physiol.; Proc. Amer. Philos. Soc. Gen. Int.: Biographer of W. C. Roentgen, the Discoverer of X-Rays; Inventor of Condenser Dosimeter for Measurement of X-Rays and Radiations from Radioactive Substances. Special Int.: Med. Physics; Ionizing Radiations; X-Ray Diffraction; Hemorrhagic Shock.

GLASSTONE, Samuel, Frick Chem. Lab., Princeton Univ., Princeton Univ., Princeton, N. J. **PHYSICAL CHEMISTRY**.

GLATTFIELD, John William Edward, Assoc. Prof., Univ. of Chicago, Chicago, Ill. **CHEMISTRY**.

GLAZE, Francis Warner, Technologist and Asst. Chf., Glass Section, Mineral Products Div., Natl. Bureau of Standards, Washington, D. C.



GLASS. b. Delaware Co., Ohio, Aug. 29, 1895. s. William Lewis and Bessie Gail (Cline) G. Edn.: B.S., Univ. of Pa., 1918; Ch.E., ibid., 1944. m. Ruthanna Stringer, Mar. 21, 1917. c.: Francis Warner, Jr.; Paul Fenimore; Norman Cline and Ruthanna Stringer Glaze Lehnert. Exp.: Rsch. Chemist, Scovill Mfg. Co., Waterbury, Conn., 1919-21; Electrician's Helper and Chemist, Do., 1921-23; Electrician's Mate, Munson S. S. Co., N. Y. C., 1921-25; Chemist, U. S. Navy Yard, Portsmouth, Va., 1923-25; Chemist, Asiatic Station, U. S. Naval Station, Cavite, P. I., 1925-28; Chemist, Analytical and Glass, Natl. Bureau of Standards, Washington, D. C. 1928-41; Technologist and Asst., Section Chf., ibid., 1941—. Mem.: Amer. Chem. Soc.; Amer. Ceramic Soc.; Wash. Soc. of Engrs. and Inst. of Ceramic Engrs. Contrb. to: Indus. and Engrng. Chem.; Chem. and Metallurgical Engrng.; N.B.S. Jour. of Rsch.; Anal. Chem.; Jour. of Amer. Ceramic Soc.; Special Int.: Analysis of Glass; The Production and Properties of Glass; The Optical Glass Industry; Ultraviolet and Infrared Transmitting Glasses; Filter Glasses; Constitution of Glass.

GLAZNER, John Frank, Prof. and Hd., Dept. of Geography, State Tchrs. Coll., 511 N. Pelham Rd., Jacksonville, Ala. **GEOLOGY, GEOGRAPHY**.

GLEASON, Henry Allan, Sr., 77 Strickland Rd., Cos Cob, Conn. **PLANT TAXONOMY**.

GLENN, Earl Rouse, Prof. of Physics and Chmn., Sci. Dept., N. J. State Tchrs. Coll., Upper Montclair, N. J. **PHYSICS**.

GLENN, Leonidas Chalmers, Prof. Emer. of Geol., Vanderbilt Univ., 2111 Garland Ave., Nashville, Tenn. **ENGINEERING**.

GLENNAN, T. Keith, Pres. of Case Inst. of Tech., Cleveland, Ohio. **ELECTRICAL ENGINEERING**.

GLICK, Dudley Peters, Mgr. of Standardization, Sharp and Dohme, Inc., 508 Sylvan Ave., Glen Olden, Pa. **BACTERIOLOGY**.

GLICK, Perry Aaron, Entomologist, Bur. Entomol. and Plant Quarantine, Tex. A. and M. Coll., Coll. Station, Tex.



**ECOL-
OGY; INSECTS IN RE-
LATION TO CONSER-
VATION; INSECT POP-
ULATIONS IN COT-
TON FIELDS AS AF-
FECTED BY INSECTI-
CIDES; INSECT MI-
GRATION AND DIS-
SEMINATION; RE-
SPONSE OF INSECTS
TO CERTAIN ULTRA-
VIOLET AND VISIBLE
RADIATION.** b. Ham-
ilton, Mo., Dec. 21, 1895.
s. M. M. and Eva Alice
(Morgan) G. Edn.:
A.B., Univ. of Ill., 1921;
M.S., *ibid.*, 1922. m.
Jessie Odom, Nov. 10,
1928. c.: Dorothy (Step-

daughter). Exp.: Asst. Entomologist, Arizona Comm. of Agriculture and Horticulture, 1922-23; Plant Quarantine Inspector, Federal Horticultural Bd., N. Y. and Washington, D. C., 1923-25; Asst. Entomologist, Bureau of Entomology, La., Ga., Tex., 1925-40; Assoc. Entomologist, *ibid.*, 1940-45; Entomologist, Bureau of Entomology and Plant Quarantine, *ibid.*, 1945—. Mem.: Entomological Soc. of Amer., Fellow; Southwestern Br. Entomological Soc. of Amer.; Fellow, A.A.A.S.; Fellow, Tex. Acad. of Sci.; Royal Entomological Soc. of London, Fellow; Sigma Xi; Kappa Delta Pi; Kappa Alpha Mu; Coll. Station C. of C.; Lions Internatl. Contrb. to: Jour. of Econ. Entomology; etc. Special Int.: Insect Ecology.

GLIDDON, Gordon Harkness, Business Officer, Dartmouth Coll. Lib., Hanover, N. H. **PHYSICS.**

GLOCKLER, George, Prof. and Hd., Depts. of Chem. and Chem. Engrng., State Univ. of Iowa, Iowa City, Iowa. **PHYSICAL CHEMISTRY.**

GLORIG, Aram, SPEECH AND HEARING.

GLOVER, Benjamin Curtis, Prof. of Math., Otterbein Coll., 220 Hiawatha Ave., Westerville, Ohio. **MATHEMATICS.**

GLOYD, Howard Kay, Dir. of Museum, Chicago Acad. Soil, 2001 N. Clark St., Chicago, Ill. **HERPETOLOGY.**

GLOYER, Walter O., retired, 106 Lyceum St., Geneva, N. Y. **PLANT PATHOLOGY.**

GLUECK, Eleanor Touroff, Rsch. Assoc., Special Studies in Criminology, Harvard Law School, Cambridge 38, Mass.



**JUVENILE DELIN-
QUENCY.** b. N. Y. C.,
Apr. 12, 1898. d. Bern-
ard L. and Anna
(Wodzislowski) G.
Edn.: M.Ed., Harvard
Univ., 1923; Ed.D., *ibid.*,
1925. m. Sheldon
Glueck, Apr. 16, 1922.
c.: Anitra Joyce. Exp.:
Hd. Worker, Welfare
Centre, Dorchester,
Mass., 1921-22; Rsch.
Assoc., Dept. of Soc.
Ethics, Harvard Univ.,
Cambridge, Mass., 1925-
28; Rsch. Assoc., Har-
vard Law Schl., *ibid.*,
1928—. Mem.: Amer.
Acad. of Polit. and Soc.

Sci.; Internatl. Soc. of Criminol.; Pi Gamma Mu. Co-Author: (with Sheldon Glueck); *Delinquents in the Making*, 1952; *Unraveling Juvenile Delinquency*, 1950; *After Conduct of Discharged Offenders*, 1945; *Criminal Careers in Retrospect*, 1943; *Juvenile Delinquents Grown Up*, 1940; *Later Criminal Careers*, 1937; *Preventing Crime*, 1936; *Five Hundred Delinquent Women*, 1934; *One Thousand Juvenile Delinquents*, 1934; 500 *Criminal Careers*, 1930. Author: *The Community Use of Schls.*, 1927; *Extended Use of Schl. Bldgs.*, 1927. Contrb. to: *The*

British Jour. of Delinquency; *Survey Mag.*; *Mental Hygiene*; *Harvard Ednl. Rev.*; *Jour. of Criminal Law and Criminol.* and similar *Jours.*; *Soc. Sci.*; *Sci. Digest*. Special Int.: *Criminol. with Special Reference to Causes of Juvenile Delinquency and Results of Various Forms of Peno-Correctional Treatment*; *Prediction of Delinquency.*

GLOYD, Leonora Katherine Doll, Lab. Asst., Ill. Natural History Survey, Urbana, Ill. **ENTOMOL-
OGY, ODONATA: TAXONOMY AND PHYLOGENY.** b. Larned, Kans., Aug. 29, 1902. d. Drs. George and Sarah Katherine (Randle) Doll. Edn.: B.Sc., Kan. State Coll., 1924; M.S., *ibid.*, 1925. m. Howard K., Sept. 25, 1925, (div.). c.: Helen Katherine; Roger Scott. Exp.: Graduate Asst., Dept. of Zool., Kans. State Coll., Manhattan, Kans., 1923-24; Rsch. Asst., Museum of Zool., Univ. of Mich., Ann Arbor, Mich., 1929-37; Lab. Asst., Ill. Natural Hist. Survey, Faunistic Surveys, Insect Identification Section, Lab. Asst., Ill. Natural Hist. Survey, Urbana, Ill., 1947—. Hon. Pos.: Hon. Curator of Insects, Chicago Acad. of Sci., 1938-47. Mem.: Soc. of Systematic Zool.; Phi Alpha Mu; Phi Kappa Phi; Sigma Xi; Sigma Delta Epsilon. Contrb. to: *Oec. Papers*, Mus. of Zool., Univ. of Mich.; *Entomological News*; *Bull. of the Chicago Acad. of Sci.* Special Int.: *Taxonomy and Phylogeny in the order Odonata.*

GLUECK, Sheldon, Harvard Law Schl., Cambridge 38, Mass. **CRIMINOLOGY.**

GOBLE, Frans Cleon, Biol. Consult., Charlotte Amalie, St. Thomas, U. S. Virgin Islands. **PATHOLOGY, PARASITOLOGY, CHEMOTHERAPY AND TOXICITY.** b. Chicago, Ill., July 11, 1913. s. Leroy Truman and Winifred Eugenie (McKee) G. Edn.: B.S., Battle Creek Coll., 1933; M.S., Univ. of Mich., 1934; Sc.D., *ibid.*, 1939. Exp.: Tchng. Fellow in Biol., The Rice Inst., Houston, Tex., 1934-35; Tech. Asst. in Histol., Univ. of Mich., Ann Arbor, Mich., 1935-38; Pathol., N. Y. State Bur. of Game, 1938-45; Hd., Lab. of Pathol. and Sr. Investigator in Chemotherapy, Sterling-Winthrop Rsch. Inst., 1945-51; Pathol., Rsch. Div., Abbott Labs., N. Chicago, Ill., 1951-52. Mem.: Amer. Assn. of Pathol. and Bacteriol.; Amer. Soc. of Parasitol.; Amer. Soc. of Tropical Med. and Hygiene; Fourth Internatl. Congr. of Trop. Med. and Malaria; Ill. Soc. for Med. Rsch.; N. Y. Acad. of Sci.; Royal Soc. of Tropical Med. and Hygiene; Soc. for Exptl. Biol. and Med.; Soc. of Ill. Bacteriol.; Soc. of Protozool.; Sigma Xi. Contrb. to: *Amer. Jour. of Trop. Med. and Hygiene*; *Annals of N. Y. Acad. of Sci.*; *Antibiotics and Chemotherapy*; *Cereal Chem.*; *Jour. of Mammalogy*; *Jour. of Nutrition*; *Jour. of Parasitol.*; *Jour. of Pharmacol. and Exptl. Therapeutics*; *Jour. of Wildlife Mgmt.*; *Bull. Brooklyn Entomol. Soc.*; *Tropical Med. and Hyg. News*. War Record: Med. Dept., U. S. Army, 1943. Special Int.: *Testing of New Synthetic Organic Chems. and Antibiotics for Subacute and Chronic Toxicity and for Chemotherapeutic Activity in Exptl. Trypanosomiasis, Malaria, Schistosomiasis, Tuberculosis and Other Infectious Diseases.* Pathol. and Hematol. Studies Related to the Above. Relation of Chem. Structure to Biol. Activity. Taxonomy of Lungworms and other Parasites of Mammals and Birds. Irritation and Tolerance Tests on Pharmaceutical Preparations.

GODBEY, Chauncey Barger, Prof. of Genetics, Tex. A. and M. Coll., College Station, Tex. **GENETICS.**

GODBEY, John Campbell, Hd., Dept. of Chem. and Chmn., Div. of Natural and Applied Sci., Southwestern Univ., Georgetown, Tex. **CHEMISTRY.**

GODDARD, David Rockwell, Prof. of Botany, Chmn. of Dept., Univ. of Pa., Philadelphia 4, Pa. **PLANT PHYSIOLOGY AND BIOCHEMISTRY.** b. Carmel, Calif., Jan. 3, 1908. s. Pliny Earle and Alice (Rockwell) G. Edn.: A.B., Univ. of Calif., 1929; M.A., *ibid.*, 1930; Ph.D., *ibid.*, 1933. m. 1st Doris Martin, Aug. 21, 1933, (dec.). m. 2nd Katharine Evans, 1952. c.: Alison and Robert M. Exp.: Univ. Fellow, Univ. of Calif., Berkeley, 1930-32; Tchng. Fellow, *ibid.*, 1932-33; Natl. Rsch. Council Fellow, Rockefeller Inst. of Med. Rsch., 1933-35; Instr., Univ. of Rochester, Rochester, N. Y., 1935-38; Asst. Prof., *ibid.*, 1938-41; Assoc. Prof., *ibid.*, 1941-44; Prof., *ibid.*, 1945; Prof., Univ. of Pa., Philadelphia,

Pa., 1946—; Chmn. of Dept., *ibid.*, 1952—. Hon. Pos.: Stephen Hales Award of Amer. Soc. for Plant Physiol., 1948. Mem.: Natl. Acad. of Sci.; Bot. Soc. of Amer.; Amer. Soc. of Plant Physiol.; Soc. of Gen. Physiol., (Pres., 1948). Author: Phys. Chem. Cells and Tissues, 1945. Contbr. to: Amer. Jour. of Botany; Editor in Chf., Plant Physiol.; Assoc. Editor Quart. Rev. Biol.; Nature; Sci.; Jour. Biol. Chem.; Biochem. Jour.; Jour. Gen. Physiol.; Physiol. Plantarum; Growth; Jour. of Infect. Diseases. Special Int.: Cellular Respiration; Enzymes; Growth.

GODDARD, Henry Newell, retired, Rt. 2, Madison, Wis. ENTOMOLOGY, ORNITHOLOGY.

GODDARD, Verz Rogers, Assoc. Prof. and Acting Chmn., Dept. of Home Econ., Univ. of Calif., Los Angeles, Calif. FOOD CHEMISTRY, NUTRITION.

GODDIER, J. M., Stanford Univ., Stanford, Calif. APPLIED MECHANICS.

GODFREY, Edward S., Jr., Commissioner of Health, N. Y. State Dept. of Health, 235 Lenox Ave., Albany, N. Y. PUBLIC HEALTH.

GODFREY, George Harold, Plant Pathologist, Tex. Agri. Expt. Substation 15, P. O. Box 172, Weslaco, Tex. PLANT PATHOLOGY.

GODWIN, Julius George, Staff Mem., Jewish Hosp., St. Louis, Mo., 4456 Natural Bridge Ave., St. Louis 15, Mo. DENTISTRY. b. Munich, Germany, Mar. 14, 1915. s. George and Sophie (Lewin) G. Edn.: D.D.S., Wash. Univ., 1941. m. Florence Silk, July 9, 1950. c.: Gary Stephen. Exp.: Intern and Residency in Oral Surg., and Anesthesia, Jefferson Davis Hosp., Houston, Tex., 1941-43; Instr. in Pre-clin. Subjects, St. Louis Univ. Dent. Schl., St. Louis, Mo., 1943-44; Instr. in Anesthesia, Exodontia and Oral Surg., *ibid.*, 1944-48; Staff Mem., Jewish Hosp., St. Louis, Mo., 1952—. Mem.: Amer. Dental Assn.; Internat. Assn. for Dental Rsch.; Internat. Anesthesia Rsch. Soc.; A.A.A.S.; Fed. Dentaire Internat.; Sigma Alpha Mu; Omicron Kappa Upsilon. Contbr. to: Jour. Amer. Dental Assn.; Dental Items of Interest; Amer. Jour. of Orthodont. and Oral Surg.; Jour. Lancet; Jour. Mo. Dental Assn.; Dental Digest. Special Int.: Exodontia and Oral Surgery, Anesthesia and Radiography.

GOETSCH, Emil, Prof. of Surgery, Long Island Coll. of Med. and Surgeon-in-Chf., Long Island Coll. Hosp., 2 Montague Terrace, Brooklyn, N. Y. MEDICAL SCIENCES.

GOETZ, Alexander, Assoc. Prof. of Physics, Project Dir., Scientific Consultant, Calif. Inst. of Tech., Pasadena, Calif. MOLECULAR PHYSICS; PHYSICAL CHEMISTRY. b. Wiesbaden, Germany, Nov. 17, 1897. s. Dr. Carl and Ellinor (Elbers) G. Edn.: Ph.D., Univ. of Goettingen, 1921. m. Sylvia Scott of Chestnut Hill, Philadelphia, Pa., June 29, 1936. d. Mr. and Mrs. Samuel Bryan Scott. c.: Alexander Franklin Hermann; Ellinor Margaretta. Exp.: Instr. and Prof. of Physics, Univ. of Goettingen, 1921-23; Rockefeller Fellow at Calif. Inst. of Tech., 1927-29;



Visiting Guest Prof. at Univs. in Japan and China, 1929-30; Assoc. Prof. of Physics, Calif. Inst. of Tech., 1930—; Rsch. Dir. of Rare Metals Inst., 1939-46; Scientific Advisor to Pub. Health Dept. of Mexican Govt., 1945, 1947; Scientific Consultant to the Chem. Corps, 1946—; Scientific Consultant to Pub. Health Service, 1950—. Mem.: Amer. Physics Soc.; Inst. of Metals; A.A.A.S.; Sigma Xi; Soc. of Amer. Bacteriol.; Sigma Xi; Los Angeles Yacht Club. Author: 70-80 Articles in Scientific and Tech. Jours. Ph.D. Dissertation: Sekundare Elektronen-Emission in Gluekatodenroehren. Travel: Europe. Gen. Int.: Emergency Methods for Ren-

dering Sea-Water Potable, Application of Chemico-Physical Prins. to Microbiological Problems. Hobbies: Music; Sailing. Listed in: A.M.S.; Who's Who in the World; Who Knows— and What; Who's Who in the Pacific Coast. Special Int.: Application of Molecular Phys. and Phys. Chem. to Surface Phenomena and Microbiol. Problems.

GOHEEN, Gilbert Earl, Dir. of Rsch. and Development, J. T. Baker Chem. Co., Phillipsburg, N. J.



ORGANIC CHEMISTRY. b. Barry, Ill., May 8, 1912. s. William M. and Nettie May (Thompson) G. Edn.: B.S., Univ. of Ill., 1934; M.S., Univ. of Iowa, 1935; Ph.D., *ibid.*, 1938. m. Eleanor V. Boots, Aug. 19, 1939. c.: E. Virginia; Elizabeth M. and William E. Exp.: Rsch. Chemist, Sun Oil Co., Norwood, Pa., 1938-42; Chem., Process Development Dept., Gen. Aniline Works, 1942-49; Asst. to Dir. of Rsch. and Assoc. Dir. of Central Rsch. Lab., Gen. Aniline and Film Corp., 1949-52; Dir. of Rsch. and Devel., J. T. Baker Chem. Co., Phillipsburg, N. J., 1952—. Mem.: Amer. Chem. Soc.; Amer. Assn. Textile Chemists and Colorists; Phi Lambda Upsilon; Alpha Chi Sigma; Sigma Xi; Phi Kappa Phi. Contbr. to: Jour. Amer. Chem. Soc.; Indus. Engrng. Chem.; Inorganic Syntheses; Encyclopedia of Chem. Tech. Special Int.: Haloamines and Their Reaction with Ketenes; Pyrrolidines; Conversion of Naphthenic Acids to Naphthene Hydrocarbons; Multicyclopentyl Hydrocarbons; Dyes, Color Formers; Detergents; Utilization of Tech. Information.

GOIN, Coleman Jett, Assoc. Prof. of Biol. Sci., Univ. of Fla., Gainesville, Fla. HERPETOLOGY. b. Gainesville, Fla., Feb. 25, 1911. s. Newbold L. and Mariam (Jett) G. Edn.: B.S., Univ. of Fla., 1939; M.S., *ibid.*, 1941; Ph.D., *ibid.*, 1946. m. Olive Bown, June 7, 1940. c.: Olive Lynda; Coleman Jett, Jr. Exp.: Instr., Univ. of Fla., Gainesville, Fla., 1945-47; Asst. Prof., *ibid.*, 1947-51; Assoc. Prof., *ibid.*, 1951—. Vice-Pres., Amer. Soc. Ichthyologists and Herpetologists, 1942-47; Treas., *ibid.*, 1952—. Rsch. Assoc., Carnegie Museum, 1950. Mem.: Amer. Soc. of Ichthyologists and Herpetologists; Herpetologists' League; Fla. Acad. Sci.; Soc. for the Study of Evolution; Soc. of Systematic Zool.; Nat. Hist. Soc. of Jamaica; Sigma Xi; Phi Sigma; F. and A. M. Contbr. to: Copeia; Annals Carnegie Museum; Herpetologica; Fla. Entomologist; Proc. New England Zool. Club; Proc. Fla. Acad. Sci.; Fauna; Natural Hist. Miscellanea; etc. Special Int.: Ecology, Evolution and Genetics of the Amphibia.

GOJDICS, Mary, Prof. of Biol., Barat Coll., Lake Forest, Ill. PROTOZOOLOGY. b. Horváti, Hungary, Aug. 16, 1900. d. Elias and Mary (Happel) G. Edn.: B.S., Pa. State Coll., 1922; M.A., Univ. of Wis., 1931; Ph.D., *ibid.*, 1933. Exp.: Special Tehr., Carson Coll. for Orphan Girls, Flourentown, Pa., 1922-23; Sci. Tehr., Carrolltown, H. S., Pa., 1924-25; Tchng. Asst. in Zool., Univ. of Wis., Madison, Wis., 1929-34; Asst. Prof. and Prof. of Biol., Duchesne Coll., Omaha, Neb., 1934-42; Prof. of Biol., Barat Coll., Lake Forest, Ill., 1942—. Mem.: A.A.A.S.; Amer. Microscopical Soc.; Soc. of Protozool.; Amer. Phycol. Soc.; Sigma Delta Epsilon; Sigma Xi. Contbr. to: Amer. Microscopical Soc. Special Int.: Taxonomy of Euglena.

GOKHALE, Vishnu Dattatreya, Chmn. and Prof. of Math., Atlanta Univ., Atlanta, Ga. SET TOPOLOGY. b. Poona, India, Feb. 24, 1892. s. Dattatreya and Savitri (Bhave) G. Edn.: B. A., Univ. of Bombay, 1911; M.A., *ibid.*, 1913; Ph.D., University of Chicago, 1922. m. Pilar Garces of Philippines, Oct. 13, 1949. Exp.: 1914-17, Prof. of Math., Fergusson Coll.; 1922-23, Ext. Instr., Univ. of Chicago; 1923-25, Assoc. Prof.; 1925-46, Prof., Univ. of the Philippines; Acting Hd. of the Dept., 1924-26; 1934-36; 1946-50, Lectr. in Math., Rutgers Univ.; 1950, Chmn. and Prof. of

Math., Atlanta Univ. Mem.: Amer. Math. Soc.; Math. Assn. of Amer.; Sigma Xi. Ph.D. Dissertation: Concerning Compact Kurschak Fields. Travel: Japan; Canada. Hobbies: Listening to Symphonic Music.

GOLAND, Martin, Assoc. Dir. for Engrng., Midwest Rsch. Inst., 4049 Pennsylvania Ave., Kansas City 2, Mo., Also Editor, Applied Mechanics Reviews. **ENGINEERING RESEARCH**. b. N. Y., N. Y., July 12, 1919. s. Herman and Josephine (Bloch) G. Edn.: M.E., Cornell Univ., 1940. m. Charlotte Nelson, Oct. 16, 1948. c.: Claudia. Exp.: Instr. in Mechanics of Engrng., Cornell Univ., Ithaca, N. Y., 1940-42; Section Hd. of Structures Dept. of the Rsch. Labs., Curtiss-Wright Corp., 1942-46; Chmn. and Assoc. Dir. of Engrng., Midwest Rsch. Inst., Kansas City, Mo., 1946—. Mem.: A.S.M.E.; S.E.S.A.; Sigma Xi; Tau Beta Pi; Inst. of Aeronautical Sci.; Comm. on Aircraft Construction, N.A.C.A.; Regional Councilor, off. of Ordnance Rsch.; Chmn., Subcomm. on Vibration and Flutter of the Natl. Advisory Comm. for Aeronautics. Contrb. to: Jour. Applied Mech.; Jour. of Aeronautical Sci.; Exptl. Stress Analysis; Jour. of the Franklin Inst.; etc. Special Int.: Engrng. Rsch. and Development; Applied Mechanics.

GOLAY, Marcel J. E., Squier Signal Lab., Fort Monmouth, N. J. **ELECTRONICS**.

GOLDBERG, Harry Jeol, Pharmacist, Sinai Hosp., 2707 Pennsylvania Ave., Baltimore, Md. **PHARMACY**.

GOLDBERG, Michael, Branch Engr., Fire Control Rsch. and Development, Bureau of Ordnance, Navy Dept., Washington, D. C. **ORDNANCE ENGINEERING AND GEOMETRY**. b. N. Y., N. Y., Nov. 13, 1902. s. Harry and Sarah (Pastor) G. Edn.: B.S., Univ. of Pa., 1925; M.A., George Wash. Univ., 1929. m. Goldie Back, Aug. 15, 1930. c.: Jeremy R. and Susan D. Exp.: Elec. Engr., Philadelphia Elec. Co., Philadelphia, Pa., 1925-26; Ordnance Engr., Bureau of Ordnance, Navy Dept., Washington, D. C., 1926—. Mem.: Amer. Math. Soc.; Math. Assn. of Amer.; A.A.A.S.



Phil Soc. of Wash.; Wash. Acad. of Sci.; Instrument Soc. of Amer.; Sigma Xi. Contrb. to: Engrng. and Math. Papers in Transactions of the A.S.M.E.; Amer. Math. Monthly; Schl. Sci. and Math.; Jour. of Math. and Physics; Scripta Mathematica. Special Int.: Polyhedra; Problem-solving Mechanisms; Space Linkages; Singular Mechanisms; Math. Recreations.

GOLDBERG, Samuel A., Pathologist and Dir. of Lab., Presbyterian Hosp., 27 S. Ninth St., Newark, N. J. **PATHOLOGY**.

GOLDBERG, Samuel David, Owner, Graham Chemical Co., 142-24 Pershing Crescent, Jamaica, N. Y. **CHEMISTRY**.

GOLDBERG, Richard Jay, Project Assoc., Chem. Dept., Univ. of Wis., Madison, Wis. **PHYSICAL CHEMISTRY**. b. Des Moines, Iowa, July 22, 1923. s. Jack and Zena (Cohan) G. Edn.: B.S., Northwestern Univ., 1945; M.S., ibid., 1947; Ph.D., Calif. Inst. of Tech., 1952. m. Rita Jacobson, Apr. 28, 1946. c.: Sally Jean and Martin Douglas. Exp.: Chemist for Tenn. Eastman, Oak Ridge, Tenn., 1944-46; Project Assoc., Univ. of Wis., Madison, Wis., 1951—. Mem.: Phi Beta Kappa; Sigma Xi. Contrb. to: Jour. Chem. Phys.; Jour. Immunol.; Jour. Amer. Chem. Soc.; Jour. Phys. Chem.; Trans. Faraday Soc.; Fed. Proceedings. War Record: U. S. Army, 1943-46. Special Int.: Thermodynamic Interactions; States of Aggregation; Antibody-Antigen Reactions.

GOLDBERT, Bernard, Dir. of Rsch., Schori Process Corp., 8-11 43 Rd., Long Island, N. Y. **CORROSION**.

GOLDFEDER, Anna, Dir., Cancer Rsch. Lab., Dept. of Hospitals, City of New York, New York Univ., 444 East 52 St., New York City, N. Y. **RADIO-BIOLOGICAL RESEARCH IN THE FIELD OF CANCER**. b. Poland, June 25, 1897. d. Harry and Theresa (Friedman) G. Edn.: D.Sc., Karl's Univ., Prague, Czechoslovakia. Exp.: Rsch. Asst. Experimental Pathology, Masaryk Univ., Brno, Czechoslovakia, 1923-25; Rsch. Assoc., ibid., 1925-28; Fellowship, Cancer Rsch., Vienna, 1928-29; Rsch. Work, Masaryk Univ., 1929-31; Cancer Rsch., Lenox Hill, New York City, N. Y., 1931-



33; Dept. of Biological Chem., Harvard Univ. Med. Schl., Boston, Mass., 1933-34; Dept. of Bacteriol. and Immunol., Columbia Univ., N. Y., N. Y., 1934-35; Rsch. Fellow in the Cancer Div., Dept. of Hospitals, City of New York, 1934; Rsch. Fellow in the Third Surgical Div., N. Y. Univ. Med. Coll. and Bellevue Hospital, New York, N. Y., 1934-44; Rsch. Assoc., N. Y. Univ. Grad. Schl. of Arts and Sci., N. Y., 1944—. Contrb. to: Casopis Ceskeh Lekaru; Biologické Lysty Masarykovy; Exp. Pathology; Radiology; Amer. Jour. Cancer; Med. Women's Jour.; Exp.: Biol. and Med. Mem.: Amer. Assn. for Cancer Rsch.; Soc. for Experimental Biol. and Med.; Amer. Physiological Soc. and Radiological Rsch. Soc.; Radiological Soc. of North Amer.; A.A.A.S., Fellow; N. Y. Acad. Sci. Gen. Int.: Received an Award from the Radiological Soc. of the North Amer., 1948 for the work in Radiobiology.

GOLDFRANK, Esther S., Staff Anthropologist, Chinese History Proj., Columbia Univ., 420 Riverside Dr., N. Y., N. Y. **ANTHROPOLOGY**.

GOLDING, Norman Shirley, Prof. of Dairy Husbandry, Wash. State Coll., Pullman, Wash. **DAIRY MANUFACTURING**.

GOLDMAN, Marcus Isaac, Geologist, U. S. Geol. Survey, 707 20th St., N. W., Washington, D. C. **SEDIMENTARY PETROLOGY**.

GOLDMANN, Franz, Assoc. Prof. of Med. Care, St., Boston 15, Mass. **ORGANIZATION AND ADMINISTRATION OF MEDICAL CARE PROGRAMS**. b. Elberfeld, Germany, Jan. 2, 1895. s. Felix and Wally (Warschauer) G. Edn.: M.D., Friedrich-Wilhelms Univ., Berlin, 1920. m. Elizabeth Warburg, June 10, 1939. Exp.: Central Health Dept., City of Berlin, 1921-29; Div. of Health Services, Reich's Ministry of the Interior, Oberregierungsrat, 1929-33; Consultant, Health Sect., League of Nations, 1933; Privatdozent Med. Schl., Frederick-Wilhelms Univ., 1932-33; Lectr., Sozialhygiensche Akademie Charlottenburg, 1931-33; Yale Schl. of Med., Dept. of Pub. Health, 1937-49; Fellow, 1937-39; Assoc. Clin. Prof. of Pub. Health, 1939-46; Clin. Prof., Pub. Health, 1946-47; Lectr. with Professorial Rank, 1947-49; N. Y. Schl. of Social Work, Columbia Univ., Lectr., 1942-47; Harvard Schl. of Pub. Health, Assoc. Prof. of Med. Care, 1947—; Lectr., Simmons Coll. Schl. of Social Work, Boston, 1947—. Mem.: Amer. Pub. Health Assn.; Amer. Pub. Welfare Assn.; A.A.A.S.; Amer. Acad. of Polit. and Social Sci.; Mass. Pub. Health Assn.; Delta Omega. Author: About 90 Scientific Publications, Including 5 Books and 9 Monographs in Textbooks. Contrb. to: Jour. of Med.; Amer. Jour. of Pub. Health; New England; Annals of Amer. Acad. of Polit. and Soc. Sci.; Amer. Ec. Rev.; Social Work Yearbook; Soc. Service Rev.; Pub. Health Nursing. War Record: Office of Strategic Services, Wash., 1944. Travel: Scandinavian Countries; Great Britain; Germany; Luxemburg; France; China. Hobby: Gardening. Listed in: Who's Important in Med.; A.M.S.; World Biog.; W. W. in New England. Special Int.: Socia-Econ. Aspects of Health and Disease; Organization of Health Services; Admin. of Med. Care Programs.

GOLDNER, Karl John, Assoc. Prof. of Pharmacy, Univ. of Tenn., Memphis, Tenn. **PHARMACY**.

GOLDRING, Winifred, State Paleontologist, N. Y. State Museum, Albany, N. Y. **PALEONTOLOGY.**

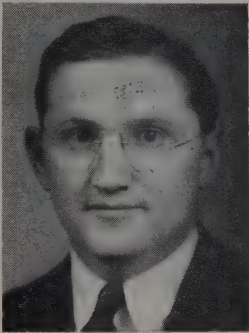
GOLDSBOROUGH, Winder Elwell, Consulting Economist and Engr., 2 Crescent St., S. Norwalk, Conn. **ECONOMICS, ENGINEERING.**

GOLDSCHMIDT, Richard B., Prof. Emeritus, Dept. of Zool., Univ. of Calif., Berkeley, Calif. **GENETICS AND EVOLUTION.** b. Frankfurt, Germany, Apr. 12, 1878. s. Solomon and Emma (Flurschheim) G. Edn.: Dr. Phil., Heidelberg Univ., 1902. Hon. Deg.: M.D., Kiel; Ph.D., Madrid. m. Else Kühnlein, Mar. 15, 1906. c.: Hans; Ruth. Exp.: Asst., Univ. of Heidelberg, Heidelberg, Germany, 1900-1902; Lectr., Asst. Prof., Custodian, Munich, Germany, 1903-14; Mem. then Dir. of Kaiser Wilhelm Inst. of Biol., Berlin, Germany, 1914-36; Prof., Univ. of Tokyo, Tokyo, Japan, 1924-26; Prof., Univ. of Calif., Berkeley, Calif., 1936-48; Emeritus, *ibid.*, 1948—. Mem.: 20 Acad. of Sci.; R. Soc. and Learned Soc. Author: 15 Books and 200 Papers in Tech. Jours. Special Int.: Cytol., Comp. Histol., Morphol., Genetics, Physiological Genetics, Geographic Variation; Evolution; Theoretical Genetics.

GOLDSMITH, Alfred N., Consulting Engr., 570 Fifth Ave., N. Y., N. Y. **PHYSICS.**

GOLDSMITH, Edward, 1615 Confederate Ave., Richmond, Va. **PHYSICS.**

GOLDSMITH, Norman Albert, Chmn., Div. of Math., Box 691, Henderson State Tchrs. Coll., Arkadelphia, Ark. **MATHEMATICS.**



b. Jewett, Ill., Jan. 15, 1908. s. Fremont and Elizabeth (Fogle) G. Edn.: B.S.E., with High Honor, Eastern Ill. State Tchrs. Coll., 1932; M.A., Univ. of Ill., 1936; Ph.D., *ibid.*, 1950. m. Euna Lowe, June 13, 1931. Exp.: Tchr. of English and Latin, Community H. S., Herrick, Ill., 1927-31; Supt. of Schls., Jewett, Ill., 1933-38; Supt. of Schls., Chestnut, Ill., 1938-41; Supt. of Schls., Stewardson, Ill., 1941-44; Supt. of Schls., Rankin, Ill., 1944-46; Grad. Asst. in Math., Univ. of Ill., 1946-49; Assoc. Prof. of Math., Ill. Wesleyan Univ., 1949-51; Prof. and Chmn., Div. of Math., Henderson State Tchrs. Coll., Arkadelphia, Ark., 1951—. Mem.: Amer. Math. Soc.; Math. Assn. Amer.; Natl. Council of Tchrs. of Math.; Sigma Xi; Kappa Delta Pi; Phi Delta Kappa; Sigma Mu Epsilon; Kappa Mu Epsilon; Sigma Tau Delta; Scottish Rite Masons. Contrb. to: Schl. Sci. and Math.; The Duke Math. Jour.; The Math. Tchr. Special Int.: Differential Geometry.

GOLDSMITH, Grace Arabell, Prof. of Med., Tulane Univ., New Orleans 12, La. **INTERNAL MEDICINE, METABOLISM AND NUTRITION.** b. St. Paul, Minn., Apr. 8, 1904. d. Arthur and Arabell L. (Coleman) G. Edn.: B.S., Univ. of Wis., 1925; M.D., Tulane Univ., 1932; M.S., Univ. of Minn., 1936. Exp.: Fellow in Med., Mayo Clinic, Rochester, Minn., 1933-36; Instr. in Med. to Prof. of Med., Tulane Univ., 1936—. Fellow; A.A.A.S.; Amer. Coll. of Physicians; Amer. Med. Assn.; Public Health Assn. Mem.: Amer. Diabetic Assn.; New Orleans Acad. of Internal Med.; La. State Med. Soc.; Orleans Parish Med. Soc.; N. Y. Acad. of Sci.; Amer. Inst. of Nutrition; Soc. for Exptl. Biol. and Med.; Southern Soc. for Clin. Rsch.; Amer. Soc. Clin. Invest.; Internatl. Soc. of Hema-



tol.; Sigma Xi; Alpha Omega Alpha; Delta Omega. Hon. Pos.: Chmn. Com. Dietary Allowances, Food and Nutr. Advis. Com. Agri. Rsch. Admn., Council on Foods and Nutr., A.M.A.; Council Amer. Inst. of Nutr.; Scientific Advis. Com., Nutr. Foundation; Editorial Bd., Jour. Clin. Nutr.; Bd. Dir., Inst. Mental Hygiene, New Orleans. Contrb. to: Arch. Int. Med.; Proc. Soc. Exptl. Biol. Med.; Jour. Biol. Chem.; Jour. Nutr.; Jour. Lab. and Clin. Med.; Fed. Proc.; Jour. Clin. Invest. Special Int.: Human Nutrition and Metabolism.

GOLDSMITH, William M (arion), Assoc. Prof. Biol., Univ. of Tampa, Tampa, Fla., Former Dean, etc., Day Div. Univ. System Center and Lectr. in Zool., Atlanta, Ga. EM-
BRYOLOGY-GENETICS. b. St. Francis, Ark. s. Rev. Daniel W. and Sarah Catherine (Boyd) G. Edn.: B.Pd., Mo. S. T. C.; A.B., Hillsdale, Mich., Coll.; A.M. and Ph.D., Ind. Univ.; Johns Hopkins Univ. and Marine Biol. Lab. m. Amy Houchin of Petersburg, Ind., 1913. d. Honorable Commodore Houchin. c.: Marian Gene; Laura Jo; Dean; Judith Ann. Exp.: Prof. of Embryol. and Histol. and Lectr. on Eugenics, Wichita Univ. (Kans.); Assoc. Prof. of Biol., Univ. of Dubuque; Dir. and Originator of Omnibus Coll., 1925-36. Mem.: Fellow, A.A.A.S.; Amer. Assn. of Zool.; Amer. Genetic Assn.; Amer. Eugenics Assn.; Fla. Acad. of Sci.; Sigma Xi; Beta Beta Beta; Kiwanis. Author: The Laws of Life; Human Poisons; Stones in a Life; Evolution and Christianity; Discoverer and Rsch. on the Catlin Mark (Eyes in Back of Head) or Bilateral Fenestrae in the Parietal Bones, Contrb. to: Jour. of Heredity; Sci.; etc. Ph.D. D'ssertation: Chromosomes of the Tiger Beetle. Travel: Ednl. Tours as Dir. Through All States, U. S., Canada, and Mexico. Listed in: Who's Who in Amer.; Amer. Naturalist; Internatl. Encyc. of Amer. Biog.; Amer. Men Sci.



GOLDSTEIN, Bessie, Tchr. of Biol., Geo. Washington H. S., 333 W. 57th St., N. Y., N. Y. **PATHOLOGY.**

GOLDSTEIN, Israel, Instr. in Chem., Walton H. S., 1261 Elder Ave., N. Y., N. Y. **ORGANIC CHEMISTRY.**

GOLDSTEIN, Kurt, Consulting Neurologist, 138 E. 94th St., N. Y., N. Y. **NEUROLOGY.**

GOLDSTEIN, Louis, Mem. Scientific Staff, Los Alamos Lab., P. O. Box 1663, Los Alamos, N. Mex. **THEROETICAL PHYSICS.**

GOLDSTEIN, Marcus S., Public Health Analyst, Div. Public Health Methods, U. S. P. H. S., Bethesda, Md. **PHYSICAL ANTHROPOLOGY.**

GOLDSWORTHY, Marion Charles, Pathologist, U. S. D. A., Bureau Plant Indus., Horticultural Station, Beltsville, Md. **PLANT PATHOLOGY.**

GOLDTHWAIT, Richard Parker, Assoc. Prof. of Geol., Ohio State Univ., Columbus, Ohio. **GEOLOGY.**

GOLDTHWAITE, Charles F., Sr. Cotton Technologist, Southern Regional Rsch. Lab., 6101 Louisville St., New Orleans, La. **TEXTILE CHEMISTRY.**

GOLL, Frank Louis, Sr. Physiologist, Bureau of Plant Indus., U. S. D. A., Beltsville, Md. **AGRICULTURE.**

GOLLAHER, Margaret A., Vice-Prin. and Hd. Sci. Dept., Potsdam H. S., 16 Garden St., Potsdam, N. Y.



PHYSICAL SCIENCE. b. Mar. 29, 1904, Macomb, N. Y. d. John T. and Nellie Agnes (O'Connell) G. Edn.: B.S., 1926, M. A., 1932, St. Lawrence Univ.; Cornell Univ., summer, 1940; G. E. Fellowship, Union Coll., 1948. Exp.: Lake Placid H. S., 1926-28; Potsdam H. S., 1928-50; Potsdam S. T. C., summers, 1942, 1943, 1947; Sci. Tchrs., Oswego S. T. C., summer, 1950; Clarkson Coll. of Tech., E.S.M.D.T. Course, Advanced Radio to Signal Corp., 1942-43. Mem.: N. Y. State Tchrs. Assn.; Pres., N. Y. Sci.

State Delta Kappa Gamma; Chmn., N. Y. State Sci. Congress; A.A.A.S.; N.S.T.A.; Exec. Bd. of Pi State Delta Kappa Gamma, 1950-53; Tau Kappa Alpha; Delta Zeta; Little Theater; Hosp. Guild; Fourth Vice-Pres., N. Y. State Tchrs. Assn., 1949-50; Third Vice-Pres., N.Y.S.T.A., 1950-51; Pres., Northern Zone Tchrs. Assn., 1947-48; Legislative Com. Rep. from Northern Zone, 1948-50. Contrb. to: N. Y. State Edn.; N. Y. State Sci. Bull. Travel: N. Amer.; Europe; Africa; Bermuda; etc. Gen. Int.: Established First Northern N. Y. Sci. Congress, 1942; Received N. Y. S. Sci. Tchrs. Fellowship, 1950, for Meritorious Serv. in Sci. Edn.

GOOCH, Wilby T., Prof. and Hd., Chem. Dept., Baylor Univ., Waco, Tex. **ORGANIC CHEMISTRY.**

GOOD, Carter Victor, Prof. of Edn. and Dir., Grad. Studies, Tchrs. Coll., Univ. of Cincinnati, Cincinnati, Ohio. **EDUCATION.**

GOOD, Harry Gehman, Prof. of Edn., Ohio State Univ., Columbus, Ohio. **EDUCATION.**

GOOD, Newell Emmanuel, Scientist, U. S. Public Health Service, 1707 Highland Rd., Silver Spring, Md. **MEDICAL ENTOMOLOGY.**

GOODALE, Hubert Dana, Geneticist, Mount Hope Farm, Williamstown, Mass. **GENETICS.**

GOODALE, Stephen Lincoln, Prof. Emer., Metallurgical Engrng., Univ. of Pittsburgh, 1156 Murrayhill Ave., Pittsburgh, Pa. **MINING, METALLURGY.**

GOODDING, Leslie Newton, retired, P. O. Box 303, Jerome, Ariz. **BOTANY.**

GOODENOUGH, Florence L., Rsch. Prof., Inst. of Child Welfare, Univ. of Minn., Minneapolis, Minn. **PSYCHOLOGY.**

GOODELL, Carol John, Editor, The Shorthorn World, Aurora, Ill. **ANIMAL HUSBANDRY.**



b. Sheldon, Ill., Mar. 19, 1888. s. Charles J. and Helen Maie (Isaacson) G. Edn.: Valparaiso Coll. (later Univ.), Ind., 1903-04; Purdue Univ., 1904-08; B.S.A.; Grad. Work, Miss. State Coll., 1924; Purdue Univ., Summer, 1931; Univ. of Ill., Summer, 1932; Visited Midwestern State Inst., Summer, 1933; Ia. State Coll. of Agri., 1934. m. Josephine M. Barsalou of Momence, Ill., June 15, 1910. d. Esadore A. and Artimise (Barnes) B. c.: Helen Maie (Mrs. W. O. Murphy). Exp.: Farm Mgr., Brazil, Ind., 1908-10; Farm Opr., Momence, Ill., 1910-14; Schl. Dir., Searls Schl.,

Geneer Twp., Kankakee County, Ill., 1912-14; Agt. in Animal Husb., U.S.D.A., and Beef Cattle Spec., Univ. of Ga., 1914-17; Sci. Asst., B.A.I., Wash. D. C., 1917; Leader in Animal Husb. Ext., State Coll., Miss., 1918-21; Assoc. Prof. of Animal Husb., ibid., 1921-24, 1925-27; Assoc. Prof. of Agri. Econ., ibid., 1924; Dairy Spec., Holmes County, Miss., 1927-28; Asst. County Agt. and Dairy Spec., Lowndes County, Miss., 1929-30; Dairy Ed., Southland Dairy Farmer, 1928-29; Hd., Animal Husb. Dept., Miss. State Coll., 1930-35; Animal Husb. Ext. Spec., Miss. State Coll. Ext. Serv., 1935-38; Mem., Kankakee County Soil and Crop Assn., 1912—; Mem., Amer. Farm Bur.; Mem., County Agts. Assn., also Assn. of Coll. Eds. Publications Ed., 1938-41; Ed., 1941-44; Ed., The Shorthorn World, 1944—. Mem.: Miss. Cattle Feeders Assn. (Sec., 1918-21); Mgr., Livestock Dept., Meridian and Jackson, Miss., Fairs, 1918-21; Sec., Sou. Cattlemen's Assn., 1926; Vice-Pres., 1927; Mem., Miss. Livestock Sanitary Bd., 1930-35; Amer. Assn. for the Adv. of Sci.; Amer. Gen. Assn.; Soc. of Animal Prod.; Purdue Mem. Union; Purdue Alumni Assn.; M.E.A. (Past Mem.); Fellow (Past Mem.) Amer. Geog. Soc.; Alpha Zeta; Pi Gamma Mu; Alpha Gamma Rho; Lambda Gamma Delta; Epsilon Sigma Phi; Shrine; Saddle and Sirloin Clubs; Past Mem., Rotary; Exchange.

GOODIER, V. N., Stanford Univ., Stanford, Calif. **ELASTICITY AND VIBRATION.**

GOODMAN, Clark, Asst. Prof. of Physics, Mass. Inst. of Tech., Cambridge, Mass. **PHYSICS.**

GOODMAN, George Jones, Prof. of Plant Sci., Univ. of Okla., Norman, Okla. **PLANT TAXONOMY.**

GOODMAN, John David, Asst. Prof. of Biol., Univ. of Redlands, Redlands, Calif. **PARASITOLOGY.**



b. Fairfield, Iowa, Apr. 8, 1920. s. Floyd W. and Elsie T. Parkins) G. Edn.: B.S., Parsons Coll., 1942; M.A., Univ. of Mich., 1947; Ph.D., ibid., 1951. m. Jeanne Moore, 1948. c.: Patricia Lee; Mary Jo. Exp.: Assoc. Prof. of Biol., Mercer Univ., Macon, Ga., 1948-49; Asst. Prof. of Biol., Univ. of Redlands, Redlands, Calif., 1951—. Mem.: Amer. Soc. Parasitologists; Amer. Microscopical Soc.; Soc. Systematic Zool.; Amer. Soc. Ichthyologists and Herpetologists; Amer. Ornithologists Union; Wilson Ornithological Club; Herpetologists League; Iowa Acad. Sci.; Iowa Ornithologists Union; Western Soc. Naturalists; Sigma Xi; Phi Sigma; Gamma Alpha. Contrb. to: Jour. Parasitol.; Herpetologica. War Record: Medical Dept., Second Lt., Sanitary Corps, 1942-46. Special Int.: Life History Studies of Vertebrate Animals and their Parasites; Parasite Cycles as they aid in Problems of Vertebrate Origins, Evolution and Distribution; Taxonomy of the Plagiorchioidea (Trematoda); Field Studies of Amphibians, Reptiles and Birds; Vertebrate Ecology; Taxonomy of Lizards; Desert Fauna.

GOODMAN, Louis Sanford, Prof. and Head of Dept. of Pharmacol., Univ. of Utah Schl. of Med., Salt Lake City, Utah. **PHARMACOLOGY.**

GOODNER, Kenneth, Prof. of Bacteriol. and Immunol., Jefferson Med. Coll., 1025 Walnut St., Philadelphia, Pa. **BACTERIOLOGY.**

GOODPASTURE, Ernest William, Vanderbilt Univ., Nashville 4, Tenn.

GOODRICH, Ernest Payson, Consulting Engr., 111 Broadway, New York 6, N. Y. **CIVIL ENGINEERING RESEARCH.** b. Decatur, Mich., May 7, 1874. s. Edward Payson and Mary Isadella (Hall) G. Edn.: B.S., Univ. of Mich., 1898; C. E., ibid., 1901; Hon. D.Eng., ibid, 1935; B.Pd., Mich. State Normal

Coll., 1898; Hon. M.Ed., *ibid.*, 1936; M. Mildred Louise Weed, 1899. c. Ernest Weed, (dec.) Exp.: Consulting Engr., Washington, D. C., New York City, N. Y., 1905—. Mem.: A.A.A.S.; Amer. Inst. of Consulting Engr.; Phi Gamma Delta. Contr.: City Planning Conference. Special Int.: Piles and Pile Driving, Pop. Distribution, Traffic Control.

GOODRICH, Hubert Baker, Prof. of Biol., Wesleyan Univ., Middletown, Conn. EMBRYOLOGY.

GOODSPEED, George Edward, Jr., Prof. of Geol. and Exec. Officer, Dept. of Geol., Univ. of Wash., Seattle, Wash. PETROLOGY.

GOODWIN, Harry Manley, Prof. Emer. Physics and Electrochem., Mass. Inst. of Tech., Cambridge, Mass.; 424 Walnut St., Brookline, Mass. PHYSICS, ELECTROCHEMISTRY.

GOODWIN, Melvin Harris, Jr., Asst. Chief, Technology Branch, Communicable Disease Center, U. S. Public Health Service, Atlanta, Ga., and Dir., Emory Univ., Field Sta., Newton, Ga. PARASITOLOGY.



Thomasville, Ga., Jan. 9, 1917. s. Melvin Harris and Munson (Beverly) G. Edn.: B.S., Univ. of Ga., 1941; M.S., *ibid.*, 1951. m. Virginia Peacock, Oct. 11, 1941. c.: Melvin Harris, III and Phyllis Virginia. Exp.: Rsch. Asst., Ga. Dept. of Public Health, Atlanta, Ga., 1938-39; Biol. in Chg., Emory Univ. Field Sta., Newton, Ga., 1939-42; Biol., Ga. Dept. of Public Health, Macon, Ga., 1942-44; Commissioned Officer, U. S. Public Health Service, Newton, Ga., 1944—; Assoc. in Preventive Med., Emory Univ. Schl. of Med., Atlanta, Ga., 1947—. Mem.: Phi Sigma; Sigma Xi; Sci. Rsch. Soc. of Amer.; Alpha Tau Omega. Contr. to: Amer. Jour. Trop. Med.; Jour. Parasitol.; Jour. of Natl. Mal.; Ecology, etc. Special Int.: Natural Hist. of Parasitic Diseases; Life Cycles of Blood inhabiting Protozoa.

GOODWIN, W. Nelson, Jr., Vice-Pres. in Chg. Rsch. and Engrng., Weston Electrical Instrument Corp., 30 Scheerer Ave., Newark, N. J. ENGINEERING.

GOODWIN, William H., North Lima, Ohio. ENTOMOLOGY.

GORDON, Alfred, Emer. Consulting in Neurol. and Psychiatry, 1520 Spruce St., Philadelphia, Pa. NEURO-PSYCHIATRY.

GORDON, Burgess Lee, Pres., and Mullen Prof. of Med., Woman's Medical Coll., Philadelphia 29, Pa. INTERNAL MEDICINE, PULMONARY DISEASES AND CARDIS—PULMONARY PHYSIOLOGY. b. Spokane, Wash., Apr. 10, 1892. s. Burgess Lee and Raphaela (Simpson) G. Edn.: A.B., Gonzaga Univ., 1912; M.D., Jefferson Med. Coll., 1919. m. Margaret Huston of Moorestown, N. J., Febr. 7, 1942. d. James Henry and Sara Hill Houston. c.: Burgess Lee. Exp.: Internship, Jefferson Hosp., 1919-21; Resident Phys., Peter Bent Brigham Hosp., 1921-26; Tchng. Fellow in Med., Harvard Med. Schl., 1922-26; Clinical Prof. of Med., Jefferson Med. Coll., 1942-51; Dir., Barton Memorial and White Haven Div., Jefferson Hosp., 1946-51; Pres. and Mullen Prof. of Med., Woman's Med. Coll., Philadelphia, Pa., 1951—. Mem.: Assn. Amer. Physicians; Amer. Soc. for Clinical Investigation; Amer. Coll. of Physicians; Amer. Coll. Chest Physicians; Coll. Physicians of Philadelphia; Diplomate, Board of Internal Med.; Phi Chi. War Record: Med. Corps, U. S. Army, 1942-46. Gen. Int.: Rsch. in Silicosis and other pulmonary diseases.

GORDON, Clarence Everett, Prof. Emer. Geol. and Mineralogy, Mass. State Coll., 180 Lincoln Ave., Amherst, Mass. GEOLOGY.

GORDON, Eva L., Cornell Univ., Ithaca, N. Y. NATURE AND CONSERVATION EDUCATION.

GORDON, Francis Byron, Assoc. Prof. of Bacteriol. Univ. of Chicago, Chicago, Ill. BACTERIOLOGY.

GORDON, Leonard Victor, Hd., Classification Rsch. Branch, U. S. Naval Personnel Rsch. Unit, San Diego 52, Calif. PSYCHOLOGY. b. Montreal, Can., Aug. 15, 1917. s. Peter and Bessie (Kirsch) G. Edn.: B.A., Univ. of Calif., Los Angeles, 1940; M.A., Ohio State Univ., 1947; Ph.D., *ibid.*, 1950. m. Katharine Burton, 1946. c.: John Christopher; Jeffrey Burton. Exp.: Vocational Appraiser, Occupational Opportunities, Ohio State Univ., 1947; Tchng. Asst., Dept. of Psychol., *ibid.*, 1947-49; Rsch. Asst., Bureau of Ednl. Rsch., *ibid.*, 1949-50; Assoc. Dir., Statistical and Rsch. Services, Boston Univ., 1950-51; Asst. Prof., (Visiting), Univ. of N. Mex., 1951-52; Hd., Classification Rsch. Branch, U. S. Naval Personnel Rsch. Unit, San Diego, Calif., 1952—. Mem.: Amer. Psychol. Assn.; A.A.A.S.; Amer. Statistical Assn.; Psychometric Soc.; Alpha Psi Delta. Co-author: Mooney Problem Check Lists, 1950; The Personal Profile, 1952. Contr. to: Ednl. and Psychol. Measurements; Jour. Applied Psychol.; Jour. Social Psychol.; Ednl. Rsch. Bull.; Journalism Quarterly; Jour. Genetic Psychol. War Record: Navigator, U. S. Army Air Corps; Classification Specialist, U. S. Army. Special Int.: Personality Measurement; Personnel Rsch. in Selection and Evaluation.

GORDON, Myron, Geneticist, Chf. Genetic and Correlated Studies of Fishes, N. Y. Aquarium, N. Y. Zool. Soc. and Amer. Museum of Natural History, N. Y., N. Y. GENETICS OF FISHES, CANCER RESEARCH.

GORDON, Robert Benson, Hd., Dept. of Sci., State Tchrs. Coll., West Chester, Pa. PLANT ECOLOGY.

GORDON, Samuel Morris, Vice-Pres., and Dir. of Rsch., Endo Products Inc., 84-40 101 St., Richmond Hill 18, N. Y. MEDICINAL CHEMISTRY. b. Boston, Mass., Sept. 28, 1898. s. Hyman and Ida (Bazol) G. Edn.: B.S., Tufts Coll., 1922; M.S., State Univ. of Iowa, 1923; Ph.D., Univ. of Wis., 1926. m. Charlotte Blank, Dec. 25, 1923. c.: Robert B.; Ruth. Exp.: Grad. Asst., State Univ. of Iowa, 1922-23; Chemist, Portland Cement Assn., 1923-24; Natl. Rsch. Council Fellow in Biochem., Univ. of Wis., 1926-28; Chf., Amer. Dental Assn., Bureau of Chem., 1928-38; Secy., A.D.A. Council on Dental Therapeutics, 1930-38; Vice-Pres. and Dir. of Rsch., Endo Products, Inc., Richmond Hill, N. Y., 1938—. Hon. Pos.: Metropolitan-Long Island Chem. Assn., Chmn., 1951-52; Editorial Bd., Jour. Dental Rsch., 1935-38; Editorial Bd., Chemical Bull., Chicago, 1933-38; Consultant on Drug Control, N. Y. City Bd. of Health, 1931-37. Mem.: Amer. Chem. Soc.; Amer. Pharmaceutical Assn.; Assoc. Fellow, A.M.A.; Fellow, N. Y. Acad. Sci.; Fellow, Amer. Inst. of Chemists; Alpha Omega, Honorary; Sigma Xi; Soc. for Exptl. Biol. and Med.; Pi Lambda Phi. Author: Dental Sci. and Dental Art, 1938; Editor and Founder, Accepted Dental Remedies. Contr. to: Jour. Biol. Chem.; Jour. Amer. Pharmaceutical Assn.; Jour. Dental Rsch.; Jour. Amer. Dental Assn.; Hygeia. War Record: Sgt., World War I; Major, World War II, 1942-44, now Lt. Col., O.R.C. Special Int.: Medicinal Chem.; Chem. of Dental Drugs.



GORDON, Walter Ora, Prof. of Math., 210 Sparks Bldg., The Pa. State Coll., State Coll., Pa. MATHEMATICS. b. Newport, Me., Oct. 28, 1904. s. Harry A. and Evelyn (Bickford) G. Edn.: A.B., Bowdoin Coll., 1928; M.A., The Pa. State Coll., 1931. Exp.: Instr., The Pa. State Coll., 1928-39; Asst. Prof. of Math., *ibid.*, 1939-44; Assoc. Prof. of Math., *ibid.*, 1944-49; Assoc.

Prof. of Math. and Exec. Sec. of the Dept. of Math., 1949-51; Prof. of Math., and Exec. Sec. of the Dept. of Math., *ibid.*, 1951—. Mem.: The Amer. Math. Soc.; The Math. Assn. of Amer.; Sigma Xi; A.A.U.P.; Pi Mu Epsilon; Delta Kappa Epsilon. Travel: Europe; W. Indies. Hobby: Bowling. Listed in: A.M.S.; Who's Who in the East. Special Int.: Topology.

GORDON, William Edwin, Regional Rsch. Consultant, Bureau Public Assistance, Social Security Bd., Region VIII, Minneapolis, Minn. SOCIAL STATISTICS.

GORDY, Walter, Assoc. Prof. of Physics, Duke Univ., Durham, N. C. PHYSICS.

GOESLINE, Harry E., Asst. Chf., Market Practices Div., Poultry Branch, Production and Marketing Admin., U. S. D. A., Washington, D. C. FOOD TECHNOLOGY.

CORTATOWSKY, Claude, Hd., Ingredients Control and Rsch. Dept., The Coca-Cola Co., P. O. Drawer 1734, Atlanta, Ga. SOFT DRINKS AND SYRUPS OR CONCENTRATES FROM WHICH THESE ARE MADE. b. Albany, Ga., May 22, 1898. s. Henry and Stella (Ehrlich) G. Edn.: B.S., Princeton Univ., 1921. m. Harriette Liebman, Feb. 6, 1934. c.: Erla. Exp.: Chemist, Southern Potassium Phosphate Co., Jacksonville, Fla., 1922-23; Chemist, Granton, Chem. Co., Highland Park, N. J., 1923-24; Chemist, Asst. to Officer, Dept. Hd., The Coca-Cola Co., Atlanta, Ga., 1924—. Mem.: Amer. Chem. Soc.; Amer. Inst. of Chemists; Amer. Inst. for the Adv. of Sci.; Zeta Beta Tau. Special Int.: Soft Drinks.

GOSS, Leonard W., Chmn., Veterinary Pathol. Dept., Ohio State Univ., Columbus, Ohio. VETERINARY PATHOLOGY.

GOSS, Robert Whitmore, Plant Pathologist and Dean of Grad. Coll. of Agri., Univ. of Nebr., Lincoln, Nebr. PLANT PATHOLOGY.

GOSS, Wilbur H., 8621 Georgia Ave., Silver Spring, Md. GUIDED MISSILES.

GOTAAS, Harold B., Chmn., Div. of Civil Engrng., Prof. of Sanitary Engrng., Dir., Sanitary Engrng. Labs., Univ. of Calif., Berkeley 4, Calif. SANITARY ENGINEERING AND MUNICIPAL ENGINEERING. b. Mellette, S. Dak., Sept. 3, 1906. s. Halfdan C. and Emma E. (Cady) G. Edn.: B.S., Univ. of S. Dak., 1928; M.S., Iowa State Coll., 1930; S.M., Harvard Univ., 1937; Sc.D., *ibid.*, 1942. m. Alice McLaughlin, Apr. 10, 1931. c. Richard M. Exp.: Engr., Iowa State Hwy. Commn., Engr., Amer. Bridge Co., 1930; Bridge Designer, Iowa State Hwy. Commn., 1931; Engr., Clinton Bridge Works, 1931-32; Asst. Prof. of Civil Engrng., Univ. of S. Dak., 1932-36; City Engr. and consulting Engr. Vermillion, S. Dak., and Special Repr. of U. S. Dept. of Labor in Chg. of Installing the Merit System in S. Dak. employment offices, 1933-37; Asst. Prof. to Prof. of San. Engrng., Grad. Schl. of Pub. Health, Univ. of N. C., 1937-42; Chief Engr., 1942-43; Dir. of Div. of Health and San., Exec. Vice-Pres., Inst. of Inter-Amer. Affairs, 1943-45; Pres. *ibid.*, 1945-46; Prof. of Sanitary Engrng., Univ. of Calif., 1946—; Chmn., Div. of Civil Engrng., *ibid.*, 1949—; Traveling Fellow, World Health Organization, 1950. Hon. Pos.: Pres., Calif. Sewage and Indus. Wastes Assn., 1951-52; Chmn., Exec. Com. of Sanitary Engrng. Div. Amer. Soc. of Civil Engrs., 1952-53; Goodell Prize Com., Amer. Water Works Assn., 1948. Mem.: Amer. Soc. of Civil Engrs.; Amer. Water Works Assn.; Amer. Soc. for Engrng. Edn.; Amer. Public Health Assn.; Calif. Sewage and Indus. Works Assn.; Federation of Sewage and Indus. Wastes Assn.; Inter-Amer. Assn. of Sanitary Engrs.; Phi Kappa Phi; Chi Epsilon; Sigma Phi Delta; Sigma Xi; Kappa Sigma; Tau Beta Pi; Delta Omega. Contrb. to: Civil Engrng.; Jour. Amer. Water Works Assn.; Sewage and Industrial Wastes Jour.; Jour. Public Health; etc. War Record: Capt., Sanitary Corps, U. S. Army, 1942, advanced through the grades to Col., 1945; Received Legion of Merit, U. S., Cross of Boyaca, Colombia, Order of Honor and Merit, Haiti, Order of Merit, Chile, Order of the Condor of the Andes, Bolivia, Kenneth Allen

Award for Outstanding Service in Sanitary Engrng. Special Int.: Water Supply and Purification; Sewage Treatment; Indus. Wastes Treatment; Municipal Engrng.; Public Health and Sanitation; Economical Development of retarded areas of the world.

GOTTSHALL, Russell Y., Bacteriologist, Mich. Dept. of Health, Lansing, Mich. BACTERIOLOGY.

GOUDGE, Mabel Ensforth, Physician and Clinical Psychologist, 421 Trust Bldg., Durham, N. C.

GOUDKOFF, Paul Pavel, Consulting Geologist, 799 Subway Terminal Bldg., 417 South Hill St., Los Angeles 13, Calif. STRATIGRAPHY, SEDIMENTARY PETROGRAPHY, AND MICRO-PALEONTOLOGY. b. Krasnoyarsky, Russia, Jan. 1, 1880. s. Pavel and Leontina (Korsak) G. Edn.: 1899-1907, St. Petersburg Mining Inst., graduated Feb. 1907 as Mining and Metallurgical Engr. of 1st Degree; 1913, Eligibility to Professorship Conferred by the Tomsk Inst. of Tech. after 3 Years of Special Study and the Completion of a Number of Publications Reviewed by a Special Com. m. Valentina Rachkovskaya, Nov. 6, 1904. c.: Katherine. Exp.: Instr. of Petrography, Tomsk Inst. of Tech., 1907-09; Lectr. on Petrography and General Geol., *ibid.*, 1909-13; Prof. of Petrography, Econ. Geol. and Field Geol., *ibid.*, 1913-19; Pro-Vice-Chancellor, *ibid.*, and Dir. of Siberian Geol. Com., 1917-19; Prof. of Geol. and Hd., Geol. Dept., Vladivostok Poly. Inst., 1919-21; Mem. of Staff, Amer. Geographical Soc., 1922-23; Geologist and Micro-Paleontologist for the Milham Exploration Co., 1923-26; Consulting Geologist, 1926. Hon. Pos.: Pres., Pacific Section, Soc. of Econ. Paleontologists and Mineralogists, Vice-Pres., Soc. Econ. Paleontologists and Mineralogists, 1933-34. Mem.: A.A.A.S.; Amer. Assn. Petroleum Geologists; Geol. Soc. Amer.; Soc. Econ. Geologists; etc. Author: Igneous Rocks of Turkestan, 1913; Petrography, 1916; Contrb. to: Bull. Tomsk Inst. of Tech.; Jour. Amer. Geographical Soc.; Econ. Geol.; Bull. Amer. Assn. Petroleum Geologists; etc. Gen. Int.: Original Outline of Metallogenetic Provinces of Siberia; Stratigraphy of Upper Cretaceous of Great Valley, Calif. Special Int.: Stratigraphy of Sacramento Valley, Calif.

GOUDSMIT, Samuel Abraham, Theoretical Physics Div., Brookhaven Natl. Lab., Upton, L. I., N. Y.

GOULD, Harley Nathan, Prof. of Biol., Newcomb Coll., Tulane Univ., New Orleans, La. BIOLOGY.

GOULD, Howard Woodham, Hd., Dept. of Physical Sci., Northern Ill. S. T. C., DeKalb, Ill. SCIENCE TEACHING PROCESSES. b. June 21, 1896, Bone Gap Coll. s. Rolla A. and Emily A. (Woodham) G. Edn.: B.S., McKendree Coll., Lebanon, Ill., 1918; M.S., Univ. of Ill., 1922; Ph.D., State Univ. of Ia., 1929; Further Study at Univ. of Ia., Chicago, and Mich. m. Alice L. Everett of Waverly, Ill., June 18, 1922. d. Mr. and Mrs. E. C. Everett. c.: Alice Emily; Constance Gabrielle. Exp.: Instr. in Eng., McKendree Acad., 1919-20; Asst. and Instr. in Chem. and Physics, McKendree Coll., 1920-22; Asst. in Chem., Univ. of Ill., 1923-25; Asst. and Assoc. Prof. of Chem., James Millikin Univ., 1925-27; Rsch. Engrng., The Mueller Co., Ill., 1926-27; Prof. of Physics, N. Ill. S. T. C., 1927-31; Hd., Dept. of Physical Sci., *ibid.*, 1931—. Mem.: A.A.A.S.; A.C.S.; Fellow, Amer. Institute of Physics; Amer. Assn. Univ. Prof.; Ill. State Acad. of Sci.; Ill. Ednl. Assn.; N.E.A.; Phi Lambda Upsilon; Sigma Zeta; Kiwanis Internatl.; Pres., DeKalb Club, 1949. Author: Textbook of Chem. and Physics, 1933, 1935, 1937; Edwards Bros., Ann Arbor, Mich. Contrb. to: Metals and Alloys; Jour. of Chem. Edn. Ph.D. Dissertation: Effect of Silicon on the Properties of Brass. War Record: U. S. Marine Corps (U. S. and W. Indies-



Haiti). Travel: U. S., Except in W. W. Hobbies: Chess; Music; Athletic Games. Listed in: A.M.S.; Who's Who in Midwest. Special Int.: Inorganic Chemistry—Metallurgy.

GOULD, Ira A., Jr., Prof. and Chmn. of Dairy Technol., Ohio State Univ., Columbus 10, Ohio.



DAIRY TECHNOLOGY. b. Sept. 28, 1905, Atchison, Kans. s. Ira A., Sr., and Waunettia H. (Adams) G. Edn.: B.S., W. Va. Univ., 1931; M.S., Mich. State Coll., 1933; Ph.D., Univ. of Wis., 1938. m. Genevieve M. Wilson of Kingwood, W. Va., 1929 d. Mr. and Mrs. Scott H. Wilson. c.: Kaye Hart-er Gould. Exp.: Mich. State Coll., 1934-44; Inst., Asst. Prof., Assoc. Prof., Asst. in Rsch., Rsch. Asst., Rsch. Assoc., Expt. Sta. Staff, Prof. of Dairy Mfg., Univ. of Md., 1944-49.

Mem.: Sigma Xi; Amer. Dairy Sci. Assn.; Inst. of Food Technol.; Internatl. Assn. of Milk and Food Sanitarians; Alpha Gamma Rho; Alpha Zeta; Amer. Chem. Soc.; Washington Acad. of Sci.; Phi Lambda Upsilon; Gamma Sigma Delta. Contrb. to: Jour. of Dairy Sci.; Food Rsch.; Indus. and Engrng. Chem.; Bd. of Dir., Amer. Dairy Sci. Assn. Ph.D. Dissertation: Influence of Heat on Milk with Spec. Reference to the Cooked Flavor. Received Borden Award from the Amer. Chem. Soc., 1946, for Rschs. Dealing with the Chem. of Milk. Listed in: A.M.S. Special Int.: Chem. of Milk and Products with Special Atten. to Action of Lipase Enzyme and to Effect of Heat on Chem. Changes.

GOULD, Laurence M., Prof. of Geol. and Geography, Pres., Carleton Coll., Northfield, Minn. **GLACIAL GEOLOGY.**

GOULD, Robert E., Buffalo Pottery, Inc., 25 Hayes Pl., Buffalo 10, N. Y. **CERAMICS.**

GOULDEM, Cyril Harold, St. Agri. Scientist, Officer-in-Chg., Dominion Lab. Cereal Breeding, 253 Ashland Ave., Winnipeg, Man., Can. **PLANT BREEDING.**

COULDEN, Harold DeWitt, Dir., Scientific Rsch. and Standards, Toilet Goods Assn., Inc., 9 Rockefeller Plaza, N. Y., N. Y. **CHEMISTRY.**

GOWENS, Cornelius, Assoc. Prof. of Math., Iowa State Coll., Ames, Iowa. **MATHEMATICS.**

GOW, Alexander Murdoch, Hydraulic Engr., Corps of Engrs., U. S. Army, 3126 Coleman Rd., Kansas City, Mo. **ENGINEERING.** b. Pittsburgh, Pa., Apr. 10, 1902. s. Alexander M. and Margaret (Schmid) G. Edn.: Engr. of Mines, Univ. of Minn., 1923. m. Margaret Barlow, Dec. 27, 1924. Exp.: Rsch. Fellow, Mines Expt. Sta., Univ. of Minn., 1923-24; Instr., Mine Engr., Schl. of Mines, Univ. of Minn., 1924-28; Asst. Metallurgist, Mo. Schl. of Mines, Rolla, Mo., 1928-30; Asst. Metallurgist, U. S. Bureau of Mines, Rolla, Mo., 1930-33; Supt. of Projects, C. W. A. and F. E. R. A., Jefferson City, Mo., 1933-35; District Engr., Sr. Engr., and State Statistician, W. P. A. in Mo., 1935-42; Indus. Engr., N. Amer. Aviation, Inc., Kans. City, Kans., 1942-45; Chf., Organization and Methods, War Assets Admin., Kans. City, Mo., 1945-49; Hydraulic Engr., Crops of Engrs., U. S. Army, Kans. City, Mo., 1949—. Mem.: Fellow, A.A.A.S.; Mo. Soc. Professional Engrs.; Natl. Soc. Professional Engrs.; Soc. Amer. Military Engrs.; Theta Tau; Serra Internatl. Contrb. to: Trans. A.I.M.E.; Jour. Indus. Engrng.; Engrng. and Mining Jour. Special Int.: Physical Metallurgy; Hydrology; Engrng. Admin.

GOWEN, John Whittemore, Rsch. Prof. of Genetics, Iowa State Coll., Ames, Iowa. **GENETICS.**

GRAAM, Dona Gayler, Physiologist in Chg. Animal Testing Penicillin, Commercial Solvents Corp., Animal House, Penicillin Plant, Terre Haute, Ind. **PHYSIOLOGY.**

GRABER, Laurence Frederick, Prof. and Chmn., Dept. of Agron., Coll. of Agri., Univ. of Wis., Madison, Wis. **AGRONOMY.**

GRABFIELD, Gustave Philip, Agent, Milton Bd. of Health, 27 Forest St., Milton 86, Mass. **PHARMACOLOGY.** b. Cincinnati, Ohio, Sept. 28, 1892. s. Gustave and Nannie Raphael (Marks) G. Edn.: A.B., Williams Coll., 1912; M.D., Harvard Med., 1915. m. Marion Murray Robertson, Sept. 8, 1923. c.: Philip Robertson and Dora Murray. Exp.: Tehng. Fellow in Pharmacol., Harvard Med. Schl., Boston, Mass., 1915-16; Med. House Officer to Sr. Assoc. in Med., Peter Bent Brigham Hosp., 1916-46; Instr., Univ. of Mich., Ann Arbor, Mich., 1919-20; Instr. to Assoc. in Med. and Pharmacol., Harvard Med. Schl., Boston, Mass., 1920-46; Agent, Milton Bd. of Health, Milton, Mass., 1946-53. 1st Lt. to Col., M.C., A.U.S., 1917-46. Mem.: Amer. Soc. of Pharmacol. and Exptl. Therapy; Amer. Soc. of Clin. Investigation, A.A.A.S.; Amer. Med. Assn.; Assn. Amer. Phys.; F.A. Coll. Phys.; Phi Sigma; Sigma Xi; Mason. Contrb. to: Jour. of Clin. Investigation; Amer. Jour. of Pharmacol. and Exptl. Therapeutics; Archives of Internatl. Med.; Amer. Jour. of Physiol.; Annals of Internal Med. Special Int.: Effects of Various Drugs on the Protein and Purine Metabolism. Sensitivity to Faradic Stimulation and the Path of Faradic Sensibility. Pathogenesis of Tuberculosis. Protein Metabolism in the Bright's Diseases. Functions of the Renal Nerves.

GRAESSER, Roy French, Prof. and Chmn., Dept. of Math., Univ. of Ariz., Tucson, Ariz. **MATHEMATICS; STATISTICS.** b. Creighton, Nebr., Oct. 31, 1892. s. Henry Lee and Ida (French) G. Edn.: A.B., Univ. of Ill., 1919; A.M., ibid., 1922; Ph.D., ibid., 1926. m. Lois Mizpah MacClement, Aug. 24, 1921. Exp.: Tchr. of Math., Sullivan Twp. H. S., Sullivan, Ill., 1919-20; Asst. in Math., Univ. of Ill., Urbana, Ill., 1920-22; Statistician, ibid., 1922-23; Asst. Prof. of Math., Univ. of Ariz., Tucson, Ariz., 1926-32; Assoc. Prof., ibid., 1932-38; Prof. and Chmn. of Dept. of Math., ibid., 1938—. Mem.: Natl. Council of Tchrs. of Math.; Math. Assn. of Amer.; Amer. Math. Soc.; Gamma Alpha; Sigma Xi; Phi Kappa Phi; Pi Mu Epsilon; Sigma Pi Sigma. Contrb. to: Math. Mag.; Schl. Sci. and Math.; Math. Tchr.; The Pentagon; Amer. Jour. Math. War Record: U. S. Army, 1917-19. Special Int.: Statistics.

GRAF, John Enos, Asst. Secy., Smithsonian Institution, Washington, D. C. **ENTOMOLOGY.**

GRAFF, Paul W., Dept. of Biol., Appalachian State Tchrs. Coll., Boone, N. C. **BOTANICAL SCIENCES.**

GRAHAM, Archibald Robert, Technician, Dominion Parasite Lab., 195 Foster Ave., Belleville, Ont., Can. **ENTOMOLOGY.**

GRAHAM, Clarence Henry, Prof. of Psychol., Columbia Univ., N. Y. 27, N. Y. **PSYCHOLOGY.**



b. Worcester, Mass., January 6, 1906. s. Robert S. and Ann Jane (Gillespie) G. Edn.: A.B., Clark Univ., 1927; M.A., ibid., 1928; Ph.D., ibid., 1930. m. Elaine Hammer, Sept. 6, 1949. Exp.: Instr., Temple Univ., 1930-31; Natl. Rsch. Fellow, Johnson Foundation for Med'cal Physics, Univ. of Pa., 1931-32; Asst. Prof., Clark Univ., 1932-36; Asst. Prof. to Prof., Brown Univ., 1936-45; Prof., Columbia Univ., 1945—. Mem., Applied Psychol. Panel, Natl. Defense Rsch. Com., 1942-46. Scientific Liaison Officer (on leave from Columbia Univ.), Office Naval Rsch., London, U. S. Navy, 1952-53. Mem.: Natl. Acad. Sci.; Amer. Acad. Arts and Science; Amer. Psychological Assn.; Soc. Exptl. Psychologists; Optical Soc. of Amer.; Physiol. Soc.; Sigma Xi. Gen. Int.: Warren Medal, Soc. Exptl. Psychologists, 1941; Presidential Certi-

fications of Merit, 1948; Consulting editor of a number of Journals. Special Int.: Experimental Psychol.; Visual Perception and Conditioning.

GRAHAM, Donald Penrose, Rsch. Assoc., Jackson Lab., E. I. du Pont de Nemours & Co., Inc., 102 South Rd., Lindamere, Wilmington, Del.



PHYSICAL CHEMISTRY. b. Adel, Iowa, Nov. 6, 1904. s. Joseph W. and Ruth (Penrose) G. Edn.: B.S., Univ. of Wash., 1926; M.S., Univ. of Wis., 1927; Ph.D., *ibid.*, 1929. m. Mildred Bayley, June 17, 1929. c.: Jean Susan; Patricia Ann. Exp.: Rsch. Chemist, Jackson Lab., E. I. du Pont de Nemours & Co., Inc., Wilmington, Del., 1929-46; Leader, Phys. Chem. Group, *ibid.*, 1946-51; Rsch. Assoc., *ibid.*, 1951—.

Mem.: Amer. Chem. Soc.; A.A.A.S.; Faraday Soc.; Amer. Inst. of Chem. Engrs.; Tau Kappa Epsilon; Sigma Xi; Tau Beta Pi; Phi Lambda Upsilon. Contrb. to: Jour. Amer. Chem. Soc.; Jour. Phys. and Colloid Chem. Special Int.: Phys. Chem. of Refrigerants and Power Fluids; Phys. Chem. of Phase Boundaries.

GRAHAM Evarts A., Emeritus Prof. of Surgery, Wash. Univ., 600 S. Kingshighway, St. Louis 10, Mo. **SURGERY.** b. Chicago, Ill., Mar. 19, 1883. s. David Wilson and Ida (Barned) G. Edn.: A.B., Princeton Univ., 1904; M.D., Rush Med. Coll., 1907. Hon. Deg.: Sc.D., Univ. of Cincinnati, 1927; Sc.D., Princeton Univ., 1929; Sc.D., Western Reserve Univ., 1931; Sc.D., Univ. of Pa., 1940; Sc.D., Univ. of Chicago, 1941; Sc.D., McGill Univ., 1944; Sc.D., Johns Hopkins Univ., 1952; M.S., Yale Univ., 1928; LL.D., Central Coll., 1927; LL.D., Univ. of Glasgow, 1951; LL.D., Wash. Univ., 1952. m. Helen Tredway, Jan. 29, 1916. c. David Tredway; Evarts Ambrose. Exp.: Instr. in Surgery, Rush Med. Coll., 1911-16; Special Student in Chem., Univ. of Chicago, 1913-14; Prof. of Surgery, Wash. Univ., St. Louis, Mo., 1919-51; Emer. Prof. of Surgery, *ibid.*, 1951—; Temporary Surgeon in Chf., Peter Bent Brigham Hosp., 1925; Temporary Prof. of Surgery, St. Bartholomew's Hosp., London, 1939. Hon. Pos.: Chmn., Bd. of Regents, Amer. Coll. of Surgeons, 1951—; Past Pres., St. Louis Assn. of Surgeons; Past Pres., Amer. Assn. Thoracic Surgery; etc. Mem.: Natl. Acad. Sci.; Amer. Philos. Soc.; Amer. Surgical Assn.; Amer. Assn. for Thoracic Surgery; Amer. Coll. Surgeons; Societe Internationale de Chirurgie; Hon. Mem., Royal Coll. of Surgeons of England; Hon. Mem., Royal Soc. of Med., London; Hon. Mem., French Acad. Surgery; Nu Sigma Nu; Alpha Omega Alpha. Author: Some Fundamental Considerations in the Treatment of Enzema Thoracis, 1925; Diseases of the Gall Bladder and Bile Ducts, 1928; Surgical Diagnosis, 1930; Surgical Diseases of the Chest, 1935. War Record: World War I on the Empyema Com. appointed by Surgeon General, U. S. Army; World War II served on Commn. appointed by the Secretary of War. General Interest: Gross Prize in Surgery, 1920; Leonard Prize of Amer. Roentgen Ray Society, 1925; Gold Medal by Amer. Radiol. Soc., 1925; Gold Medal, St. Louis Med. Soc., 1927; Gold Medal, Southern Med. Assn., 1933; John Scott Medal of City of Philadelphia, 1937; St. Louis Award, 1942; Lister Medal, Royal Coll. of Surgeons of England, 1942; Distinguished Service Medal of A.M.A., 1950; Medal of Amer. Coll. Chest Physicians, 1951; Medal of Amer. Cancer Soc., 1951; Bigelow Medal, 1951; French Legion of Honor, 1953; etc. Special Int.: Chest Surgery; Gall Bladder Diseases; Cancer of the Lung.

GRAHAM, Frank Dunstone, Walker Prof. of Internal Finance, Princeton Univ., Princeton, N. J. **ECONOMICS.**

GRAHAM, Helen Tredway, Assoc. Prof. of Pharmacol., Wash. Univ., Schl. of Med., 4580 Scott Ave., St. Louis, Mo. **PHARMACOLOGY.**

GRAHAM, John Young, P. O. Box 156, Roberts, Wis. **ZOOLOGICAL SCIENCES.**

GRAHAM, Lewis Texada, Prof. of Biol., B. 403, Southwestern Station, Lafayette, La. **ENTOMOLOGY.** b. Alexandria, La., Oct. 2, 1904. s. G. Mason and Aimee (Texada) G. Edn.: B.S., Southwestern La. Inst., 1936; M.S., La. State Univ., 1938; Ph.D., Iowa State Coll., 1947. m. Justine Bruner on Aug. 12, 1939. c.: Lewis T.; Elizabeth Marie. Exp.: Agent, Grasshopper Control, U. S. Dept. of Agri., summer 1938; Instr., Iowa State Coll., 1938-39; Rsch. Assoc. and Assoc. Extension Entomologist, *ibid.*, 1939-42; Asst. Entomologist, Expt. Station, Univ. of Nebr., 1942-43; Asst. Prof. of Biol., Southwestern La. Inst., Lafayette, La., 1946-49; Assoc. Prof., *ibid.*, 1949-52; Prof., *ibid.*, 1952—. Mem.: Amer. Assn. of Econ. Entomologists; Entomological Soc. of Amer.; La. Acad. of Sci.; Sigma Xi; Sigma Pi; Gamma Sigma Delta; Kiwanis. Contrb. to: Jour. Econ. Entomol. War Record: U. S. Navy, W. W. II, 1943-46. Special Int.: Insect Toxicology and Bionomics.

GRAHAM, Margaret Alex, Prof. Emer., Dept. of Biol., Hunter Coll., 320 Riverside Dr., N. Y., N. Y. **CYTOLOGY.**

GRAHAM, Minnie Almira, retired, 32 Park Pl., Lockport, N. Y. **INORGANIC CHEMISTRY.**

GRAHAM, Robert Dean, Coll. of Veterinary Med., Univ. of Ill., 1010 S. Busey St., Urbana, Ill. **VETERINARY MEDICINE.**

GRAHAM, Samuel Alexander, Prof. of Econ. Zool., Schl. of Forestry and Conservation, Univ. of Mich., Ann Arbor, Mich. **FOREST ENTOMOLOGY, ECOLOGY.**

GRAHAM, Verne O., Prin., Hanson Park Schl., 4028 W. Grace St., Chicago 41, Ill. **FUNGI, HIGHER ECOLOGICAL BOTANY.** b. Marysville, Ohio, Jan. 6, 1892. s. Stephen and Amelia (Witcraft) G. Edn.: Ph.D., Univ. of Chicago, 1931. m. Dorothy Bowdle, May 29, 1917. c.: June; Rosalie; Sara Lou. Exp.: Tchrs., Rural Schls., New Dover, Ohio, 1910-12; Tchrs. Biol., Great Falls, Mont., 1917-18; Tchrs. of Botany, Lake View H. S., Chicago, Ill., 1918-26; Prin. of Various Chicago Schls. including Burroughs, Barry, Schubert—Pres., Chicago Tchrs. Coll. 1936-38; Prin., Norwood Park and Hanson Park Schls., Chicago, Ill. Hon. Pos.: Pres., Ill. Acad. of Sci., 1940; Vice-Pres., Chicago Acad. of Sci., 1930-36; Pres., Friends of Our Native Landscape, 1946-54. Mem.: Fellow, A.A.A.S.; N.E.A.; A.A.S.A. Author: Forest Families with Sherman, 1937; Mushrooms of the Great Lakes Region, 1944. Special Int.: Ecology of Fungi in the Chicago Area; The Ecological Position of Each Tree Kind; Life About Camp Owassippe.

GRAHAM, William Pratt, Chancellor Emer., Syracuse Univ., 120 Windsor Pl., Syracuse, N. Y. **ELECTRICAL ENGINEERING.**

GRAMET, Charles A., Asst. Prin., Midwood H. S., 41 Eastern Parkway, Brooklyn, N. Y. **PHYSIOLOGY.**

GRANATH, Louis P., Asst. Prof. of Physics, Worcester Poly. Inst., Worcester, Mass. **PHYSICS.**

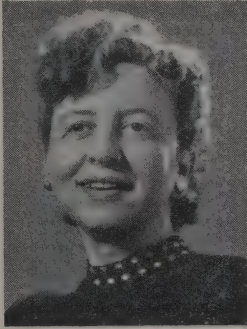
GRANDSTAFF, James Okley, Animal Husbandman and Dir., S. W. Range and Sheep Breeding Lab., U. S. Dept. of Interior, Fort Wingate, N. Mex. **ANIMAL HUSBANDRY.**

GRANOVSKY, Alexander A., Prof. of Entomol. and Econ. Zool., Univ. of Minn., Univ. Farm, St. Paul, Minn. **ENTOMOLOGY.**

GRANT, Adele Lewis, Coordinator and Supvr. Sci., Los Angeles County Bd. of Edn., 6019 S. Overhill Dr., Los Angeles, Calif. **BOTANY.**

GRANT, Chapman, 2970 Sixth Ave., San Diego, Calif. **HERPETOLOGY.**

GRANT, Charlotte Liebttag, Dean, Oak Park and River Forest H. S., Oak Park, Ill. **BIOLOGICAL**



SCIENCE. b. Indianapolis, Indiana, Jan. 24, 1906. d. William G. Liebttag and Elida A. (Null). Ancestry: Nulltown (near Connorsville, Ind.), Named After Great-Grandfather. Edn.: A.B., DePauw Univ., 1926; A.M., Univ. of Ill., 1927; Ph.D., ibid., 1935. m. Joseph Derby Grant, Ann Arbor, Mich. Exp.: Univ. of Ill., 1926-27, 1928-30, 1932-35; Lab. Bot. and Class Instr., Summer, 1935; Asst., Assoc. Bot., Lectr., Rockford Coll., 1930; Asst. Prof., Arsenal Tech. Schl., Instr.,

1935-43; Illustrator of Flowers and Trees, Summers, 1939-40; Lectr. in Bot., Butler Univ., Evening Div. Hd. Biol. Sci. Dept., Oak Park H. S., Oak Park, Ill. and Dean, ibid., 1944—. Hon. Pos.: Bot. Comm., Nature Study Club of Ind. Mem.: N.E.A.; A.C.S.T.; Chmn., Conservation Sect., Central Assn. of Sci. and Math. Tchrs.; Phi Beta Kappa; Sigma Xi; A.A.A.S., Fellow; Pres., CASMT, 1949-50; Ecol. Soc. of Amer.; Kappa Delta; Sigma Delta Epsilon; Bd. of Dirs., Natl. Sci. Tchrs. Assn.; Mem. of Natl. Assn. for Rsch. in Sci. Tchng. Alumni Clubs of DePauw Univ. and Univ. of Ill. Co-author and Artist: "Wild Flowers of Ill., 1936; Flora of Nature Preserve of Arsenal Tech. Schl., 1937. Contrb. to: Bot. Gazette; Ecol.; Trans. of Illinois State Academy of Science; Proceedings of Ind. Acad. of Sci.; Schl. Sci. and Math.; Sci. Tchrs.; The Clearinghouse. Title of Ph.D. Dissertation: Plant Structure as Influenced by Soil Moisture. Travel: Eastern U. S. and Western U. S.; San Dune Areas of Great Lakes. Achievements of Gen. Int.: Lecturing on Nature Topics, Direction of Projects Along Sci. Lines. Recreations and Hobbies: Nature Study; Hiking; Drawing and Painting; Writing. Sept. 1, 1941-Jan. 31, 1942, on Leave of Absence from Teaching, Rsch. Assoc. in Bur. of Ednl. Rsch. in Seis., Tchrs. Coll., Columbia Univ.; Rep. of Indianapolis in Coop. Sci. Study with Columbia Univ., 1940-43; Mem. Natl. Sci. Comm. for War and Peace. Special Int.: Sci. Edn.; Biol. Sci.; Health Edn.; Nutrition.

GRANT, Eugene Fredrick, Coordinator of Electronic Rsch. and Engrng., W. L. Maxson Corp., 460 W. 34th St., N. Y. 1, N. Y. **ELECTRONIC ENGINEERING—DIGITAL COMPUTING SYSTEMS: RADAR AND ALLIED ELECTRONIC SYSTEMS**. b. Baker, Ore., June 15, 1917. s. Fred C. and Geraldine (Martin) G. Edn.: B.S., Ore. State Coll., 1941; M.S., ibid., 1942. m. Evelyn Dully, June 12, 1943. c.: Charles Alexander; Robin Jean. Exp.: Rsch. Engr., Westinghouse Rsch. Labs., East Pittsburgh, Pa., 1942-45; Project Engr., Sperry Gyroscope Co., Garden City, N. Y.,



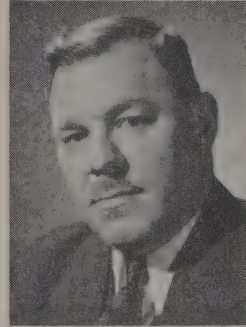
1945-46; Chf. of Computer Branch of Air Defense Group, Air Force Cambridge Rsch. Lab., Cambridge, Mass., 1948-51; Coordinator of Rsch. and Electronics, W. L. Maxson Corp., N. Y., N. Y., 1951—. Mem.: Phi Kappa Phi; Sigma Pi Sigma; Sigma Tau; Eta Kappa Nu; Sigma Xi; Pi Mu Epsilon. Contrb. to: Inst. of Radio Engrs. Special Int.: Applied Math.; Communication Theory.

GRANT, Martin Lawrence, Assoc. Prof. of Biol., Iowa State Tchrs. Coll., Cedar Falls, Iowa. **TAXONOMY**.

GRANT, Ulysses S., IV, Prof. of Geol., Univ. of Calif. at Los Angeles, Los Angeles 24, Calif. **GE-**

OLOGY. b. Salem Center, N. Y., May 23, 1893. s. U. S. Grant, Jr. and Fanny (Chaffee) G. Edn.: A.B., cum laude, Harvard Univ., 1915; Ph.D., Stanford Univ., 1929. m. Frances Dean, Sept. 27, 1951. Exp.: Instr., Asst. Prof., Assoc. Prof., and Prof., Univ. of Calif. at Los Angeles, Los Angeles, Calif., 1931—. Mem.: Geol. Soc. Amer.; Amer. Geophysical Union; Amer. Assn. Petroleum Geologists; Amer. Soc. Civil Engrs.; etc. Contrb. to: Bull. Geol. Soc. Amer.; Amer. Jour. Sci.; etc. War Record: 2nd Lt., World War I. Special Int.: Dynamical Geology; Engrng. Geol.; Invertebrate Paleontology.

GRANT, Gordon A., Dir. of Rsch., Rsch. and Biol. Lab., Ayerst, McKenna and Harrison, Ltd., Montreal, Can. **BIOCHEMISTRY AND PHARMACOLOGY**. b. Yarmouth, N. S., Can., Aug. 4, 1904. s. Melford and Florence (Atwood) G. Edn.: Ph.G., Maritime Coll. of Pharmacy, Can., 1925; B.Sc., Dalhousie Univ., Can., 1927; M.Sc., ibid., 1929; Ph.D., Univ. of Toronto, Can., 1932; Ph.D., Univ. of London, England, 1937. m. Ruth Allison, 1929. c.: Marion Fulton. Exp.: Lectr., Maritime Coll. of Pharmacy, Halifax, N. S., Can., 1925-29; Lectr., Biochem., Dalhousie



Halifax, N. S., Can., 1927-30; Fellow in Pathol. Chem., Univ. of Toronto, Toronto, Can., 1930-32; Fellow in Pathol. Chem. and Med., ibid., 1932-33; Fellow, Royal Soc. of Can., London, England, 1933-34; Fellow, Beit Memorial in Med. Rsch., Lister Inst., London, England, 1934-37; Chf. Rsch. Chem., Ayerst, McKenna and Harrison, Montreal, Can., 1937-47; Dir. of Rsch., Rsch. and Biol. Lab., ibid., 1947—. Mem.: N. Y. Acad. of Sci.; Amer. Chem. Soc.; Chem. Inst. of Can.; Canadian Physiol. Soc.; Biochem. Soc. of Great Britain. Contrb. to: Canadian Jour. of Chem.; Jour. of Amer. Chem. Soc.; Canadian Jour. of Med. Rsch.; Amer. Jour. of Physiol.; Amer. Jour. of Bacteriol.; Jour. Chem. Soc. of Great Britain; Biochemical Jour. Great Britain; Jour. Biol. Chem. (U. S.). Special Int.: Hormones; Antibiotics; Chemotherapeutic Agents.

GRANTHAM, Guy Everett, Prof. of Physics, Cornell Univ., Ithaca, N. Y. **PHYSICS**.

GRATON, Louis Caryl, Sturgis-Hooper Prof. of Geol., Emeritus, Vansong Labs., Cambridge 38, Mass. **GEOLOGY**. b. Parma, N. Y., June 10, 1880. s. Louis and Ann Ella (Gould) G. Edn.: B.S., Cornell Univ., 1900; Ph.D., ibid., 1930. Hon. Deg.: A.M., Harvard Univ., 1942. m. Josephine Bowman, June 30, 1906. c.: Louis Bowman; Josephine Gould (Mrs. Philip W. Chase). Exp.: U. S. Geol. Survey, 1903-09; Secy.-Treas., Copper Producers' Assn., N. Y., 1909-14; Prof. of Mining Geol., Harvard Univ., 1912-49; Dir., Secondary Enrichment Investigation, 1913-17; Secy., Copper Producers' Com. for War Service, 1917-19; In Chg., Valuation of Copper Mines, U. S. Revenue Bureau, 1919-20; Consulting Engr., U. S. Bureau of Mines, 1930-31; Consulting Geologist for various companies, mainly in foreign countries, 1920-51; Mem., Bd. of Directors, Cerro de Pasco Corp., 1945—. Mem.: Fellow, Amer. Acad. Arts and Sciences; Amer. Inst. Mining and Met. Engrs.; Mining and Met. Soc. Amer.; Canadian Inst. of Mining and Metallurgy; Geol. Soc. of Amer.; Geol. Soc. of Wash.; Geophys. Union; Geol. Soc. of Boston; Mineral. Soc. of Amer.; Chem., Met. and Mining Soc. of S. Africa; Geol. Soc. of S. Africa; Geol. Assn. of Can.; Foreign Mem., Mex. Acad. Sci.; Hon. Mem., Geol. Soc. Belgium; Foreign Mem., Geol. Soc. of London; Sigma Xi. Contrb. to: Jour. Geol.; Amer. Jour. Sci.; Amer. Mineralogist. Special Int.: Ore Deposition; Ore Finding; Volcanism; Hot Springs and Geysers; Microscopy.

GRAU, Fred V., Dir., Green Section, U. S. Golf Assn., Beltsville, Md. **AGRONOMY**.

GRAUSTEIN, Jeannette Elizabeth, Assoc. Prof. of Biol., Univ. of Del., Newark, Del. **PLANT MORPHOLOGY**.

GRAVATT, Annie R., Assoc. Pathologist, Div. Forest Pathology, Bureau Plant Indus., Apt. 503, 100 Maryland Ave., N. E., Washington, D. C. **AGRICULTURE.**

GRAVE, Charlotte Easby, Psychologist, Woods Schls., Inc., 221 S. Bellevue Ave., Langhorne, Pa. **PSYCHOLOGY.**

GRAVES, Arthur H., Consulting Pathologist, Conn. Agri. Expt. Station, 255 S. Main St., Wallingford, Conn. **BOTANY.** b. New Haven, Conn., Jan. 22, 1879. s. Joseph Alvin and Mary Frances (Harmount) G. Edn.: B.A., Yale Coll., 1900; Ph.D., Yale Univ., 1907. m. Helen Freeman Tiffany, May 1, 1939. c.: Elizabeth Wing. Exp.: Asst. in Botany, Sheffield Sci. Schl., Yale Univ., 1902-04; Instr., Forest Bot., Forestry Schl., 1904-06; Instr. in Botany, Yale Univ., 1906-09; Asst. Prof., *ibid.*, 1909-14; Assoc. Prof. of Biol., Conn. Coll. for Women, 1916-17; Pathologist and Collaborator, Div. Forest Pathol., U. S. Dept. Agri., 1909—; Consulting Pathologist, Conn. Expt. Station, 1947—; Curator, Brooklyn Botanic Garden, 1921-47; Emeritus Curator, *ibid.*, 1947—. Mem.: A.A.A.S.; Torrey Bot. Club; Conn. Bot. Soc.; Mycol. Soc.; Amer. Bot. Soc.; Amer. Phytopath. Soc.; Phi Beta Kappa; Sigma Xi. Author: A Tchng. Guide to the Trees and Shrubs of Greater N. Y., 1933; Illustrated Guide to Trees and Shrubs, 1952. Contrb. to: Bull. Torrey Bot. Club; Phytopathol.; Amer. Jour. Botany. Special Int.: Forest Pathol., especially the Blight of the Amer. Chestnut; Breeding Chestnuts since 1930 to Develop Blight Resistance.

GRAVES, Henry Solon, Dean Emer., Yale Univ. Schl. of Forestry, New Haven, Conn. **AGRICULTURE.**

GRAVES, Lawrence Murray, Prof. of Math., Univ. of Chicago, Chicago, Ill. **CALCULUS OF VARIATIONS.**

GRAVES, William Washington, Prof. and Dir., Dept. of Neuropsychiatry, St. Louis Univ. Schl. of Med., St. Louis, Mo. **NEURO-PSYCHIATRY.**

GRAY, Arthur Wellington, retired, 512 Colonial Ave., Westfield, N. J. **PHYSICS.**

GRAY, Cora E., Prof. of Home Econ., Woman's Coll., Univ. of N. C., Greensboro, N. C. **NUTRITION.**

GRAY, Dwight Elder, Chief, Technical Information Div., Library of Congress, 9614 Brunet Ct., Silver Spring, Md. **PHYSICS.** b. Knoxville, Ohio, July 6, 1903. s. Dr. L. L. and Mary (Elder) G. Edn.: A.B., Muskingum, 1921; M.S., Ohio St. Univ., 1929; Ph.D., *ibid.*, 1932. m. Helen Baldwin, Sept. 5, 1931. Exp.: Physics Faculty, Inst., Assoc. Prof., Univ. of Akron, Akron, Ohio, 1933-43; Editor, Harvard Underwater Sound Lab., Harvard Univ., Cambridge, Mass., 1943-45; Suprv. Tech. Reports, Johns Hopkins Lab., Silver Spring, Md., 1945-49; Technical Information Service, A.E.C., Washington, D. C., Mar.-Nov., 1950; Chief Tech. Information Div., Library Congress, Wash., D. C., 1951—. Mem.: Amer. Physical Soc.; Amer. Assn. Adv. of Sci.; Amer. Assn. of Physics Tchr.; Amer. Documentation Inst.; Sigma Xi. Author: Man and His Physical World, 1942; Radiation Monitoring in Atomic Defense, 1951. Contrb. to: Physics Today; Amer. Documentation; Jour. Chem. Edn. Spec. Int.: Physics, Tech. Documentation.

GRAY, Frank, Rsch. Engr., Bell Telephone Labs., Murray Hill, N. J. **COMMUNICATIONS.**

GRAY, Harold Fransworth, Special Consultant to Secy. on War in Japan, 2540 Benvenue Ave., Berkeley, Calif. **SANITARY AND HYDRAULIC ENGINEERING.**

GRAY, Horace, Clinical Prof. of Med., Stanford Univ. Schl. of Med., San Francisco, Calif. **INTERNAL MEDICINE.**

GRAY, Irving Emery, Prof. of Zool., Duke Univ., Durham, N. C. **VERTEBRATE ZOOLOGY, ENTOMOLOGY.**

GRAY, James Clarke, Assoc. Prof. of Biol., Western Reserve Univ., Cleveland, Ohio. **ZOOLOGY.**

GRAY, Kenneth Russell, Rsch. Group Leader, Ray-onier, Inc., 222 Pine St., Shelton, Wash. **CELLULOSE CHEMISTRY.**

GRAY, Nina Estella, Assoc. Prof. of Biol., Ill. State Normal Univ., Normal, Ill. **VERTEBRATE ANATOMY.**

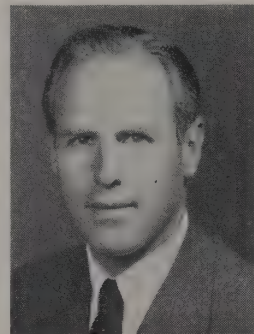
GRAY, Peter, Prof. of Biol. and Hd., Dept. of Biol. Sciences, Univ. of Pittsburgh, Pittsburgh, Pa.

GRAY, Richard Wilson, Sr. Meteorologist, retired, U. S. Weather Bureau, 415 N. W. 19th Ave., Miami, Fla. **METEOROLOGY.**

GRAY, Samuel Dent, Northeast Mgr., Amer. Potash Inst., Inc., 1155 16th St., N. W., Washington, D. C. **SOIL CHEMISTRY.**

GRAY, Samuel Harold, Pathologist, Jewish Hosp., 216 S. Kingshighway, St. Louis, Mo. **PATHOLOGY.**

GRAY, Seymour Jerome, Asst. Prof. of Med., Harvard Med. Schl., Sr. Assoc. in Med., Peter Bent Brigham Hospital, 721 Huntington Ave., Boston, Mass. **INTERNAL MEDICINE, BIOPHYSICAL LABORATORY.** b. Rochester, N. Y., Nov. 30, 1911. s. H. Lewis and Eva (Boby) G. Edn.: B.A., Univ. of Rochester 1933; M.D., Univ. of Pa., 1936; Ph.D., Univ. of Chicago, 1943. m. Ruth Hart, July 2, 1935. c.: Alfred, Roger. Exp.: Internship, Rochester General Hospital, Rochester, N. Y.; Resident in Med., Univ. of Chicago, Chicago, Ill., 1938-39; Asst. in Med., The Univ. of Chicago, Instr. in Med., *ibid.*, Asst. Prof. of Med., *ibid.*; Asst. Prof. of Med., Harvard Med. Schl., Boston, Mass., 1946—; Sr. Asso. in Med., Peter Bent Brigham Hospital, 1946—; Attending Physician, U. S. Veterans Hospital, Boston, Mass.; Consultant in Med., U. S. Naval Hospital, Chelsea, Mass. Mem.: Amer. Bd. of Internal Med.; Amer. Coll. of Physicians; Amer. Federation for Clinical Rsch.; Amer. Gastroscopic Soc.; A.M.A.; Central Soc. for Clinical Rsch.; Soc. for Exptl. Biol. and Med.; Sigma Xi; Amer. Gastroenterological Assn.; Fellow, A.A.A.S.; Harvard Club; Longwood Cricket Club. Author: The Colloidal Gold Reaction of Blood Serum in Diseases of the Liver; Studies on the Colloidal Gold Curve of Blood Serum in Liver Disease; Mechanism of the Colloidal Gold Reaction of Blood Serum in Liver Disease, 1942; Epigastric Symptoms in Alcoholics with and without Gastritis, 1943; A Study of the Serum Proteins in Diseases of the Liver, with Special References to Electrophoresis and the Colloidal Gold Reaction, 1945. Contrb. to: Amer. Gastroenterological Assn. Special Int.: Internal Med., Biophysics, Gastro-Intestinal Disease.



GRAYZEL, David M., Pathologist, Jewish Hosp. of Brooklyn, 105 Winthrop St., Brooklyn 25, N. Y. **PATHOLOGY.** b. Russia, June 3, 1897. s. Aaron and Rebecca (Kachon) G. Edn.: A.B., Columbia Coll., 1918; Ch.E., Columbia Univ., 1921; Ph.D., *ibid.*, 1927; M.D., *ibid.*, 1931. m. Sara M. Gross, 1926. c.: Arthur Irwin. Exp.: Chem., Dept. of Health, N. Y. C., 1921-24; Asst. Instr., Biochem., Columbia Univ., N. Y. C., 1924-27; Instr. of Pathology, Yale Univ. Schl. of Med., New Haven, Conn., 1932-36; Pathol., Jewish Hospital of Brooklyn, N. Y., 1936—. Mem.: Sigma Xi; Sci. Rsch. Soc. of Amer.; Amer. Assn. of Pathol. and



Bact.; Coll. of Amer. Pathol.; A.A.A.S.; N. Y. Acad. of Sci.; N. Y. Pathol. Soc. Contrb. to: Various Med. Jours. Special Int.: Metabolism; Cardiovascular Disease.

GRAY, William Scott, Prof. of Edn., Univ. of Chicago, Chicago, Ill. EDUCATION.

GREACEN, Katherine Fielding, Asst. Prof. of Geol. and Geography and Curator, Greene Memorial Museum, Milwaukee-Downer Coll., Milwaukee, Wis. PALEONTOLOGY, STRATIGRAPHY.

GREATHOUSE, Glenn A., Dir. of Prevention Deterioration Project, Natl. Rsch. Council, 2101 Constitution Ave., Washington, D. C. BIOCHEMISTRY AND BIOPHYSICS.

GREAVES, Joseph E., Prof. of Bacteriol. and Biochem., Utah State Agri. Coll., Logan, Utah. BACTERIOLOGY, BIOCHEMISTRY.

GREAVES-WALKER, Arthur Frederick, Rsch. Engr., Engrng. Expt. Station, Univ. of Fla., Gainesville, Fla. CERAMIC ENGINEERING.

GREB, Raymond J., Assoc. Prof., S. Dak. State Coll. of Agri. and Mech. Arts, Brookings, S. Dak. GENETICS.

GREBE, John Josef, Dir. of Physical Rsch. Lab., Dow Chemical Co., 90 Chippewa River Rd., Midland, Mich. PHYSICS, CHEMISTRY.

GREEN, Edward H., Dept. of Physics, Brooklyn Coll., Bedford Ave. and Ave. H, Brooklyn, N. Y. PHYSICS.

GREEN, Ferris Milton, Supt., Western Slope Sub-Station, Colo. Agri. Expt. Station, Fort Collins, Colo. HORTICULTURE.

GREEN, Frederick William, Pres., St. Louis S. W. Railway Lines, 515 Cotton Belt Bldg., St. Louis, Mo. ENGINEERING.

GREEN, George K., Brookhaven Natl. Lab., Upton, L. I., N. Y. PHYSICS.

GREEN, John Joseph, Chf. of Div. "B" Defence Rsch. Bd. and Scientific Adviser to the Chf. of the Air Staff, R.C.A.F., Dept. of Natl. Defence, Ottawa, Ont., Can. AERONAUTICS. b. Portsmouth, England, Nov. 9, 1905. s. George Edward and Elizabeth (Jarmey) G. Edn.: B.Sc., Royal Coll. of Sci., London Univ., 1928; A.R.C.S., *ibid.*, 1928; D.I.C., Imperial Coll. of Sci. and Tech., Royal Coll. Sci., 1929; Ph.D., Royal Coll. of Sci., London Univ., 1930. m. Winifred Maud Pascoe, May 31, 1930. c.: Lorna; Janet. Exp.: Jr. Rsch. Physicist, Natl. Rsch. Council, Can.



1930; Hd. of Aerodynamics Section, Div. of Mech. Engrng., *ibid.*, 1936; Chf. Rsch. Engr., Test and Development Establishment, R.C.A.F., 1943-45; Chf. Rsch. Aeronautical Engr., Air Transport Bd., Can., 1945-49; Chf. Div. "B" Defence Rsch. Bd. and Scientific Adviser to the Chf. of the Air Staff, R.C.A.F., Can., 1949—. Mem.: Fellow, Inst. of Aeronautical Sci.; Fellow, Royal Aeronautical Soc.; Engrng. Inst. of Can. Author: Manual of Ground Schl. Trng., 1940. Contrb. to: Philosophical Mag.; Reports and Memoranda British Aeronautical Rsch. Council; Jour. Aeronautical Sci.; Canadian Jour. of Rsch.; Royal Aeronautical Soc. Jour.; The Engrng. Jour. War Record; Commissioned Squadron Leader, R.C.A.F., 1943; Awarded Mem. Order of British Empire for Valuable Public Service in the Field of Scientific Rsch., 1943; Awarded King's Commendation for Valuable Services in the Air, 1945. Special Int.: Aerodynamics; Aeronautical Engrng.

GREEN, Morris Nathan, Rsch. Assoc., Harvard Med. Schl., Assoc. in Surgical Rsch., Beth Israel Hosp., 330 Brookline Ave., Boston 15, Mass. BIOCHEMISTRY AND BACTERIOLOGY. b. Chelsea, Mass., Aug. 12, 1910. s. Harry and Ida (Schneiderman) G. Edn.: S.B., Mass. Inst. of Tech., 1933; A.M., Boston Univ., 1935; M.S., Univ. of Mich., 1937; Ph.D., Univ. of Pa., 1945. m. Blanche R. Jacobstein, Aug. 24, 1947. c.: Sarah Dena and Philip Avram. Exp.: Rsch. Seol., Ill. Dept. of Health, 1939-42; Rsch. Fellow, Univ. of Pa., Philadelphia, Pa., 1943-45; Instr. in Bacteriol. and Rsch. Assoc., Iowa State Coll., Ames, Iowa, 1945-46; Rsch. Assoc., Univ. of Pa., Philadelphia, Pa., 1946-48; Assoc. Prof. of Bacteriol., Univ. of Mo., Columbia, Mo., 1948-51; Rsch. Assoc., Harvard Univ., Boston, Mass., 1951—. Mem.: Soc. for Exptl. Biol. and Med.; Amer. Assn. of Cancer Rsch.; Soc. of Amer. Bacteriol.; N. Y. Acad. of Sci.; Amer. Chem. Soc.; Sigma Xi. Contrb. to: Jour. of Bacteriol.; Proc. of Soc. of Exptl. Biol. and Med.; Jour. of Biol. Chem.; Arch. Biochem.; Amer. Jour. Syph. Special Int.: Serology of Syphilis, Bacterial Physiол., Mechanism of Action of Antibacterial Drugs, Tumor Chemotherapy, Diabetes, Resistance to Antibacterial Agents, Nitro-furans, Histochemistry.

GREEN, N. Bayard, Prof. of Zool. and Hd. of Dept., Marshall Coll., Hunting, W. Va. HERPETOLOGY. b. Blooming, Md., Nov. 15, 1905. s. James Weston and Adah (Harshbarger) G. Edn.: B.S., Davis and Elkins Coll., 1926; M.S., W. Va., Ph.D., Ohio State, 1952. m. Tressa Smith of Davis, W. Va., June 1, 1930. d. Ernest and Celia Smith. c.: James Norman. Exp.: Tchr., Elkins H. S., 1926-38; Critic Tchr., Marshall Coll. Lab. Schl., 1938-45; Prof., *ibid.*, 1947-52; Prof., *ibid.*, 1952—. Mem.: Sigma Xi; Chi Beta Phi; Omicron Delta Kappa; Alpha Epsilon Delta; Alpha Phi Omega; Alpha Sigma Phi. Author: Lab. Manual in Gen. Zool., 1951; Lab. Manual in Adv. Zool., 1949. Contrb. to: Copeia; Wilson Bull. Ph.D. Dissertation: A Study of the Life Hist. of Pseudacris Brachyphona. Hobbies: Photography. Listed in: A.M.S.; Who Knows— and What. Special Int.: Life Histories of W. Va. Amphibia.

GREEN, Susan Allen, Prof. of Biol. and Chmn., Div. of Sciences, Maryville Coll., College Station, Maryville, Tenn. BIOLOGY.

GREEN, Warren Kimball, Prof. of Astron. and Dir., Amherst Coll. Observatory, 46 Snell St., Amherst, Mass. ASTRONOMY.

GREEN, Wymen Reed, Hd., Biol. Dept., Brothers Coll., Drew Univ., Madison, N. J. BIOLOGY.

GREENBAUM, Sigmund Samuel, Prof. of Clinical Dermatology and Syphilology, Grad. Schl. of Med., Univ. of Pa., Philadelphia, Pa. DERMATOLOGY AND SYPHILOLOGY.

GREENBERG, David Morris, Prof. of Biochem. and Div. Chmn., Univ. of Calif., Berkeley, Calif. BIOCHEMISTRY.

GREENBLATT, Irving Jules, Rsch. Dir., Beth-El Hosp., 511 Allen Rd., Woodmere, L. I., N. Y. BIOCHEMISTRY AND CLINICAL CHEMISTRY. b. N. Y. C., Sept. 15, 1912. s. Samuel and Sada (Schneider) G. Edn.: A.B., N. Y. Univ., 1938; M.S., Georgetown Univ., 1939; Ph.D., *ibid.*, 1941. m. Augusta Pecker, Apr. 28, 1940. c.: Richard E. and Lawrence V. Exp.: Biochemist, Bellevue Hosp., N. Y. C., 1940-41; Biochemist, Beth-El Hosp., Woodmere, N. Y., 1941-42; Rsch. Dir., *ibid.*, 1946—. Mem.: Soc. of Exptl. Biol. and Med.; Kings Med. Soc.; A.A.A.S.; N. Y. Acad. of Sci. Contrb. to: Jour. Amer. Med. Assn.; Jour. of Biol. Chem.; Amer. Jour. of Med. Sci.; Archives of Biochem. Special Int.: Clin. Biochem.

GREENBURG, Leonard, Exec. Dir., Div. of Indus. Hygiene and Safety Standards, N. Y. State Dept. of Labor, 80 Centre St., N. Y., N. Y. PUBLIC HEALTH.

GREENE, Allan J., General Production Mgr., Charles Pfizer & Co., Inc., 11 Bartlett St., Brooklyn, N. Y. CHEMICAL ENGINEERING. b. Shelton, Conn., July 5, 1912. s. James J. and Anna T. (LaVelle) G. Edn.: B.Ch.E., Yale Univ., 1938. m. Gertrude

Todd, Sept. 14, 1940. c.: Dianne L.; Janice T. Exp.: Staff, Charles Pfizer & Co., Brooklyn, N. Y., 1938—. Mem.: Sigma Xi; Tau Beta Pi.

GREENE, Arthur Maurice, Jr., Dean Emer., Schl. of Engrng., Princeton Univ., 19 Maple St., Princeton, N. J. **MECHANICAL ENGINEERING.**

GREENE, Carl Hartley, Assoc. Clin. Prof. of Med., N. Y. Post Grad. Med. Schl., N. Y. Univ., 401 Clinton Ave., Brooklyn 5, N. Y. **INTERNAL MEDICINE, GASTRO-ENTEROLOGY.** b. South Bend, Ind., June 22, 1896. s. Charles Wilson and Flora (Hartley) G. Edn.: A.B., Univ. of Mo., 1914; Ph.D., Yale Univ., 1917; M.D., Johns Hopkins Med. Schl., 1921. m. Anna E. Purdy, Apr. 9, 1930. c.: Margaret E.; Anna P.; Barbara H. Exp.: Asst. Physiol., U. S. Bur. of Mines, 1917-18; Instr. in Med., Mayo Foundation, Univ. of Minn., St. Paul, Minn., 1923-27; Assoc. Prof. in



Med., Mayo Foundation, *ibid.*, 1927-32; Assoc. in Biochem., N. Y. Post-Grad. Med. Schl., Columbia Univ., N. Y. C., 1932-33; Assoc. in Med., *ibid.*, 1932-35; Asst. Clin. Prof. of Med., *ibid.*, 1935-37; Clin. Prof. of Med., L. I. Coll. of Med., Brooklyn, N. Y., 1935-47; Assoc. Clin. Prof. of Med., N. Y. Post-Grad. Med. Schl., Columbia Univ., N. Y. C., 1937-49; Assoc. Clin. Prof. of Med., N. Y. Univ. Post-Grad. Med. Schl., 1950—. Mem.: Phi Beta Kappa; Alpha Kappa Kappa; Amer. Bd. of Internal Med.; Fellow, A.A.A.S.; Fellow, Amer. Med. Assn.; Amer. Physiol. Soc.; Amer. Soc. of Biol. Chemists; Amer. Soc. for Clin. Investigation; Soc. for Exptl. Biol. and Med.; Amer. Soc. for Exptl. Pathol., N. Y. State Med. Soc.; Med. Soc. Co. of Kings; Amer. Gastroenterol. Soc.; Brooklyn Soc. of Internal Med.; Fellow, Amer. Coll. of Physicians; Fellow, N. Y. Acad. of Med.; Fellow, Amer. Acad. of Compensation Med. Contbr. to: Various Med. and Scientific Jours. Author: Diagnosis and Mgmt. of Diseases of the Biliary Tract, with R. Franklin Carter and John Russell Twiss, 1939. Special Int.: Physiol. Chem.; Gastroenterol.; Internal Med.

GREENE, Charles Tull, Assoc. Entomologist, U. S. Bureau Entomol. and Plant Quarantine, 4805 Guilford Rd., College Park, Md.

GREENE, Charles Wilson, Prof. Emer., Physiol. and Pharmacol., Univ. of Mo., 814 Virginia Ave., Columbia, Mo. **PHYSIOLOGY.**

GREENE, Frank Cook, Geologist, Mo. Geol. Survey, Box 138, Rolla, Mo. **GEOLOGY.**

GREENE, Hoke Smith, Prof. of Chem. and Hd. Dept., Univ. of Cincinnati, Cincinnati, Ohio. **ORGANIC CHEMISTRY.**

GREENE, James Edward, Prof. of Edn., Univ. of Ga., Athens, Ga. **PSYCHOLOGY.**

GREENE, J. F., 1043 New Pear, Vineland, N. J. **CERAMICS.**

GREENE, Katharine Bradford, Lectr. in Edn., Univ. of Mich., 1666 Broadway, Ann Arbor, Mich. **CHILD PSYCHOLOGY.**

GREENE, Laurenz, Hd., Dept. of Horticulture and Chf. Horticulturist, Agri. Expt. Station, Purdue Univ., Lafayette, Ind. **HORTICULTURE AND PLANT PHYSIOLOGY.**

GREENE, Robert A., Prof. and Exec., Dept. of Med. Microbiol., Coll. of Osteopathic Physicians and Surgeons, 1721 Griffin Ave., Los Angeles 31, Calif. **MEDICAL MICROBIOLOGY.** b. Pea Ridge, Ark., Apr. 26, 1905. s. Lee O. and Eva (Dickson) G. Edn.: B.A., Univ. of Ark., 1924; M.S., Okla. A. and M., 1926; Ph.D., Univ. of Ariz., 1933. m. Cecile Alain, June 16, 1934. c.: Yvette; Robert

Dickson; John Richard. Exp.: Grad. Asst., Okla. A. and M., Stillwater, Okla., 1924-26; Asst. Chemist, R. I. State Coll., Kingston, R. I., 1926-27; Demonstrator of Biochem., Schl. of Med., McGill Univ., Montreal, Que., Can., 1927-28; Instr., Asst. and Assoc. Prof., Dept. of Agri. Chem., Dairy Husbandry and Bacteriol., Univ. of Ariz., Tucson, Ariz., 1928-41; Dir., Ariz. State Lab., 1935-41; Dir., Div. of Labs., Ariz. State Dept. of Health, 1944-46; Dir., Thomas Lab., El Centro, Calif., 1947; Rsch. Bacteriologist, Shellmar Corp., South Gate, Calif., 1948; Prof. of Bacteriol., Coll. of Osteopathic Phys. and Surgeons Los Angeles, Calif., Los Angeles, Calif., 1948—; Consulting Microbiologist, Los Angeles Co. Osteopathic Hosp., 1953—. Mem.: Fellow, Amer. Pub. Health Assn.; Fellow, A.A.A.S.; Fellow, Amer. Inst. of Chemists; Soc. of Amer. Bacteriologists; Ariz. Pub. Health Assn.; Pi Kappa Alpha; Phi Lambda Upsilon; Phi Kappa Phi; Sigma Xi. War Record: Capt. and Major, C. W. S., World War II. Special Int.: Med. Microbiol.; Public Health.

GREENE, Luther Wilson, Technical Dir., Chem. Corps Chem. and Radiological Labs., U. S. Army, Bldg. 330, Army Chemical Center, Md. **CHEMICAL ENGINEERING.** b. Portsmouth, Va., Nov. 3, 1900. s. Luther Wilson and Ruth (Fulford) G. Edn.: B.S., N. C. State Coll., 1922. Hon. Deg.: Dr. of Engrng., N. C. State Coll. m. Elizabeth Holland, Oct. 20, 1923. c.: Barbara Greene Cusack. Exp.: Chem. Engr., E. I. du Pont de Nemours & Co., Philadelphia, Pa., 1922-29; Chem. Engr., Chem. Warfare Service, U. S. Army, Edgewood Arsenal, Md., 1929-41; Chf. Chem. Engr., C.W.S.,



Huntsville Arsenal, Ala., 1941-42; Active Unit in Army, 1942-46; Technical Dir., Chem. Corps, Chem. and Radiological Labs., Army Chem. Center, Md., 1946—. Hon. Pos.: Dir.-at-Large, Armed Forces Chem. Assn. Mem.: Amer. Chem. Soc.; Amer. Microscopical Soc.; Amer. Soc. Military Engrs.; Armed Forces Chem. Assn.; Gamma Sigma Epsilon. Author: Where to Find Information in the German Chem. Indus., 1946; The German Chem. Indus.: A Bibliography of the Chem., Metallurgical, and Process Indus., 1950. Contbr. to: Jour. Chem. Edn.; Amer. Jour. Pharm.; Oil and Soap; Foundry; Textile Colorist; Armed Forces Chem. Jour. War Record: Lt. Col., 1942-44; Col., 1944-46. Special Int.: Chem. Engrng.; Chem. and Radiological Warfare; Rsch. Management; Oils, Fats, Waxes, and Essential Oils; Chem. Microscopy.

GREENE, Richard Daniel, Rsch. Assoc., E. R. Squibb and Sons, 37 Jones Ave., New Brunswick, N. J. **BIOCHEMISTRY—NUTRITIONAL RESEARCH AND ASSAY.** b. Newport, Ohio, Oct. 31, 1901. s. Harry and Rose E. (Orr) G. Edn.: A.B., Marietta Coll., 1922; M.S., Northwestern Univ., 1925; Ph.D., *ibid.*, 1928. m. Esther Corry, July 11, 1932. Exp.: Jr. Chemist, Food and Drug Control, U. S. D. A., N. Y., N. Y., 1922-25; Lab. Asst. in Chemistry, Northwestern Univ., 1924-25; Univ. Fellow, *ibid.*, 1926-27; Rsch. Chemist in Nutrition, E. R. Squibb and Sons, 1927—. Mem.: Alpha Chi Sigma; Phi Lambda Upsilon; Sigma Xi. Contbr. to: Jour. Biol. Chem.; Jour. Amer. Chem. Soc.; Proc. Soc. Exptl. Biol. and Med. Special Int.: Fractionation of Vitamins, Microbiol. Methods of Assay for Vitamins and Amino Acids.



GREENLEAF, Herrick E. H., Chmn. Dept. Math., DePauw Univ., Greencastle, Ind. **MATHEMATICS, ESPECIALLY PRE-ACTUARIAL MATHEMATICS**. b. Waltham, Mass., Aug. 23, 1894. s. L. Herbert and Emma E. (Boyce) G. Edn.: S.B., Boston Univ., 1916; M.A., *ibid.*, 1925; Ph.D., Ind. Univ., 1932. m. L. Blanche Bryant, Apr. 10, 1917. c.: Elizabeth A.; Edith; Marion; Mildred. Exp.: Grad. Asst. in Physics, Boston Univ., 1916-17; Tehr., Winthrop, Mass., H. S., 1917-21; Tehr., Fall River, Mass., H. S., 1919; Staff, DePauw Univ., Greencastle, Ind., 1921—. Mem.: Amer. Math. Soc.; Math. Assn. of Amer.: A.A.U.P.; Lambda Chi Alpha; Phi Mu Alpha; Phi Beta Kappa; Mason; Order Eastern Star; Sigma Xi. War Record: World War I.

GREENLEE, Sylvan Owen, Applied Rsch. Dir., S. C. Johnson and Son, Inc., 1700 Ole Davidson Rd., Racine, Wis. **CHEMISTRY**. b. McLeansboro, Ill., Mar. 15, 1910. s. Julius and Eliza Agnes (Thompson) G. Edn.: B.Ed., Southern Ill. Univ., 1935; A.M., Univ. of Ill., 1936; Ph.D., *ibid.*, 1939. m. Evelyn Ayre, June 29, 1940. c.: Nancy Kay; Sandra Sue; Sharon Lynn. Exp.: Rsch. Chemist, Devoe and Raynolds Co., Inc., Louisville, Ky., 1939-43; Dir. of Rsch., *ibid.*, 1943-46; Applied Rsch. Dir., S. C. Johnson and Son, Inc., Racine, Wis., 1946—. Mem.: Amer. Chem. Soc.; Amer. Inst. Chemists; Natl. Paint, Varnish and Lacquer Assn.; Amer. Oil Chem. Soc.; Sigma Xi; Phi Lambda Upsilon. Special Int.: Rsch. and Development Leading to New Types of Resins and Protective Coatings.



GREENWALD, Willard F. Consultant, General Products, 350 Fifth Ave., N. Y., N. Y. **TOBACCO PRODUCTS; CHEMISTRY; PHYSIOLOGY; PHARMACOLOGY; ELECTRO-CHEMISTRY**. b. Philadelphia, Pa., Mar. 23, 1897. s. Max and Mary (Simon) G. Edn.: B.S., Columbia Univ., 1919; Ch.E., *ibid.*, 1922. m. Nellie Benenson, 1925. c.: Willard F., Jr., Mary Jane. Exp.: Chem. Engr., Acids Mfg. Co., 1922-23; Technical Dir., Chem. Treatment Co., New York City, 1923-25; Development of Chromium Plating Consultant, N. Y. C., 1925-33; Consultant, Commercialization of Chromium Plating, Philip Morris and Co., N. Y. C., 1933-42; Consultant, Tobacco Products, N. Y. C., 1942—. Mem.: Amer. Chem. Soc.; Amer. Inst. of Chem.; Phi Beta Kappa; Sigma Xi; Tau Beta Pi; Phi Lambda Upsilon; Phi Epsilon Pi. Contrb. to: Chem. and Metallurgical Engrng.; Military Surgeon. Special Int.: Commercialization of Chromium Plating; Advances in Tobacco Products.

GREENWALD, Willard F. Consultant, General Products, 350 Fifth Ave., N. Y., N. Y. **TOBACCO PRODUCTS; CHEMISTRY; PHYSIOLOGY; PHARMACOLOGY; ELECTRO-CHEMISTRY**. b. Philadelphia, Pa., Mar. 23, 1897. s. Max and Mary (Simon) G. Edn.: B.S., Columbia Univ., 1919; Ch.E., *ibid.*, 1922. m. Nellie Benenson, 1925. c.: Willard F., Jr., Mary Jane. Exp.: Chem. Engr., Acids Mfg. Co., 1922-23; Technical Dir., Chem. Treatment Co., New York City, 1923-25; Development of Chromium Plating Consultant, N. Y. C., 1925-33; Consultant, Commercialization of Chromium Plating, Philip Morris and Co., N. Y. C., 1933-42; Consultant, Tobacco Products, N. Y. C., 1942—. Mem.: Amer. Chem. Soc.; Amer. Inst. of Chem.; Phi Beta Kappa; Sigma Xi; Tau Beta Pi; Phi Lambda Upsilon; Phi Epsilon Pi. Contrb. to: Chem. and Metallurgical Engrng.; Military Surgeon. Special Int.: Commercialization of Chromium Plating; Advances in Tobacco Products.

GREENWALD, Willard F. Consultant, General Products, 350 Fifth Ave., N. Y., N. Y. **TOBACCO PRODUCTS; CHEMISTRY; PHYSIOLOGY; PHARMACOLOGY; ELECTRO-CHEMISTRY**. b. Philadelphia, Pa., Mar. 23, 1897. s. Max and Mary (Simon) G. Edn.: B.S., Columbia Univ., 1919; Ch.E., *ibid.*, 1922. m. Nellie Benenson, 1925. c.: Willard F., Jr., Mary Jane. Exp.: Chem. Engr., Acids Mfg. Co., 1922-23; Technical Dir., Chem. Treatment Co., New York City, 1923-25; Development of Chromium Plating Consultant, N. Y. C., 1925-33; Consultant, Commercialization of Chromium Plating, Philip Morris and Co., N. Y. C., 1933-42; Consultant, Tobacco Products, N. Y. C., 1942—. Mem.: Amer. Chem. Soc.; Amer. Inst. of Chem.; Phi Beta Kappa; Sigma Xi; Tau Beta Pi; Phi Lambda Upsilon; Phi Epsilon Pi. Contrb. to: Chem. and Metallurgical Engrng.; Military Surgeon. Special Int.: Commercialization of Chromium Plating; Advances in Tobacco Products.

GREENEWALT, Crawford Hallock, E. I. du Pont de Nemours and Co., Inc., Wilmington, Del.

GREENFIELD, Robert Edman, Gen. Supt., A. E. Staley Mfg. Co., Decatur, Ill. **CHEMISTRY**.

GREENHILL, Jacob Pearl, Prof. and Chmn. Dept. of Gynecology, Cook County Grad. Schl. of Med. and Hosp., 55 E. Washington Blvd., Chicago, Ill. **OBSTETRICS, GYNECOLOGY**.

GREENSLADE, Grover Rawle, Dir. of Rsch., Flannery Bolt Co., Bridgeville, Pa. **PHYSICS**.

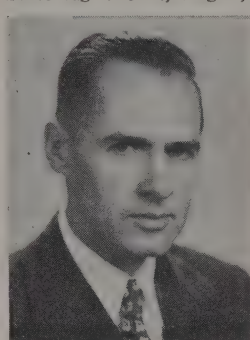
GREENSTEIN, Jesse L., Asst. Prof., Yerkes Observatory, Univ. of Chicago, Williams Bay, Wis. **ASTROPHYSICS**.

GREGersen, Magnus Ingstrup, Prof. and Hd., Dept. of Physiol., Coll. of Physicians and Surgeons, Columbia Univ., 630 W. 168th St., N. Y., N. Y. **MEDICAL SCIENCES**.

GREGG, Alan, Dir. of Med. Sciences, Rockefeller Foundation, N. Y., N. Y. **MEDICAL SCIENCE**.

GREGG, Clifford C., Dir., Chicago Natural History Museum, Roosevelt Rd. and Field Dr., Chicago, Ill. **EDUCATION, ADMINISTRATION**.

GREENWOOD, Delbert A., Prof. of Biochem., Utah State Agri. Coll., Logan, Utah. **BIOCHEMISTRY**.



PHARMACY. b. Lehi, Utah, Oct. 15, 1904. s. Thomas A. and Mary A. (Losee) G. Edn.: B.S., Brigham Young Univ., 1926; M.S., B. Y. Univ., Provo, Utah, 1930; Ph.D., Univ. of Chicago, 1946. m. Maxine Clayton, Sept. 12, 1934. d. Raymond H. and Ada Clayton, Midvale, Utah. c.: Joan Clayton, Ray Clayton. Exp.: Instr., B. Y. Univ., 1927-30; Grad. Asst. and Instr., 1930-36; Rsch. Biochemist, Amer. Meat Inst., Univ. of Chicago, 1936-46; Rsch. Assoc. and Instr., Dept. of Pharmacology, *ibid.*, 1939-46; Prof. of Biochemistry, Utah St. Agri. Coll., 1946—. Learned Soc.: A.A.A.S.; Amer. Chem. Soc.; Soc. for Exptl. Biol. and Medicine; Ia. Acad. of Sci.; Utah Acad. of Sci.; A.A.U.P. Mem.: Phi Kappa Phi; Phi Lambda Upsilon; Sigma Xi; Gamma Sigma Delta; The Amer. Soc. for Pharmacology and Experimental Therapeutics, Inc. Contrb. to: Food Rsch.; Jour. Dairy Sci.; Sci.; Ind. and Engr. Chem.; Jour. Biol. Chem.; Proc. Soc. Exp. Biol. and Med.; Jour. Amer. Vet. Med. Assn.; Jour. Dental Rsch. Ph.D. Dissertation: Some Chronic Effects of Fluorides in Rats, Dogs, and Man. Travel: Canada; Mexico. Studies on Physiological Effects of Fluorides; Effect of processing on the nutritive value of meats; Studies of toxicity of DDT and newer insecticides to farm animals, and their accumulation in products consumed by man; Studies on the effect of fertilizers on yield, composition and nutritive value of alfalfa. Hobbies: Sports and travel. Listed in: Amer. Men. of Sci.; Who's Who in Chicago; Who's Who in Amer.; Who's Who in the West. Special Int.: Rsch. on Physiol. Effects of Fluorine; Toxicity of DDT and Newer Organic Insecticides to Farm Animals.

GREGG, Donald Eaton, Chf., Rsch. Physician, Med. Dept., Field Rsch. Lab., Ft. Knox, Ky. **PHYSIOLOGY, CARDIOVASCULAR**.

GREGORIUS, J. S., Pittsburgh Plate Glass Co., 2300 Grant Bldg., Pittsburgh 19, Pa. **CERAMICS**.

GREGORY, Louis H., Assoc. Dean and Prof. of Zool., Barnard Coll., Columbia Univ., N. Y., N. Y. **ZOOLOGY, ADMINISTRATION**.

GREGORY, Paul Wallace, Assoc. Prof. of Animal Husbandry, Univ. of Calif., Davis, Calif. **GENETICS**.

GREGORY, Raymond William, Asst. U. S. Commr. Vocational Edn., U. S. Office of Edn., 4531 Van Ness St., N. W., Washington, D. C. **EDUCATION (ADMINISTRATION)**.

GREGORY, Wilbur Smith, Professor of Psychol., Univ. of Redlands, Redlands, Calif. **PSYCHOLOGY**. b. Johnstown, Pa., Oct. 6, 1912. s. Albert M. and Darl (Smith) G. Edn.: A.B., Muskingum Coll. 1933; M.A., Syracuse Univ., 1936; Ph.D., *ibid.*, 1937. m. Stella Thompson of Pasadena, Calif., Nov. 23, 1944. d. Mr. and Mrs. F. W. Thompson. Exp.: Instr. in Psychol. and Special Advisor to Freshmen, 1937-40; Univ. of Neb.: Asst. Prof. in Psychol. and Guid. Consultant, 1940-42; Military Service, 1942-46; Hd. of Counseling and Testing Service, Univ. of N. Mex., 1946-47; Assoc. Prof. of Psychol., Univ. of Redlands, 1947-51; Prof., *ibid.*, 1951—. Mem.: Amer. Psy-



47; Assoc. Prof. of Psychol., Univ. of Redlands, 1947-51; Prof., *ibid.*, 1951—. Mem.: Amer. Psy-

chological Assn.; Amer. Coll. Personnel Assn.; A.A.A.S.; Western Psychological Assn.; Sigma Xi; Calif. Psychol. Assn. Author: Gregory Academic Interest Inventory. Contrb. to: Character and Personality; Jour. of Social Psychol.; Jour. of Psychol. Special Int.: Test Dev. in Areas of Interest and Personality Measurement; Guidance Methods.

GREGORY, Walton Carlyle, Asst. Prof. of Agron., N. C. State Coll., Raleigh, N. C. GENETICS, CYTOLOGY.

GREGORY, William King, Amer. Museum of Natural History, 77th St. and Central Park West, N. Y. 24, N. Y.

GREIDER, Clarence Edwin, Rsch. Engr., Natl. Carbon Co., Cleveland, Ohio. INDUSTRIAL CHEMISTRY.

GREIFF, Lotti June, Tchr. of Chem., Far Rockaway H. S., Far Rockaway, N. Y. PHYSICAL CHEMISTRY.

GREISHEIMER, Esther Maud, Prof. of Physiol., Temple Univ., Philadelphia, Pa. PHYSIOLOGY.

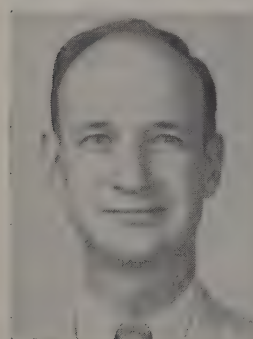
GRESS, Ernest Milton, retired, 2000 High St., Camp Hill, Pa. BOTANY.

GRETH, Ewald Theophilus, Prof. of Econ., Dean Schl. of Business Admin., 112 S. Hall, Univ. of Calif., Berkeley, Calif. ECONOMICS, MARKETING.

GREULACH, Victor August, Assoc. Prof. of Botany, Tex. A. and M. Coll., College Station, Tex. PLANT PHYSIOLOGY.

GREULICH, William Walter, Prof. of Anatomy and Dir., Brush Foundation, Stanford Univ., Calif. ANATOMY.

GREVILLE, Thomas Nall Eden, Analytical Statistician, Natl. Office of Vital Statistics, Institute



of Inter-Amer. Affairs, Caixa Postal 1530, Rio de Janeiro, Brazil. MATHEMATICS. b. N. Y., N. Y., Dec. 27, 1910. s. Algernon E. and Hermione (Nall) G. Edn.: B.A., Univ. of the South, 1930; A.M., Univ. of Mich., 1932; Ph.D., ibid., 1933. m. Florence Nusim, July 23, 1951. c. Alice Eden; Edgar Murdock. Exp.: Actuarial Asst., Acacia Mutual Life Ins. Co., Washington, D. C., 1933-37; Instr. in Math., Univ. of Mich., 1937-40; Chf., Actuarial Analysis Branch, Natl. Office of Vital Statistics, 1940-52; Analytical Statistician, Internatl. Vital Statistics Cooperative Program, ibid., 1952—. Mem.: Soc. Actuaries; Amer. Statistical Assn.; Inst. of Math. Statistics; Amer. Math. Soc.; Inter-Amer. Statistical Inst.; Population Assn. of Amer.; Internatl. Union for the Scientific Study of Population; Phi Beta Kappa; Sigma Xi; Sigma Pi Sigma; Sociedade Brasileira de Estatística; Instituto Brasileiro de Atuária; etc. Author: U. S. Life Tables and Actuarial Tables, 1939-41, 1946. Contrb. to: Trans. Soc. Actuaries; The Record, Amer. Inst. Actuaries; Trans. Actuarial Soc. Amer.; Jour. Amer. Statistical Assn.; etc. Special Int.: Mortality Tables, Interpolation and Smoothing of Numerical Data; Calculus of Finite Differences; Foundations of the Theory of Probability.

Office of Vital Statistics, 1940-52; Analytical Statistician, Internatl. Vital Statistics Cooperative Program, ibid., 1952—. Mem.: Soc. Actuaries; Amer. Statistical Assn.; Inst. of Math. Statistics; Amer. Math. Soc.; Inter-Amer. Statistical Inst.; Population Assn. of Amer.; Internatl. Union for the Scientific Study of Population; Phi Beta Kappa; Sigma Xi; Sigma Pi Sigma; Sociedade Brasileira de Estatística; Instituto Brasileiro de Atuária; etc. Author: U. S. Life Tables and Actuarial Tables, 1939-41, 1946. Contrb. to: Trans. Soc. Actuaries; The Record, Amer. Inst. Actuaries; Trans. Actuarial Soc. Amer.; Jour. Amer. Statistical Assn.; etc. Special Int.: Mortality Tables, Interpolation and Smoothing of Numerical Data; Calculus of Finite Differences; Foundations of the Theory of Probability.

GRIER, George W., Prof. of Radiology, Univ. of Pittsburgh, Pittsburgh, Pa. RADIOLOGY.

GRIFFIN, Edward Lawrence, Asst. Chf., Insecticide Div., Production and Marketing Admin., U. S. D. A., 420 Whittier St., N. W., Washington, D. C. CHEMISTRY

GRIFFIN, Harriet Madeline, Assoc. Prof. of Math., Brooklyn Coll., Brooklyn, N. Y. MATHEMATICS. b. Apr. 6, 1903, Brooklyn, N. Y. d. Harry and Madeline (Gully) G. Edn.: A. B., Hunter Coll., 1925; M.A., Columbia Univ., 1929; Ph.D., N. Y. Univ., 1939. Exp.: Tutor and Instr., Hunter Coll., 1926-30; Instr., Brooklyn Coll., 1930-41; Asst. Prof., ibid., 1941-50; Assoc. Prof., 1950—. Mem.: Phi Beta Kappa; Key Pin Soc.; Pi Mu Epsilon; Comm. for Liberation of Archbishop Stepinac; Math. Assn. of Amer.; A.M.S.; A.A.A.S.; Cath. Round Table of Sci.; etc. Author: The Concepts of the Theory of Numbers, 1947. Ph.D. Dissertation: The Abelian Quasi-Group. Travel: N. Amer.; S. Amer.; Europe. Listed in: Who's Who in the East; A.M.S. Special Int.: Abstract Algebra; Theory of Numbers.

GRIFFIN, Howard C., Assoc. Prof. of Chem., retired, Carnegie Inst. of Tech., 82 James St., Bangor, Maine. CHEMISTRY.

GRIFFIN, James Bennett, Dir. and Curator Archaeology, Museum Anthropol., Univ. of Mich., Ann Arbor, Mich. AMERICAN ARCHAEOLOGY.

GRIFFITH, Coleman Roberts, Provost, Univ. of Ill., Urbana, Ill. PSYCHOLOGY.

GRIFFITH, Edward J., Rsch. Chem., Monsanto Chemical Co., Nicholas Rd., Dayton, Ohio. Physical CHEMISTRY. b. Atlanta, Ga., April 4, 1925. s. George P. and Frances (Berrier) G. Edn.: B.S., Howard Coll., 1946; M.S., Univ. of Ky., 1948; Ph.D., ibid., 1951. m. Marguerite J., Oct. 26, 1946. c.: J. E. Exp.: Rsch. Chemists, Monsanto Chemical Co., 1951—. Mem.: Sigma Xi; A.A.A.S. Contrb. to: Jour. Amer. Chem. Soc.; Jour. Phys. Chem.; Transaction of the Ky. Acad. of Sci. Special Int.: Phosphate Chem.; Nonaqueous Solvent Studies, Polymer Chem. and Terpene Chem.

GRIFFITH, Frederick Reece, Jr., Prof. and Hd. of Dept. of Physiol., Univ. of Buffalo Med. Schl., Buffalo, N. Y. PHYSIOLOGY. b. St. Louis, Mo., June 30, 1892. s. Frederick Reece and Elizabeth Hannah (Welsh) G. Edn.: A.B., Wash. Univ., 1914; M.A., ibid., 1915; Ph.D., Harvard Univ., 1923. m. Varina O'Hara, June 15, 1921. c.: Anne Elizabeth; James O'Hara; Davis Walker. Exp.: Asst. Prof. of Biol., Univ. of Miss., Oxford, Miss., 1915-16; Asst. Prof. of Biol., Southern Methodist Univ., Dallas, Tex., 1916-19; Tehng. Fellow and Instr., Dept. of Physiol., Harvard



Med. Schl., Boston, Mass., 1919-23; Asst. and Assoc. Prof. of Physiol., Univ. of Buffalo Med. Schl., Buffalo, N. Y., 1923-36; Prof. and Hd. of Dept. of Physiol., ibid., 1936—. Mem.: Amer. Physiol. Soc.; Amer. Inst. of Nutrition; Soc. for Exptl. Biol. and Med.; A.A.A.S.; Phi Beta Kappa; Sigma Xi. Contrb. to: Amer. Jour. of Physiol.; Jour. of Nutrition; Proc. Soc. for Exptl. Biol. and Med.; Physiol. Rev. Special Int.: Mammalian Physiol.; Reflex and Hormone Control of the Blood Sugar; Seasonal and other Rhythmical Variations in Metabolic Rate, Cardio-Vascular and Respiratory Functions and Blood and Urine Chem.; Control of the Circulation in the Liver; Metabolic and Related Effects of Adrenaline.

GRIFFITH, John Hughes, Los Angeles City Coll., 855 N. Vermont Ave., Los Angeles, Calif.

GRIFFITHS, Charles H., 1507 Charlton Ave., Ann Arbor, Mich. PSYCHOLOGY.

GRIFFITHS, Fred Albert, Prof. of Chem., Maryville Coll., Maryville, Tenn. INORGANIC AND PHYSICAL CHEMISTRY. b. Philadelphia, Tenn., Apr. 11, 1903. s. Fred W. and Lou Ann (Mitchell) G. m. Ruby Irene Miller of Knoxville, Tenn., 1933. Edn.: A.B., Maryville Coll., 1925; M.S., Iowa State

Coll., 1930; Ph.D., Ind. Univ., 1936. Exp.: Instr. in Chem., Maryville Coll., 1925-30; Chem., Du Pont Expt. Sta., Summer, 1926; Asst. in Chem., Iowa State Coll., Summer, 1927; Assoc. Prof. of Chem., Maryville Coll., 1930-37; Asst. in Chem., Ind. Univ., 1935-36; Prof. of Chem., Maryville Coll., 1937—; Staff of the Chem. Faculty, Ind. Univ., Summer, 1937; Staff, Chem. Faculty, Univ. of Tenn., 1946-47-48-52-53. Mem.: Phi Lambda Upsilon; Sigma Xi; The Amer. Chem. Soc.; A.A.U.P.; N. Y. Acad. of Sci. Ph.D. Dissertation: The Catalytic Activity of Cobalt Sulfide. Author: A Lab. Manual of Liberal Arts Chem. Contrb. to: Jour. of Physical Chem.; Ia. State Coll. Jour. of Sci.; The Chemist. Gen. Int.: Inorganic and Physical Chem. Special Int.: Nonaqueous Solvents; Catalytic poisons.

GRIGGS, David Tressell, Office of the Chf. of Staff, U. S. Air Force, Washington 25, D. C.

GRIGGS, Robert Fiske, 207 Aiden Rd., Rosslyn Farms, Carnegie, Pa. BOTANY.

GRIGSBY, Buford Horace, Assoc. Prof. and Rsch. Assoc. in Botany, Mich. State Coll., East Lansing, Mich. WEED CONTROL.

GRIMES, Jay Cook, Prof., Animal Husb., Ala. Poly. Inst., Auburn, Ala. GENETICS AND ANIMAL NUTRITION. b. Clifton, Tenn., Feb. 20, 1890. s. William Henry and Nancy Elizabeth (Cook) G. Edn.: B.S., Univ. of Tenn., 1916; M.S., Univ. of Ky., 1919. m. Lottie Busey of Frisco City, Ala., Aug. 4, 1924. d. John and Ella Busey. c.: Elizabeth Jeannette; Mary Frances. Exp.: County Agri. Agent, Monroe County, Tenn., 1916-18; Instr., Animal Husb., Univ. of Ky., 1918-20; Hd. Prof., Animal Husb., Ala. Poly. Inst. and Ala. Expt. Sta., 1920-50; Prof., ibid., 1950—. Hon. Pos.: Chairman, Animal Husbandry Section, Southern Agri. Workers Assn.; Chairman, Board of Deacons, Auburn Bapt. Ch. Mem.: Amer. Soc. of Animal Prod.; Amer. Genetics Assn.; Amer. Assn. of Sou. Agri. Workers; Delta Sigma Phi; Phi Kappa Phi; Gamma Sigma Delta; Mason; Auburn Kiwanis Club. Author: Ala. Expt. Sta. Bulls. on Feeding and Management of Livestock. Travel: U. S. Gen. Int.: Rsch. upon Nutrition and Breeding of Animals. Hobbies: Civic Improvement and Community Betterment. Listed in: A.M.S.; Who's Who in the South and Southwest; Poor's Register of Dir. and Execs. Special Int.: Animal Breeding; Animal Feeding.

GRIMSLEY, George Perry, retired, Hopkins Apts., 3100 St. Paul St., Baltimore, Md. GEOLOGY.

GRINNELL, Lawrence Irving, Ornithologist, 710 Triphammer Rd., Ithaca, N. Y. ORNITHOLOGY. b. Flushing, N. Y., June 14, 1889. s. E. Morgan and Sarah J. (Stone) G. Edn.: A.B., Harvard Univ., 1912; M.S., Cornell Univ., 1943; Ph.D., ibid., 1947. m.: Julia Temple, Oct. 30, 1930. c.: Sarah T. Exp.: Expeditions to the following countries for purpose of bird-study and motion-picture photography: Alaska, Hudson Bay, North Shore of St. Lawrence Gulf, Trinidad, Tobago, Guatemala, Colombia, West Indies, Mexico and British Guiana. Mem.: Amer. Ornithol. Soc.; N. Y. Zool. Soc.; Wilson Ornithol. Club; Cooper Ornithol. Club; Linnaean Soc.; Amer. Geographical Soc.; Amer. Alpine Club; Phi Kappa Phi; Historical Soc. of Ithaca, N. Y. Contrb. to: The Auk; Wilson Ornithol. Bull.; Amer. Alpine Jour.; War Record; Lt., World War I. Special Int.: Ornithol.

GRISCOM, Ludlow, Rsch. Curator of Zool., Museum Comparative Zool., Harvard Univ., 21 Fayerweather St., Cambridge, Mass. ORNITHOLOGY.

GRISEWOOD, Edgar Norman, Dir., Univ. Broadcasts, N. Y. Univ., N. Y., N. Y. PHYSICS.

GRISWOLD, Don Morse, Med. Consultant, 3708 Northview Drive, Jackson, Miss. PUBLIC HEALTH ADMINISTRATION AND EPIDEMIOLOGY. b. Sherman, Mich. Aug. 18, 1887. s. H. Dwight and Mary (Francher) G. Edn.: M.D., Univ. of Mich., 1912; Dr. P. H., Wayne Univ., 1922. m. Bernice Voos, Sept. 15, 1913. c.: Don Morse, II. Exp.: Dir. of Lab., Detroit Bd. of Health, Sci. Lab. Rsch., Tchr., Med. Coll., Wayne Univ., Detroit, Mich.,

1913; Dir. of Med. Service, ibid., 1915; Dir. for Antigua, British West Indies, Study of Tropical Diseases, 1917; Dept. Sta. Health Commr., Tchr., Univ. of Mich., Ann Arbor, Mich., 1919; State Health Officer, Tchr., Univ. of Iowa, Iowa City, Iowa, 1920-30; Consulting Epidemiol., N. Y. Dept. of Health, Albany Med. Coll., N. Y. C., 1930-47; Med. Consultant, Miss. State Bd. of Health, Jackson, Miss., 1947—. Mem.: Fellow, Amer. Public Health Assn., Amer. Med. Assn.; N. Y. State Med. Soc. and Geneva Acad. of Med. War Record: Camp Epidemiol., W. W. I.

GRIZZELL, Emit Duncan, Prof. of Secondary Edn., Univ. of Pa., Philadelphia, Pa. SECONDARY EDUCATION.

GROFF, George Weidman, Laurel, Sarasota Co., Fla. SUBTROPICAL POMOLOGY.

GROH, Herbert, Assoc. Botanist, Div. of Botany and Plant Pathol., Central Expt. Farm, Dept. of Agri., Ottawa, Ont., Can. BOTANY.

GRONDAHL, Lars Olai, Dir., Rsch. and Engrng., Union Switch and Signal Co., Pittsburgh, Pa. PHYSICS.

GROSS, Alfred William, Assoc. Prof. of Edn. and Psychol., State Tchrs. Coll., Duluth, Minn. EDUCATION, PSYCHOLOGY.

GROSS, Eric T. B., Prof., Elec. Engrng., Ill. Inst. of Tech., Chicago, Ill. ELECTRIC POWER SYSTEMS ENGINEERING. b. May 24, 1901, Vienna, Austria. s. Berthold and Sophie (Gerstmann) G. Edn.: Univ. of Vienna, Austria, and Inst. of Tech., Vienna, E. E., 1923; D.Sc., 1932. m. Catharine Rohrer of Lititz, Pa., Aug. 14, 1942. d. Ira Eby and Bertha Brubaker R. c.: Patrick Walter; Elizabeth Sophia; Margaret Joan. Exp.: Jr. Lectr., Inst. of Tech., Vienna, Austria, 1921-23; Elec. Engr., A.E.G.-Union Elec. and Mfg. Co., Vienna, 1924-38; In Chg. of Relay and Protective Devices Div., 1929-34; In Chg. Central Sta. Dept., 1935-38; Consult. Engr., A.E.G., British Elec. Co., Ltd., London, 1938-39; Res. Dr., Grad. Schl., Cornell Univ., Ithaca, N. Y., 1939-40; Rsch. Assoc., Coll. of Engrng., ibid., 1940-41; Instr., E. E. Schl. of Tech., Coll. of City of N. Y., 1941-42; Asst. Prof. of E. E., Cornell Univ., 1942-45; Consultant to War Dept., 1942-44; Prof. Power Systems Engr., Ill. Inst. of Tech., 1945—; Consultant, Armour Rsch. Foundation, Chicago, 1952—. Hon. Pos.: Chmn., Sect., System Protection and Grounding, Internatl. Conf. on Large High Voltage Systems at Paris, 1937; Pres., Sigma Xi Chapt. at Ill. Inst. Tech., 1950-51. Fellow: A.A.A.S.; A.I.E.E. Mem.: Inst. E.E. (London); A.S.E.E.; A.A.U.P.; Hist. of Sci. Soc.; Sigma Xi; Tau Beta Pi; Eta Kappa Nu; Swiss Inst. of Elec. Eng.; Internatl. Conf. on Large High Voltage Systems in Paris; Sigma Kappa Tau. Contrb. to: A.I.E.E. Transactions, Jour. of the Franklin Institute, Bulletin Swiss Inst. of E.E., and others. Travel: Central, Western European Countries. Gen. Int.: Patents in U. S. and Other Countries Concerning Relaying in Large High Voltage Systems. Listed in: Who's Who in Engrng.; A.M.S.; Who's Who in the Middle West; Who Knows—and What. Special Int.: High Voltage Transmission; Grounding; Protective Devices.

GROSS, Erwin George, Prof. and Hd., Dept. of Pharmacol., Univ. of Iowa, Iowa City, Iowa. PHARMACOLOGY.

GROSS, George Lloyd, Rsch. Engr. Applied Math., Grumman Aircraft Engrng. Corp., Bethpage, Long Island, N. Y. APPLIED MATHEMATICS.

GROSS, Paul Magnus, Prof. of Chem., Duke Univ., Durham, N. C. PHYSICAL CHEMISTRY.

GROSSENBACHER, Karl Albert, Asst. Prof. of Botany, Dept. of Sci., Univ. of Calif., Santa Barbara, Calif. PLANT PHYSIOLOGY.

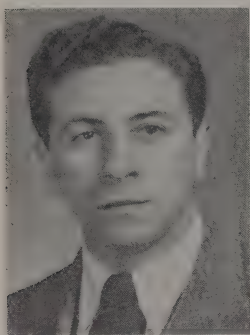
GROSSMAN, Edward B., Chf., Med. Unit, N. Y. Regional Office, U. S. Veterans Admin., 252 Seventh Ave., N. Y. 1, N. Y. INTERNAL MEDICINE. b. N. Y., N. Y., Apr. 3, 1911. s. William and Frances (Schonfeld) G. Edn.: A.B., summa cum laude, Harvard Univ., 1931; M.D., Johns Hopkins

Univ., 1935. Exp.: Resident House Officer, The Johns Hopkins Hosp., 1935-36; Asst. Resident Physician, Diagnostic Hosp. of the Boston Dispensary, 1936-37; Resident Physician, Vanderbilt Univ. Hosp., 1937-38; Sr. Clin. Asst. Physician and Rsch. Asst. Chemist, Mount Sinai Hosp., N. Y., 1938-42; Chf., Med. Unit, N. Y. Regional Office, Veterans Admin., 1948—, Mem.: Phi Beta Kappa; Sigma Xi; A.A.A.S.; N. Y. Acad. Sci.; Amer. Federation for Clin. Rsch.; Amer. Coll. of Physicians; N. Y. Acad. Med.; A.M.A. Contrb. to: Jour. General Physiol.; Amer. Jour. Physiol.; Proc. Soc. for Exptl. Biol. and Med.; Jour. Clin. Investigation; Jour. Mount Sinai Hosp., Arch. Int. Med. War Record; Capt. to Lt. Col., Med. Corps, U. S. Army, 1942-46.

GROSSMAN, Harold Henry, Physicist, Dow Chemical Co., 122 Campbell Ct., Midland, Mich. **SPECTROGRAPHIC ANALYSIS.**

GROSSMAN, Louis Irwin, Asst. Prof., Dept. of Oral Med., Univ. of Pa., Philadelphia, Pa. **ENDODONTIA.**

GROSSMAN, Nicholas, Hd., Mech. Development Section, Atomic Energy Div., Sylvania Elec. Products Inc., Bayside, L. I., N. Y. **APPLIED MECHANICS, MECHANICS OF MATERIALS, MECHANIC METTALURGY.** b. Aug. 25, 1919, Budapest, Hungary.



s. Sigmund and Elizabeth (Deutelbaum) G. m. Irene Deros, July 12, 1952. Edn.: Gymnasium, Budapest, Hungary, 1930-38; Case Inst. of Tech., B.S., 1942; M.S., Mass. Inst. Tech., 1946. Exp.: Staff Mem., Div. of Industrial Coop., M. I. T., Full-Time Rsch., 1944-49; Asst. Prof., Mech. Engrng., *ibid.*, 1949-51; (leave of absence resign. '52); Mech. Engr., M. W. Kellogg Co., N. Y. C., 1951-52; Hd. Mech. Development Sec., Atomic Energy Div., Sylvania Elec. Products Inc., Bayside, L.I., N. Y., 1952—. Hon. Pos.: Chmn., N. Eng. Div. of Amateur Fencers League of Amer., 1949-50. Mem.: Amer. Soc. of Mech. Engrs.; Amer. Inst. of Mining and Metallurgical Engrs.; Inst. of Mech. Engrs., England; Soc. of Sigma Xi; Amateur Fencers League of Amer. Contrb. to: Welding Jour. War Record: Enlisted, U.S.A.A.F., 1943-44. Travel: Europe; N. Amer. Gen. Int.: Licensed Professional Engr., Commonwealth of Mass. Hobbies: Model Railroad; Travel; Photography; Fencing. Special Int.: Mech. Behavior of Metals, Testing for design and development, Powder Metallurgy.

GROSVENOR, Gilbert, Pres., Natl. Geographic Soc. and Editor, Natl. Geography Mag., 16th and M Sts., Washington, D. C. **GEOGRAPHY.**

GROTE, Irvine Walter, Prof. of Chem., Univ. of Chattanooga, 50 S. Crest Rd., Chattanooga, Tenn. **CHEMISTRY.**

GROUT, Frank Fitch, Prof. of Geol. and Mineralogy, Univ. of Minn., Minneapolis, Minn. **PETROGRAPHY.**

GROVE, Alvin R., Jr., Asst. Prof. of Botany, Pa. State Coll., State College, Pa. **PHYSIOLOGICAL ANATOMY.**

GROVE, Charles Clayton, Prof. Emer., Coll. of the City of N. Y., 143 Milburn Ave., Baldwin, L. I., N. Y. **MATHEMATICS.**

GROVE, Cornelius Sherman, Jr., Prof., Chem. Engr., Syracuse Univ. Engrng. and Sci. Campus, E. Syracuse, N. Y. **CHEMICAL ENGINEERING AND PHYSICAL CHEMISTRY.** b. September 8, 1905, Oneida, N. Y. s. Cornelius Sherman and Ada Mae (Weller) G. Edn.: A.B., Lenoir Rhyne Coll., 1925; B.S., N. C. State Coll., 1928; Ch.E., *ibid.*, 1932; M.S., Mass. Inst.

Tech., 1934; Ph.D., Univ. of Minn., 1942. Exp.: Asst. Prof. Chem. Engrng., N. C. State Coll., 1930-35; Instr., Univ. of Minn., 1935-41; Rach. Chem. Engrng., DuPont, 1941-45; Prof., Hd. Chem. Engrng., State Univ. of Ia., 1945-47; Prof., Syracuse Univ., 1947—. Mem.: A.I.Ch.E.; A.C.S.; A.S.E.E.; A.A.U.P.; A.A.A.S.; Tau Beta Pi; Sigma Xi; Phi Lambda Upsilon; Alpha Chi Sigma; Faculty Club; Kiwanis. Contrb. to: Indus. Engrng. Chem.; Chem. Engrng. Prog.; and other Tech. Jour. Ph.D. Dissertation: Crystal Growth in Aqueous Solutions (Potassium Alum). Hobbies: Gardening. Listed in: Chem. Who's Who; Who's Who in Engrng.; A.M.S.; Who Knows—and What Special Int.: Fibers; Crystallization; Organic Unit Processes; Fluid Flow of Multiphase Systems, E. G. Foams.

GROVER, Frederick Warren, Prof. Emer. Elec. Engrng., Union Coll., 1036 Univ. Pl., Schenectady, N. Y. **ELECTRICAL MEASUREMENTS.**

GROVES, Ancell Byron, Plant Pathologist, Va. Agri. Expt. Station, Winchester Rsch. Lab., Winchester, Va. **PLANT PATHOLOGY.**

GROVES, James F., Chicago Undergrad. Div., Univ. of Ill., Navy Pier, Chicago, Ill. **BOTANY.**

GROWDON, Clarence Holmes, Rsch. Dir., Bureau Juvenile Rsch., 2280 W. Broad St., Columbus, Ohio. **PSYCHOLOGY.**

GRUBB, Carl F., District Geologist, Superior Oil Co., Tower Bldg., Jackson, Miss. **PETROLEUM GEOLOGY.**

GRUBER, Charles M., Prof., Jefferson Med. Coll., Philadelphia, Pa. **PHARMACOLOGY.**

GRUBER, Rudolf E., Vice-Pres., Merck and Co., Inc., 161 Sixth Ave., N. Y., N. Y. **CHEMISTRY.**

GRUENBERG, Benjamin Charles, Consultant, Lectr. and Writer, 418 Central Park W., N. Y., N. Y. **SOCIAL IMPLICATIONS OF SCIENCE.**

GRUENBERT, Sidonie Matsner, Dir., Child Study Assn. of Amer., 221 W. 57th St., N. Y., N. Y. **CHILD PSYCHOLOGY.**

GRUENER, Hippolyte, Prof. Emer. Chem., Western Reserve Univ., 2324 Coventry Rd., Cleveland, Ohio. **ORGANIC CHEMISTRY.**

GRULEE, Clifford Grosselle, Chf. Editor, Amer. Jour. of Diseases of Children, Emeritus Rush Prof. of Pediatrics, Med. Schl., Univ. of Ill., 610 Church St., Evanston, Ill. **PEDIATRICS.** b. Newport, Ky., Jan. 3, 1880. s. Frank Joseph and Gertrude (Kennedy) G. Edn.: M.A., Miami Univ. Med. Schl., 1901; LL.D., *ibid.*, 1919. m. Margaret Freer, 1907. c.: Mary F.; Clifford G., Jr. Exp.: Assoc. in Pediatrics, Northwestern Univ. Med. Schl., 1907; Staff, Rush Med. Coll. Dept. of Pediatrics, 1908—; Clinical Prof. and Hd., Dept. of Pediatrics, *ibid.*, 1924-41; Chf. of Pediatric Staff, Presby. Hosp., Chicago, Ill., 1924-41; Consulting Pediatrician to St. Francis Hosp., Evanston, Ill., 1924-41; Rush Prof. of Pediatrics, Univ. of Ill., Chicago, Ill., 1941-48; Emer. Rush Prof. of Pediatrics, *ibid.*, 1948—; Chf. Editor, Amer. Jour. of Diseases of Children, 1923—. Mem.: A.M.A.; Ill. Med. Soc.; Chicago Med. Soc.; Chicago Inst. Med.; Chicago Soc. Internal Med.; Chicago Pediatric Soc.; A.A.A.S.; Amer. Pediatric Soc.; Amer. Acad. Pediatrics; Beta Theta Phi; Phi Rho Sigma; Phi Beta Kappa; Sigma Xi; Alpha Omega Alpha. Co-author: The Child in Health and Disease, 1949. Contrb. to: Abt's System of Pediatrics; Brennemann's System of Pediatrics. Gen. Int.: Mem., Bd. of Dirs., Infant Welfare Soc. of Chicago; Formed Amer. Acad. Pediatrics, 1929. Special Int.: Pediatrics.

GRUNDFEST, Harry, Rsch. Assoc. in Neurol., Coll. of Physicians and Surgeons, Columbia Univ., 4 E. 9th St., N. Y., N. Y. **PHYSIOLOGY.**

GRUNER, John W., Dept. of Geol., Univ. of Minn., Minneapolis, Minn. **MINERALOGY.**

GRUSE, William Arthur, Admin. Fellow, Mellon Inst. Indus. Rsch., 4400 Fifth Ave., Pittsburgh, Pa. **PETROLEUM GEOLOGY.**

GUDERNATSCH, Frederick, retired, 41 Fifth Ave., N. Y., N. Y. **ANATOMY, ENDOCRINOLOGY.**

GUDGER, Eugene Willis, Honorary Assoc. in Ichthyology, Amer. Museum of Natural History, Central Park West at 79th St., N. Y. 24, N. Y. **ICHTHYOLOGY: THE NATURAL HISTORY OF FISHES.** b. Waynesville, N. C., Aug. 10, 1866. s. James C. L. and Mary Goodwin (Willis) G. Edn.: Awarded Byars Prize Medal in Sci., Emory and Henry Coll., 1887; B.S., Univ. of Nashville, 1892; M.S., *ibid.*, 1893; Ph.D., Johns Hopkins Univ., 1905. Exp.: Tchr., Asheville, N. C., H. S., 1893-94; Tchr., Asheville Coll., 1894-95; Tchr. of Sciences, Peabody H. S., Little Rock, Ark., 1895-1901; Lab. Asst., General Biol. Course, Johns Hopkins Univ., 1902-04; Prof. of Biol., N. C. Coll. for Women, 1905-19; Worked at Biol. Lab., Bureau of Fisheries, Beaufort, N. C., 1902-11; Biol. Lab., Carnegie Inst. of Washington, Tortugas, Fla., 1912-15; Editor, Vol. III, Bibliography of Fishes (Amer. Museum), 1919-23; Assoc. Curator in Ichthyol., Amer. Museum of Natural History, 1931; Bib. in Ichthyology, *ibid.*, 1923-38; Assoc. Curator, *ibid.*, 1935-38; Honorary Assoc., *ibid.*, 1938—; Editor Bashford Dean Memorial Vol. 1930-42; Librarian, Dean Memorial Library, 1945-53. Mem.: N. Y. Acad. Sci.; Amer. Soc. Naturalists; N. Y. Zool. Soc.; Amer. Soc. Ichthyologists and Herpetologists; Hist. of Sci. Soc.; Corr. Mem. Zool. Soc. of London; Salmon and Trout Assn. of Great Britain. Special Int.: Ichthyology.

GUENVEUR, Helen Marie, Rsch. Asst., Univ. of Calif. Dental Schl., 581 25th Ave., San Francisco, Calif. **DENTAL MEDICINE.**

GUERLAC, Henry, Boardman Hall, Cornell Univ., Ithaca, N. Y. **HISTORY, PHILOSOPHY OF SCIENCE.**

GUERNSEY, Ernest William, Asst. Dir. of Rsch., Consolidated Gas, Electric Light and Power Co., Baltimore, Md. **CHEMISTRY.**

GUERRANT, Nellie Burnham, Prof. of Biochem., Chg. Nutrition Investigations, Pa. State Coll., State College, Pa. **BIOCHEMISTRY AND NUTRITION.**

GUEST, Herbert Hartley, Chf. Chemist, J. B. Williams Co., Glastonbury, Conn. **ORGANIC CHEMISTRY.**

GUEST, M. Mason, Prof. and Chmn., Dept. of Physiol., Univ. of Tex. Med. Branch, Galveston, Tex. **PHYSIOLOGY.** b. Fredonia, N. Y., July 30, 1906. s. Maurice S. and Daisy Dean (Mason) G. Edn.: A.B., Univ. of Mich., 1930; Ph.D., Columbia Univ., 1942. m. Alice Avery, Aug. 16, 1936. c.: Avery Mason; John Andrew. Exp.: Instr. in Physiol., Coll. of Phys. and Surgeons, Columbia Univ., 1936-40; Rsch. Assoc. in Anatomy, *ibid.*, 1940-41; Assoc. Prof. of Physiol., Wayne Univ. Coll. of Med., Detroit, Mich., 1946-51; Prof. and Chmn., Physiol., Univ. of Tex. Med. Branch, Galveston, Tex., 1951—. Mem.: A.A.A.S.; A.A.U.P.; Soc. for Exptl. Biol. and Med.; Amer. Physiol. Soc.; Sigma Xi. Contrb. to: Jour. Biol. Chem.; Sci.; Amer. Jour. Physiol.; Jour. Clinical Rsch. War Record: Major, U. S. Army Air Force, 1942-46. Special Int.: Carbohydrate Metabolism; Blood Clotting; Proteolytic Enzyme Systems of Blood.

GUILFORD, Joy Paul, Prof. of Psychol., Univ. of Sou. Calif., Box 1288, Beverly Hills, Calif. **PSYCHOLOGICAL MEASUREMENT.** b. Marquette, Neb., Mar. 7, 1897. s. Edwin Augustus and Arvilla (Monroe) G. Edn.: A.B., Univ. of Nebr., 1922; A.M., *ibid.*, 1924; Ph.D., Cornell Univ., 1927. Hon. Deg.: LL.D., Univ. of Nebr., 1952. m. Ruth Burke, Sept. 8, 1927. c.: Joan Sheridan. Exp.: Instr. in Psychol., Univ. of Ill., Urbana, Ill., 1926-27; Asst. Prof. of Psychol., Univ. of Kans., 1927-28; Assoc. Prof. and Prof., Univ. of Nebr., Lincoln, Nebr., 1928-40; Dir., Bureau

of Instructional Rsch., *ibid.*, 1938-40; Prof. of Psychol., Univ. of Southern Calif., 1940—. Hon. Pos.: Pres., Psychometric Soc., 1937-38; Pres., Midwestern Psychol. Assn., 1939-40; Pres., Western Psychol. Assn., 1946-47; Pres., Amer. Psychol. Assn., 1949-50. Mem.: Fellow, A.A.A.S.; Fellow, Amer. Psychol. Assn.; Calif. St. Psychol. Assn.; Midwestern Psychol. Assn.; Western Psychol. Assn.; Southern Calif. Psychol. Assn.; Calif. Color Soc.; Inst. of Math. Statistics; Soc. Exptl. Psychologists; Psychometric Soc.; Pi Kappa Alpha; Phi Beta Kappa; Sigma Xi; Psi Chi; Phi Kappa Phi; Phi Delta Kappa; Phi Sigma. Author: Psychometric Methods, 1936; Fundamental Statistics in Psychol. and Edn., 1942, rev. 1950; General Psychol., 1939, rev., '52. Contrb. to: Jour. Applied Psychol.; Amer. Jour. Psychol.; Jour. Exptl. Psychol.; Psychometrika; etc. War Record: World War I, Private, S.A.T.C.; World War II, Major to Col., 1942-46. Special Int.: Applied Statistics; Psychophys.; Factor Analysis of Abilities, Interests, and Temperament Traits; Affective Value of Colors; Test Theory and Construction; Psychol. Scaling Methods.

GUILD, Lawrence Ridge, Prof. of Mgt., Univ. of Southern Calif., Los Angeles, Calif. **INDUSTRIAL RELATIONS.**

GUILLEMIN, Ernst A., Prof. of Electrical Communications Engrng., Mass. Inst. of Tech., Cambridge, Mass. **ELECTRICAL COMMUNICATIONS ENGINEERING.**

GUILLEMIN, Victor, Jr., Prin. Physicist, Chf. Physics Unit, Aeromed. Lab., Air Materiel Command, Wright Field, Dayton, Ohio. **BIOPHYSICS.**

GUISE, Cedric Hay, Prof. of Forestry and Hd. Dept., N. Y. State Coll. of Agri., Cornell Univ., Ithaca, N. Y. **FORESTRY.**

GULICK, Addison, 308 Westmount Ave., Columbia, Mo. **MEDICAL SCIENCES.**

GULICK, Luther Halsey, Pres., Inst. of Public Admin., 684 Park Ave., N. Y., N. Y. **PUBLIC ADMINISTRATION.**

GULLEY, Milton Gordon, Asst. Geologist, Gulf Oil Corp., 1166, Pittsburgh, Pa. **PETROLEUM GEOLOGY.**

GULLICKSON, Thor Wilhelm, Assoc. Prof. of Dairy Husbandry, Univ. of Minn., Univ. Farm, St. Paul, Minn. **ANIMAL NUTRITION.**

GUNN, Ross, Dir. of Phys. Rsch., U. S. Weather Bureau, Washington, D. C. **BASIC PHYSICS.** b. Cleveland, Ohio, May 12, 1897. s. Ross D. A. and Lora (Conner) G. Edn.: B.S., Univ. of Mich., 1920; M.S., *ibid.*, 1921; Ph.D., Yale Univ., 1926. m. Gladys J. Rowley, Sept. 8, 1923. c.: Ross, Jr.; A. Leigh; Charles R.; Robert B. Exp.: Instr. of Engrng. Physics, Univ. of Mich., Ann Arbor, Mich., 1920-22; Radio Rsch. Engr., U. S. Air Service, McCook Field, 1922-23; Instr. in Physics, Yale Univ., New Haven, Conn., 1923-27; Rsch. Physicist, Naval Rsch. Lab., 1927-33; Tech. Adv., *ibid.*, 1933-47; Supt. of Mechanics and Elec. Div., *ibid.*, 1938-46; Supt., Aircraft Elec. Div., *ibid.*, 1943-48; Supt. of Phys. Div., *ibid.*, 1946-47; Dir. of Phys. Rsch., U. S. Weather Bureau, Washington, D. C., 1947—. Dir., Army-Navy Precipitation Static Project, 1941-47; Dir., Weather Bureau, Air Force-Navy Cloud Physics Proj., 1947-50. Fellow, Inst. of Radio Engrs.; Fellow, Amer. Phys. Soc. Mem.: Natl. Acad. of Sci.; Geophys. Union, etc. Contrb. to: More than 100 Tech. and Sci. Papers Published in the Leading Scientific Jours. War Record: Signal Reserve Corps., 1918. Special Int.: Mil. Sci.; Geophysics; Geol. Physics; Atmospheric Elec.; Terrestrial Magnetism; Elec. Instruments.

GUNSALUS, I. C., Univ. of Ill., Urbana, Ill. **BACTERIAL PHYSIOLOGY.**

GUNTER, Gordon, Inst. of Marine Sci., Port Aransas, Tex. **FISHERIES BIOLOGY.**

GUNTER, Herman, Dir., Fla. Geol. Survey, P. O. Drawer 631, Tallahassee, Fla. **ECONOMIC GEOLOGY.**



GUNTHER, Charles Otto, Prof. of Math. and Ordnance Engrng., Stevens Inst. of Tech., P. O. Box 822, Hoboken, N. J. **MATHEMATICS, ORDNANCE ENGINEERING.**

GURCHOT, Charles, Rsch. Dir., 150 Palo Alto Ave., San Francisco 14, Calif. **BIOLOGY AND PHARMACOLOGY OF CANCER.** b. Paris, France, July 19, 1898. s. Marcus and Rebecca (Nordius) G. Edn.: B.S., Coll. of the City of N. Y., 1921; Ph.D., Cornell Univ., 1925. m. Georgette Rossillon, 1928. Exp.: Asst. Instr. of Spectroscopy, Cornell Univ., Ithaca, N. Y., 1921-23; Asst. Instr. of Chem. Microscopy, *ibid.*, 1923-24; Heckscher Rsch. Fellow in Colloid Chem., *ibid.*, 1925-26; Instr. of Biochem., *ibid.*, 1926-27; Rsch. Assoc., Stanford Univ., Calif., 1927-30; Dir. of Rsch., Sonoma State Home, Calif., 1930-33; Asst. Prof. of Pharmacol., Univ. of Calif., San Francisco, Calif., 1941-45; Rsch. Dir., *ibid.*, 1945—. Mem.: Soc. of Exptl. Biol. and Med.; Fellow, A.A.A.S.; Calif. Acad. of Sci.; Amer. Genetics Assn.; Sigma Xi. Author: Biol. Key to the Riddle of Cancer, 1951. Contrb. to: Jour. of Phys. Chem.; Sci.; Growth; Jour. of Clin. Endocrinol.; Jour. of Pharmacol. and Exptl. Therapeutics; Surgery, Gynecol. and Obst.; Archives of Neurol. and Psychiatry; Jour. Amer. Med. Assn.; Feder. Proc. Special Int.: Colloid Chem.; Syphilis Therapy; Enzymes in Physiol. and Therapeutics; Relation of Fundamental Biol. to Cancer; Pharmacol.; Psychotherapy and Gen. Chem.

GURLEY, John Edwin, Editor and Instr. Dental History, Univ. of Calif. Coll. of Dentistry, Third St. and Parnassus Ave., San Francisco, Calif. **PEDODONTICS.**

GURNHAM, Charles Frederick, Hd. and Prof., Dept. Chem. Engrng., Mich. State Coll., E. Lansing, Mich. **CHEMISTRY ENGINEERING, SANITATION ENGINEERING.** b. Oct. 19, 1911, Ludlow, Mass. s. Geo. Frederick and Ella (Hendrick) G. Edn.: B.S., Yale Univ., 1932; M.Ch.E., N. Y. Univ., 1940; D. Eng.Sc., *ibid.*, 1942. m. Vivian Wikander of New Haven, Conn., Aug. 25, 1934. d. Gustaf F. and Maria K. Wikander. c.: Sandra Jeanne; Diane Wikander; Robert Henry; Roy Frederick. Exp.: Smith Paper, Inc., Lee, Mass., 1932-34; Ludlow Mfg. Assn., Mass., 1934-36; Naugatuck Chem. Co., 1936-38; Pratt Inst., Brooklyn, N. Y., 1938-41; Air Reduction Co., Stamford, Conn., 1942-44; Whitney Blake Co., Hamden, Conn., 1944-48; Consultant, 1948—; Tufts Coll., 1949-52; Hd. and Prof. Dept. of Chem. Engrng., Mich. State Coll., E. Lansing, Mich., 1952—. Mem.: A.T.T.C.; Amer. Assn. Textile Chem. and Colorists; A.C.S.; A.I.Ch.E.; Amer. Electroplaters' Soc.; A.A.U.P.; N. Eng. Sewage Works Assn.; N.S.P.E.; Beta Chi; Scroll and Compass; Tau Beta Pi; Sigma Xi; Phi Lambda Upsilon; Sigma Pi Sigma; Appalachian Mtn. Club; Conn. Soc. Civil Engrs.; Natl. Tech. Task Comm. on Ind. Waste. Ph.D. Dissertation: Expression of Liquids from Fibrous Materials. Special Int.: Industrial wastes.

GUSTAFSON, Felix Gustaf, Prof. of Botany, Univ. of Mich., Ann Arbor, Mich. **PLANT PHYSIOLOGY.**

GUSTAFSON, Wesley A., Neurosurgeon, Asst. Clinical Prof. of Neurol. Surgery, Univ. of Ill., 700 N. Michigan Ave., Chicago, Ill. **NEUROLOGICAL SURGERY.** b. Waukegan, Ill., Mar. 5, 1909.

s. Axel and Victoria (Johnson) G. Edn.: M.D., Univ. of Ill. Coll. of Med., 1934. m. Jennie Robinson, Aug. 21, 1936. c.: Garrick A.; James W.; Judith. Exp.: Instr. in Neurosurgery and Surgery, Univ. of Ill., 1934-37; Assoc. in Neurol. Surgery, *ibid.*, 1939-46; Asst. Clinical Prof. of Neurol. Surgery, *ibid.*, 1946—. Mem.: A.M.A.; Ill. Med. Soc.; Chicago Surgical Soc.; Chicago Neurol. Soc.; Harvey Cushing Soc.; Amer. Acad. Neurol. Surgery;



Dipl. Amer. Bd. of Neurol. Surgeons; Univ. Club of Chicago; Swedish Club of Chicago; Westmoreland Country Club; Interurban Neurosurgical Soc.; Institute of Medicine of Chicago. Contrb. to: Amer. Jour. Cancer; Arch. Neurol. and Psychiatry; etc. War Record: U. S. Army, M. C., 1942-46.

GUSTAVSON, Carl Gustav, Assoc. Prof. of Hist., Ohio Univ., Athens, Ohio. **HISTORY.** b. Vinton, Iowa, Aug. 3, 1915. s. Carl Linus and Edla Matilda (Gustavson) G. Edn.: A.B., Augustana Coll., 1937; A.M., Univ. of Ill., 1938; Ph.D., Cornell Univ., 1942. m. Caryl Jennings, June 30, 1943. c.: Carl George; Eric David; Martha. Exp.: Asst., Cornell Univ., Ithaca, N. Y., 1940-42; Instr., Lake Forest Coll., Lake Forest, Ill., 1942-43; Asst. Prof., Miami Univ., Oxford, Ohio, 1943-45; Asst. Prof., Ohio Univ., Athens, Ohio, 1945-48; Assoc. Prof., *ibid.*, 1948—; Ford Foundation Fellowship for Improvement of Edn., 1953-54. Mem.: Amer. Historical Assn.; Miss. Valley Historical Assn.; Ohio Acad. of Sci.; Phi Beta Kappa; Alpha Delta; Lambda Chi Alpha. Contrb. to: Jour. of History of Ideas; Survey Graphic; South Atlantic Quarterly; Jour. of Speech; Jour. of Geography. Special Int.: Origins of German Nationalism; Techniques of Tehng. Hist. to First Year Coll. Students.

GUTERMAN, Carl Edward Frederick, Dir. of Rsch., N. Y. State Coll. of Agri. and Home Econ., Dir., Agri. Expt. Station, Cornell Univ., Ithaca, N. Y. **PLANT PATHOLOGY.**

GUTERMUTH, Clinton Raymond, Vice-Pres., Wildlife Management Inst., 709 Wire Bldg., Washington 5, D. C. **CONSERVATIONIST; NATURALIST; MANAGEMENT OF NATURAL RESOURCES.** b. Fort Wayne, Ind., Aug. 16, 1900. s. Henry Christian and Alice Virtue (Zion) G. Edn.: Post Grad., Amer. Inst. of Banking, 1927-28. m. Ila Bessie Horm, Mar. 4, 1922. Exp.: Asst. Cashier, St. Joseph Valley Bank, Elkhart, Ind., 1922-34; Dir. of Edn., Ind. Dept. of Conservation, Indianapolis, Ind., 1934-40; Dir. of Fish and Game, *ibid.*, 1940-42; Ind. Rent Dir.,



Office of Price Adm., Indianapolis, Ind., 1942-45; Secy., Amer. Wildlife Inst., Washington, D. C., 1945-46; Vice-Pres., Wildlife Management Inst., Washington, D. C., 1946—. Hon. Pos.: Trustee and Secy., N. Amer. Wildlife Foundation; Secy., Natural Resources Council of Amer.; Trustee, The Wildlife Soc.; Trustee, Stronghold (Sugar Loaf Mountain), Inc. Mem.: Amer. Fisheries Soc.; Amer. Forestry Assn.; Amer. Polar Soc.; Amer. Soc. of Range Management; Arctic Inst. of N. Amer.; Natl. Audubon Soc.; N. Y. Zool. Soc.; Soil Conservation Soc.; Wilderness Soc.; Wildlife Soc.; Mason. Special Int.: Dir. Rsch. Programs of the Institute, the Delta Waterfowl Rsch. Station in Manitoba, and the Northeastern Wildlife Station in New Brunswick.

GUTENBERG, Beno, Prof. of Geophysics, Calif. Inst. of Tech. and Dir., Seismol. Lab., Calif. Inst. of Tech., 220 N. San Rafael Ave., Pasadena 2, Calif. **STRUCTURE OF THE EARTH, PROPAGATION OF SEISMIC WAVES, MICROSEISMS, STRUCTURE OF THE ATMOSPHERE, ESPECIALLY THE STRATOSPHERE.** b. Darmstadt, Germany, June 4, 1889. s. Hermann and Pauline (Hachenburger) G. Edn.: Ph.D., Univ., Goettingen, Germany, 1911. m. Hertha Dernburg, Aug. 17, 1919. c.: Arthur W. and Stephanie. Exp.: Asst. Central Bur. of Internatl. Seismol. Assn., Strasbourg, Germany, 1913; Priv. Doz., 1923; A. O. Prof., Frankfurt Univ., Germany, 1926; Prof. of Geophysics, Calif. Inst. of Tech., Pasadena, Calif., 1930—; Dir., Seismol. Lab., *ibid.*, 1946—. Hon. Pos.: Pres., Internatl. Assn. of Seismol. and Physics of Earth's Interior; Hon. Mem., Royal Soc. of New Zealand and Finnish Geographic Soc.; Foreign Mem., Acad. Nazionale dei Lincei, Rome; Foreign Mem., Finn. Acad. Letters

and Sci.; Foreign Mem., Royal Swedish Acad. of Sci. Mem.; Natl. Acad. of Sci., Seismol. Soc. of Amer.; Amer. Meteorol. Soc.; Geol. Soc. of Amer.; Amer. Phys. Soc.; Soc. Exploration Geophys.; Amer. Assn. Pet. Geol.; Amer. Geophys. Union; Royal Astron. Soc.; Sigma Xi. Author: Grundlagen der Erdbebenkunde, 1927; Handbuch der Geophysik, 1930; Internal Constitution of the Earth, 1951; Seismicity of the Earth, with C. F. Richter, 1953; Die mitteleuropäischen Beben, 1911; Aufbau der Erde, 1925; Lehrbuch der Geophysik, 1927, etc. Contbr. to: Jour. of Meteorol.; Trans., Amer. Geophys. Union; Bull., Geol. Soc. of Amer.; Seismol. Soc. of Amer.; Physics Today; Sci.; Die Umschau. Special Int.: Interior of the Earth; Structure of the Earth; Deep-Focus Earthquakes; Determination of Earthquake Magnitudes; Sound Propagation in the Atmosphere.

GUTHE, Carl Eugen, Dir., N. Y. State Museum and N. Y. State Sci. Service, N. Y. State Edn. Dept., Albany, N. Y. **AMERICAN ARCHAEOLOGY**.

GUTHRIE, David Vance, Hd., Dept. of Physics and Astron., La. State Univ., Baton Rouge, La. **PHYSICS, ASTRONOMY**.

GUTHRIE, Edward Sewall, Prof., Dept. of Dairy Indus., Cornell Univ., Ithaca, N. Y. **DAIRY INDUSTRY**.

GUTHRIE, Edwin Ray, Prof. of Psychol. and Dean, Grad. Schl., Univ. of Wash., Seattle, Wash. **PSYCHOLOGY**.

GUTHRIE, John Daulton, Sr. Chemist, Southern Regional Rsch. Lab., Bureau Agri. and Indus. Chem., U. S. D. A., New Orleans, La. **BIOCHEMISTRY**.

GUTHRIE, Ned, Prof. of Chem., Hanover Coll., Hanover, Ind. **ORGANIC CHEMISTRY**.

GUTMAN, Alexander B., Asst. Prof. of Med., Columbia Univ., N. Y., N. Y. **MEDICINE**.

GUTSCHE, Carl David, Assoc. Prof. of Chem., Wash. Univ., St. Louis, Mo. **ORGANIC CHEMISTRY**. b. Oak Park, Ill., Mar. 21, 1921. s. Frank Carl and Vera Virginia (Mutchler) G. Edn.: B.A., Oberlin Coll., 1943; Ph.D., Univ. of Wis., 1947. m. Alice Eugenia Bjorklund of Chicago, Ill., June 4, 1944. d. Martha and Einar Bjorklund. c.: Clara Jean; Betha Lynn. Exp.: Penicillin Project, Univ. of Wis. Dept. of Biochem., 1943-44; Instr., Wash. Univ., 1947-48; Asst. Prof., ibid., 1948-51; Assoc. Prof., ibid., 1951—. Hon. Pos.: Chmn. of Organic Div. of St. Louis Chapt. of the Amer. Chem. Soc., 1950-51. Mem.: Phi Beta Kappa; Sigma Xi; Amer. Chem. Soc.;

Chem. Soc.; Phi Lambda Upsilon. Contbr. to: Jour. Amer. Chem. Soc. Ph.D. Dissertation: New Methods for the Synthesis of Fused Ring Structures. War Record: War Project at Univ. of Wis., 1943-44. Hobbies: Music; Sports; Photography; Lit. Listed in: A.M.S. Special Int.: Synthesis of Fused Ring Systems; Chemistry of diazoalkanes.

GUTTMACHER, Alan F. **STERILITY**.

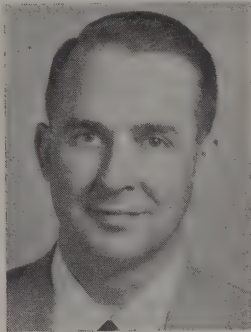
GUY, William George, Prof. of Chem., Coll. of William and Mary, Williamsburg, Va. **CHEMISTRY**.

GUYER, Edwin Michael, Rsch. Physicist, Corning Glass Works, Corning, N. Y. **PHYSICS**.

GUYER, Michael Frederick, Prof. Emer. Zool., Univ. of Wis., 138 N. Prospect Ave., Madison, Wis. **ZOOLOGY**.

GUYTON, Thomas Lee, Dir., Bureau Plant Indus., Pa. Dept. Agri., 2310 Chestnut St., Harrisburg, Pa. **ENTOMOLOGY**.

GUYTON, William Franklin, Consulting Ground-Water Hydrologist, 1304 Northwood Rd., Austin, Tex. **GROUND WATER HYDROLOGY**. b. Oxford, Miss., Oct. 15, 1917. s. Billy Sylvester and Mary Katherine (Smallwood) G. Edn.: B.A. and B.S., Univ. of Miss., 1938; C.E., Univ. of Miss., 1945. m. Mary Lou Camp, 1935. c.: William Louis; Harry Franklin; Thomas Wolcott. Exp.: Hydraulic Engr., Ground Water Branch, U. S. Geol. Survey, 1939-45; Scientific Consultant on Ground Water, U. S. Army, 1945; Hydraulic Engr., Ground Water Branch, U. S. Geol. Survey, 1946-50; Consulting Ground-Water Hydrologist, 1950—. Mem.: Amer. Geophys. Union; Amer. Soc. Civil Engrs.; Amer. Water Works Assn.; Sigma Chi; Chi Epsilon. Contbr. to: Amer. Geophys. Union Trans.; Econ. Geol. Special Int.: Ground-Water Hydrology.



GWINN, George Richards, Mineral Economist, U. S. Bureau of Mines, Washington, D. C. **GEOLOGY**.

GWYNNE, Charles S., Assoc. Prof. of Geol., Iowa State Coll., Ames, Iowa. **ECONOMIC GEOLOGY**.

Physics, *ibid.*, 1952—. Mem.: Sigma Xi; Phi Beta Kappa; Sigma Pi Sigma; Pi Mu Epsilon. Contrb. to: Physical Review; Amer. Jour. of Physics. Special Int.: Nuclear Physics, Accelerator Rsch., Energy Levels of Light Nuclei.

HAHNER, Clarence H., Natl. Bureau of Standards, Washington 25, D. C. CERAMICS.

HAIG, Charles, Asst. Prof. of Physiol., N. Y. Med. Coll., 5th Ave. at 105th St., N. Y. BIOPHYSICS.

HAIG, Irvine Theodore, Dir., Appalachian Forest Expt. Station, Federal Bldg., Asheville, N. C. FORESTRY.

HAIGHT, Harry Vercoe, retired, 49 Portland Ave., Sherbrooke, Que., Can. ENGINEERING.

HAIMOWITZ, Morris Loeb, Sociol. Tchr., Wright Junior Coll., 3400 N. Austin, Chicago 34, Ill.

HUMAN RELATIONS;
SOCIAL PSYCHOLOGY.

b. N. Y., N. Y., June 5, 1918. s. Samuel and Frieda (Paster) H. Edn.: A.A., Univ. of Fla., 1940; B.A., *ibid.*, 1941; A.M., *ibid.*, 1942; Ph.D., Univ. of Chicago, 1951. m. Natalie Reader, Dec. 31, 1948. c.: Carla Elizabeth; Myrna Susan. Exp.: Sociology Dept. Fellow, Univ. of Fla., 1941; Sigmund Livingston Fellow, Univ. of Chicago, 1948; Social Sci. Rsch. Fellow, *ibid.*, 1948-50; Sociol. Tchr., Wright Jr. Coll., Chicago, Ill., 1950—;

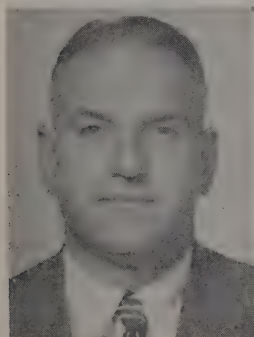


Rsch. Consultant, Indus. Relations Center, Univ. of Chicago, 1952—; Human Relations Tchr., Chicago Police, 1951—; Moderator of Seminar in Police Station Management, for Commanding Officers of Chicago Police Dept., 1953—. Mem.: Amer. Sociol. Assn.; Amer. Psychol. Assn.; Phi Beta Kappa; Pi Gamma Mu. Author: Personality Changes in Client-Centered Therapy, 1952. Contrb. to: Jour. Social Psychol.; Human Development Bull. Special Int.: Race Relations; Industrial Relations; Group Dynamics in Family Edn.; Community Action Rsch.; Normal Personality.

HAINES, Edward Cadinus, Chemist, Geo. D. Wetherill Varnish Co., Camden, N. J.

HAINES, Edward Cadmus, Chemist, 501 E. Main St., Moorestown, N. J. ORGANIC CHEMISTRY.

b. Rancocas, N. J., May 25, 1900. s. Thomas Lee and Elena (Cadmus) H. Edn.: B.S., M.A., Haverford, 1921; Ph.D., M. I. T., 1924. m. Marian Rogers, Dec. 1, 1924. c.: Marion E.; Martha C.; Edward C. Exp.: Staff, Du Pont, 1924-27; Staff, George D. Wetherill Varnish Co., 1927-49; Varnish Consultant, 1949—; Associated with Superior Varnish and Drier Co., Merchantville, N. J., 1949—; Staff, Sapolin Paints, Inc., 1952—. Mem.: A.C.S.; A.A.A.S.; Franklin Inst.; Phi Beta



Kappa; Alpha Chi Sigma. Contrb. to: Official Digest Fed. of Paint and Varnishes Production Clubs. Special Int.: Varnish and Paint Vehicles with most interest in Synthetics of Various Types and Copolymers; Patents on Continuous Methods of Preparing Alkyds and Copolymers.

HAINES, George, retired, 4414 Oliver St., Hyattsville, Md. ANIMAL HUSBANDRY.

HAINES, Thomas Harvey, Private Practice, 58 Tuxedo Rd., Montclair, N. J. PSYCHOLOGY.

HAINES, William Joseph, Hd., Endocrinology Rsch. Dent., The Unjohn Co., 301 Henrietta St., Kalamazoo, Mich. BIOCHEMISTRY; ENDOCRINOLOGY.



b. Crawfordsville, Ind., Sept. 26, 1919. s. Burt and Lala R. (Luster) H. Edn.: A.B., Wash. Coll., 1940; Ph.D., Univ. of Ill., 1943. m. Wilma M. Hester, June 6, 1943. c.: Paula Sue; Eric Joseph. Exp.: Rockefeller Fellow, Univ. of Ill., 1940-43; Univ. Fellow, *ibid.*, 1943; Rsch. Chemist, The Upjohn Labs., 1943-50; Hd. of Dept. of Endocrinology Rsch., *ibid.*, 1950—. Mem.: Amer. Chem. Soc.; A.A.A.S.; N. Y. Acad. Sci.; Kalamazoo Acad. of Med.; Alpha Chi Sigma; Phi Beta Kappa; Sigma Xi; Phi Lambda Upsilon; Phi Kappa Phi; Mason; Elks; Jr. C. of C.; Endocrine Soc.; Amer. Soc. of Botanical Chemists. Special Int.: Bio-Chem. of Amino Acids; Biochem. of Penicillins; Biochem. of Adrenal Cortex Hormones; Interested in Nutrition, Endocrinology and Enzymology; Use of Microorganisms for the Partial Synthesis of Adrenal Cortex Hormones such as Cortisone and Hydrocortisone.

HAIT, Kenneth Blaisdell, Hd., Dept. of Psychol. & Testing Bureau, Southwestern La. Inst., Lafayette, La. PSYCHOLOGY. b. Patchogue, L. I., N. Y., April 18, 1900. s. Myron Grant and Elizabeth (Smith) H. Edn.: A.B., Univ. of Fla., 1924; Ph.D., Peabody Coll., 1936. m. Bolivar Lee Sutherland, 1936. c.: Elizabeth Anne. Exp.: Instr., Psychology, Peabody Coll., Nashville, Tenn., 1931-33; Supervising Principal of Schl., Brooksville, Fla., 1933-37; Psychologist, Lab. Schl., Univ. of Fla., Gainesville, Fla., 1937-38; Prof. of Psychol. and Hd., of Dept. of Psychol. and Testing Bureau, Southwestern La. Inst., 1938—. Mem.: La. Edn. Assn.; La. Psychological Assn.; Amer. Psychological Assn.; Phi Delta Theta; Blue Key National Honor Frat.; Pi Gamma Mu; Alpha Phi Epsilon; Kappa Delta Pi; Phi Delta Kappa; Scabbard and Blade. Author: Generalizing Ability of Coll. Students, 1936; Learning in Coll., 1941. War Record: Capt. Air Corps, World War II. Special Int.: Clinical Psychology, Counseling, Learning and Higher Mental Processes, Testing.

HALBOUTY, Michael T., Petroleum Geologist Engr., Shell Bldg., Houston, Tex. PETROLEUM GEOLOGY AND ENGINEERING.

HALDEMAN, William S., Chmn., Dept. of Chem., Monmouth Coll., Monmouth, Ill. ORGANIC CHEMISTRY.

HALE, Cecil Harrison, Owner, Southwestern Analytical Chemicals, Austin 4, Tex. CHEMISTRY.



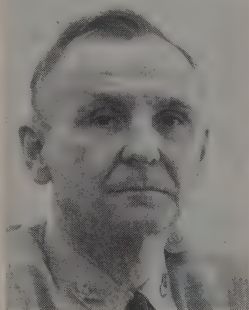
b. Kilgore, Tex., June 12, 1919. s. Mancel Elder and Bessie May (Rogers) H. Edn.: B.S., Trinity Univ., 1938; M.S., La. State Univ., 1940; Ph.D., Purdue Univ. 1948. m. Margie Nornhausser, May 6, 1945. c.: Bryan Mance; Connie Merle. Exp.: Analytical Chemist, Standard Oil Development Co., Baton Rouge, La., 1940-46; Grad. Asst., Purdue Univ., Lafayette, Ind., 1946-48; Rsch. Chemist, Standard Oil Development Co., Baton Rouge, La., 1948-51; Owner,

Southwestern Analytical Chem., Austin, Tex., 1951—. Mem.: Amer. Chem. Soc.; Sigma Xi; Phi Lambda Upsilon. Contrb. to: Analytical Chem.; Jour. of Amer. Chem. Soc.; Indus. and Engrng. Chem.; Petroleum Refiner. Special Int.: Analytical

Chem.; Polarography; Spectrophotometry; Electrochem.

HALE, Arthur Slone, Fisheries Rsch. Biol., Fish and Wildlife Service, Mo. River Basin Studies, Box 317, Grand Island, Nebr. **ZOOLOGY**. b. Prestonsburg, Ky., Aug. 1, 1913. s. Henry and Daisy (Slone) H. Edn.: B.A., Berea Coll., 1937; M.A., Ind. Univ., 1942. m. Ione Sachau, Nov. 15, 1942. c.: Barbara; Claudia; Constance. Exp.: Investigator, Lake and Stream Survey, Ind. Conservation Comm., 1939-41; Instr., Ind. Univ., Bloomington, Ind., 1937-41; Instr. Aviation Physiology, Army Air Forces, 1943-46; Aquatic Biol., U. S. Fish and Wildlife Service, Columbia, Mo. and College Park, Md. 1942-49; Fisheries Rsch. Biol., ibid., River Basin Studies, Kansas City, Mo., 1949-52; ibid., Grand Island, Nebr., 1952—. Mem.: Amer. Fisheries Soc. Contrb. to: Trans. of Amer. Fisheries Soc.; Investigations of Ind. Lakes and Streams; U. S. Fish and Wildlife Service Reports. Special Int.: Biochem. and Endocrinol., Water Quality, River Basin Studies.

HALE, Donald Herbert, Colonel, U. S. Army, Commanding Officer, Dugway Proving Grounds, Tooele,



Utah. **PHYSICS**. b. Rumford, S. Dak., July 7, 1904. s. Charles and Lulu (Harte) H. Edn.: B.Sc., York Coll., 1925; M.S., Nebr. Univ., 1929; Ph.D., Calif. Univ., 1939. m. Maxine Thureson, Sept. 25, 1943. c.: Patricia Joy. Exp.: Instr. in Phys., Univ. of Nebr., Lincoln, Nebr., 1929-33; Grad. Student, Univ. of Minn., Minneapolis, Minn., 1933-34; Active Duty, U. S. Army, 1934-37; Grad. Student, Univ. of Calif., Berkeley, Calif., 1937-39; Asst. in Elec. Engrng., ibid., 1938-39; Rsch. Dir., General Geophys. Co., Houston, Tex., 1939-40; Active Duty, U. S. Army, 1940-45; Chem. Staff Officer, McChord Field, Wash., 1940-41; Chf., Tactics Section, Chem. Corps Schl., Army Chem. Center, Md., 1941-44; Chf., Chem., Section, Infantry Schl., Ft. Benning, Ga., 1944-45; Rsch. Physicist, Douglas Aircraft Co., Santa Monica, Calif., 1945-46; Rsch. Assoc., Northwestern Univ., Evanston, Ill., 1946-47; Commissioned in Regular Army, 1947; Chf., Radiological Defense Branch, Chem. Corps Schl., Army Chem. Center, Md., 1947-49; Deputy Chf., Chem. Div., Headquarters European Command, Heidelberg, Germany, 1949-50; Chem. Officer, Headquarters, Seventh Army, Stuttgart, Germany, 1950-51; Commanding Office, Dugway Proving Ground, Tooele, Utah, 1951—. Mem.: Sigma Xi; A.A.U.P.; Amer. Phys. Soc. Contrb. to: Phys. Rev. Special Int.: Electric Discharge in Gases; Geophys. Instruments; Combustion Problems in Jet Engines; Radiation Instruments.

HALE, Harrison, Hd. of Dept. of Chem. and Chmn., Div. of Nat. Scis., Sou. State Coll., Magnolia, Ark. **CHEMISTRY**. b. Columbus, Miss., Dec. 27, 1879. s. Moses and Sue (Cook) H. Edn.: A.B., Emory Coll., 1899; M.S., Univ. of Chicago, 1902; Ph.D., Univ. of Pa., 1908. Hon. Deg.: LL.D., Drury, 1928. m. Mabel Hays of Kans. City, Mo., Dec. 22, 1904. d. Mr. and Mrs. James Arthur H. c.: Arthur H.; Harrison, Jr.; Elinor. Exp.: Asst. Prin., Pub. Schl., Edgewood, Ga., 1899-1901; Instr., Asst. Prof., Prof. of Chem., Drury Coll., 1902-18; Hd. of Dept. and Chem. Engrng., Univ. of Ark., 1918-45; Emer., 1945; Rsch. Chem., Inst. of Sci. and Tech., Univ. of Ark., 1945-50; Hd. of Dept. of Chem., Sou. St. Coll., 1951—. Mem.: Amer. Chem. Soc.; Amer. Inst. of Chem. Engrs.; Ark. Acad. of Sci.; Ark. Water and Sewage Conf.; Kappa Alpha; Phi Eta; Alpha Chi Sigma; Phi Beta Kappa; Rotary. Author: Amer. Chem., 1921; Scientific Sidelights on Jesus, 1930; City Water Supplies of Ark., 1926; Hist. of the Univ. of Ark., 1948. Contrb. to: Indus. Chem.; Jour. of Chem. Edn.; Chem. and Engrng. News; The Rotarian. Ph.D. Dissertation: An Electrolytic Method of Analyzing Zinc Ores.

Listed in: Who's Who in Amer.; Who's Who in the Southwest; A.M.S.; Who's Who in Engrng. Special Int.: Water Treatment His. of Chem.

HALE, William Jay, Rsch. Consultant, Dow Chemical Co., Midland, Mich. **ORGANIC CHEMISTRY**. b. Ada, Ohio, Jan. 5, 1876. s. James Thomas and Emma Elizabeth (Ogle) H. Edn.: A.B., A.M., Miami Univ., 1897; A.B., Harvard Univ., 1898; A.M., ibid., 1899; Ph.D., ibid., 1902. Hon. Deg.: LL.D., Miami Univ., 1937. m. Helen Dow, Feb. 7, 1917. c.: Ruth Elizabeth. Exp.: Harris Traveling Fellowship, Harvard Univ., 1902-03; Instr., Asst. Prof. and Assoc. Prof. of Chem., Univ. of Mich., 1904-19; Dir. of Organic Chem. Rsch., Dow Chemical Co., 1919-34; Rsch. Consultant, ibid., 1934—; Pres., Verdun Co., Midland, Mich., 1951—. Hon. Pos.: Chmn., Div. of Chem. and Chem. Tech., Natl. Rsch. Council, Washington, D. C., 1925-27; Visiting Prof. of Chemistry, Conn. Coll., 1936-39. Mem.: Fellow, A.A.A.S.; Fellow, London Chem. Soc.; Amer. Chem. Soc.; Societe Suisse de Chimie; Phi Beta Kappa; Sigma Xi; Phi Lambda Upsilon; Alpha Xi Sigma; Cosmos Club; etc. Author: The Calculations of General Chem., 1909; A Lab. Manual of General Chem., 1917; etc. War Record: Scientific Assoc., Edgewood Arsenal, Chem. Warfare Service, 1918-19. Special Int.: Special Emphasis on Chlorophyll in its role of aiding food metabolism.

HALE, William Mason, Prof. and Hd., Dept. of Bacteriol., State Univ. of Iowa, Iowa City, Iowa. **BACTERIOLOGY**.

HALES, Wayne Brookbank, Prof. of Physics, Brigham Young Univ., Provo, Utah. **PHYSICS**.

HALEY, George, Hd. Biol. Dept., Univ. of San Francisco, P. O. Box 265, Berkeley, Calif. **BOTANY**.

HALFORD, Joseph Olney, Prof. of Chem., Univ. of Mich., Ann Arbor, Mich. **CHEMISTRY**.

HALL, Ada Roberta, Asst. Prof. of Physiol., Wellesley Coll., Wellesley, Mass. **PHYSIOLOGY**.

HALL, Arthur A., Prof. of Elec. Engrng., W. Va. Univ., Morgantown, W. Va. **ENGINEERING**.

HALL, Calvin S., Prof. and Chmn., Dept. of Psychol., Western Reserve Univ., Cleveland, Ohio. **PSYCHOLOGY**.

HALL, Elwin B., Pres., E. B. Hall and Co., 523 W. Sixth St., Los Angeles, Calif. **PETROLEUM GEOLOGY AND ENGINEERING**.

HALL, Eugene Raymond, Chmn. and Prof., Dept. of Zool. and Dir., Museum Natural History, Univ. of Kans., Lawrence, Kans. **VERTEBRATE ZOOLOGY**.

HALL, F. P., Pass and Seymour, Inc., Syracuse 9, N. Y. **CERAMICS**.

HALL, Frank Gregory, Prof. of Physiol., Duke Univ., Durham, N. C. **ZOOLOGY, PHYSIOLOGY**.

HALL, Goldan Orlando, Prof. of Poultry Husbandry, N. Y. State Coll. of Agri., Cornell Univ., Ithaca, N. Y. **POULTRY BREEDING AND MARKETING**.

HALL, Harriet Parsons, 316 Glenside Rd., South Orange, N. J. **ASTRONOMY**.

HALL, Ivan Clifford, Bacteriologist, McIntire Rsch. Unit for Rheumatic Fever and Dept. of Bacteriol., Univ. of Fla., Gainesville, Fla. **MICROBIOLOGY**.

HALL, J. Alfred, Dir., Pacific Northwest Forest and Range Expt. Sta., 423 U. S. Court House, Portland, Ore. **CHEMISTRY**.

HALL, Lawrence Percival, Rsch. Chemist, Rohm and Haas Co., 222 W. Washington Square, Philadelphia, Pa. **CHEMISTRY**.

HALL, Marguerite F., Assoc. Prof. of Public Health Statistics, Schl. Public Health, Univ. of Mich., Ann Arbor, Mich. **PUBLIC HEALTH STATISTICS**.

HALL, J. Frank, Prof. of Oral Surgery, Ind. Univ. Schl. of Dentistry, 9 N. Illinois St., Indianapolis, Ind. **ORAL SURGERY.**



b. Quaker City, Ohio, Apr. 1, 1899. s. Lewis Walton and Lucretia Margaret (Lowery) H. Edn.: D.D.S., Univ. of Pittsburgh Schl. of Dentistry, 1934; B.S., *ibid.*, 1935. m. Roberta Cain, Nov. 21, 1927. Exp.: Univ. of Rochester Fellow in Dental Rsch., Pathol., 1935-36; Instr. in Oral Surgery, Med. Coll. of Va., Schl. of Dentistry, Richmond, Va., 1936—Resigned as Assoc. Prof., *ibid.*, 1942; Prof. of Oral Surgery, Ind. Univ. Schl. of Dentistry, 1942—; Part-

time practice in Indianapolis, Ind., 1946—. Hon. Pos.: One of Originators and Secy., Council on Hosp. Dental Services, Amer. Dental Assn.; Secy., Ind. State Oral Surgery Soc. Mem.: Psi Omega; Omicron Kappa Epsilon; Internatl. Torch Club. Author: Business Mgr., Jour. of Dental Rsch., 1936—. Contrb. to: Jour. Amer. Dental Assn.; Jour. Dental Rsch. War Record; Organized Dental Corps Hosp. 45, Med. Coll. of Va., Major, 1940-42. Gen. Int.: Oral Surgery Technics; Oral Pathol.; General Anesthesia and Oral Pathol. Special Int.: Healing of Tooth Sockets following Removal of Teeth; Fractured Jaw Technics.

HALL, Mary Bowers, 37 E. Church St., Bethlehem, Pa. **ZOOLOGICAL SCIENCES.**

HALL, Norris Folger, Prof. of Chem., Univ. of Wis., Madison, Wis. **INORGANIC CHEMISTRY.**

HALL, Raymond E., Museum of Natural History, Univ. of Kans., Lawrence, Kans. **MAMMALOLOGY.**

HALL, Richard P., Prof. of Biol., N. Y. Univ., N. Y., N. Y. **PROTOZOOLOGY.**

HALL, Roscoe W., Clinical Prof. of Psychiatry, Geo. Washington Univ., Washington, D. C. **PSYCHIATRY.**

HALL, Rufus Clifford, Mem. Excess Profits Tax Council, Bureau Internal Revenue, Washington, D. C. **FORESTRY.**

HALL, Victor Ernest, Prof. of Physiol., Stanford Univ., Stanford Univ., Calif. **PHYSIOLOGY.**

HALL, Wallace LeRoy, Organic Chemist, U. S. Food and Drug Admin., Washington, D. C. **ORGANIC CHEMISTRY.**

HALL, William Edward, Assoc. Prof. of Ednl. Psychol., Tehrs. Coll., Univ. of Nebr., Lincoln, Nebr. **PSYCHOLOGY.**

HALL, William Thomas, Prof. Emer., Mass. Inst. of Tech., Cambridge, Mass. **CHEMISTRY.**

HALLAUER, Frank Joseph, Prin. Engr., Forest Service, U. S. D. A., 3819 Jenifer St., N. W., Washington, D. C. **ECONOMIC ENGINEERING.**

HALLER, Herbert Ludwig Jacob, Prin. Chemist, U. S. Bureau of Entomol. and Plant Quarantine, Beltsville, Md. **ECONOMIC ENTOMOLOGY.**

HALLER, Mark H., Pomologist, U. S. D. A., Washington, D. C. **POMOLOGY.**

HALLETT, Laurence Trenery, Hd., Analytical Section, Central Rsch. Lab., General Aniline and Film Corp., Easton, Pa. **ANALYTICAL CHEMISTRY.**

HALLIDAY, Evelyn Gertrude, Assoc. Prof. Emer. of Food Chem., Dept. of Home Econ., Univ. of Chicago, 5757 Drexel Ave., Chicago, Ill. **FOOD CHEMISTRY.**

HALLOCK, Frances Adelia, Hunter Coll., N. Y., N. Y. **BOTANICAL AND MEDICAL SCIENCES.**

HALLOWELL, Alfred Irving, Box 14, Bennett Hall, 34th and Walnut Sts., Philadelphia, Pa. **ANTHROPOLOGY.**

HALLSTED, Alanson Lola, 521 E. Sixth St., La Crosse, Kans. **AGRICULTURE.**

HALPIN, James G., Prof. and Chmn., Dept. of Poultry Husbandry, Univ. of Wis., Madison, Wis. **POULTRY HUSBANDRY.**

HALSEY, Robert Hurtin, Consulting Physician, Welfare Island and N. Y. Post. Grad. Hosp., 17 E. 89th St., N. Y., N. Y. **INTERNAL MEDICINE.**

HALVERSON, Frederick, Theoretical Chemist, The Amer. Cyanamid Co., Stamford, Conn. **SPECTROSCOPY.** b. W. Prairie, Wis., Sept. 8, 1917. s. Allen and Bertha (Johnson) H. Edn.: B.A., Luther Coll., 1939; Ph.D., The Johns Hopkins Univ., 1943. m. Edith M. Lynn, Apr. 2, 1946. Exp.: Pfeiffer Fellow, Johns Hopkins Univ., Baltimore, Md., 1939-43; Instr., *ibid.*, 1943-46; Infrared Spectroscopist, Amer. Cyanamid Co., Stamford, Conn., 1946-51; Theoretical Chemist, *ibid.*, 1951—. Mem.: Amer. Chem. Soc.; Amer. Phys. Soc.; Amer. Inst. of Physics; Sigma Xi; Phi Beta Kappa; Phi Lambda Upsilon. Contrb. to: Jour. of Chem. Physics; Rev. of Mod. Physics. Special Int.: Infrared and Raman Spectroscopy; Molecular Dynamics; Electronic Spectra; Isotope Effect in Molecular Spectra.

HALVERSON, John Oliver, retired, 4131 E. Speedway, Tucson, Ariz. **ANIMAL NUTRITION.**

HALVERSON, Wilton L., **PUBLIC HEALTH.**

HALVORSON, H. O., Hd., Dept. of Bacteriol., Univ. of Ill., Urbana, Ill. **BACTERIOLOGY.**

HALVORSON, Henry Albert, State Chemist in Chg. Feed and Fertilizer Control, Minn. Dept. of Agri., 548 State Office Bldg., St. Paul, Minn. **CHEMISTRY.**

HAM, Lloyd Blinn, Hd., Dept. of Physics and Prof. of Physics, Univ. of Ark., Fayetteville, Ark. **ACOUSTICS.**

HAM, William Taylor, Jr., Rsch. Physicist and Hd., Div. of Electronics and Exptl. Physics, Inst. Textile Tech., Univ. of Va., Charlottesville, Va. **PHYSICS.**

HAMAN, John O. **STERILITY.**

HAMBLEEN, Edwin C. **STERILITY.**

HAMBLETON, Edson Jorge, Entomologist, Office Foreign Agri. Relations, U. S. D. A., Washington, D. C. **ENTOMOLOGY.**

HAMBLETON, James Isaac, In Chg. Div. of Bee Culture, Bur. Entomol. and Plant Quarantine, U. S. D. A., Beltsville Rsch. Center, Beltsville, Md. **APICULTURE.**

HAMBY, Wallace Bernard, Neurosurgeon, Prof. of Neurosurgery, Univ. of Buffalo, 140 Linwood Ave., Buffalo 9, N. Y. **NEUROSURGERY.** b. Ennis, Tex., Aug. 2, 1903. s. Adrian and Willie Elizabeth (Moseley) H. Edn.: A.B., Univ. of Okla., 1924; M.D., *ibid.*, 1928. m. Hellyn M. Greenwald, Aug. 14, 1934. c.: Marcia M.; Wallace B. Exp.: Asst., Dept. of Histology, Univ. of Okla., 1924-26; Intern, Buffalo City Hosp., 1928-29; Fellowship, Surgery, Cleveland Clinic, 1929-31; Neurol. Surgery, *ibid.*, 1931-34; Fellow in Neuropathol., Univ. of Chicago, 1933; Attending Neurosurgeon, General, Children's, Meyer Memorial and Millard Fillmore Hospitals; Prof. of Neurosurgery, Univ. of Buffalo, Buffalo, N. Y., 1941—. Hon. Pos.; Diplo-



mate, Amer. Bd. of Neurol. Surgery; Pres., Amer. Acad. Neurol. Surg., 1951. Mem.: A.M.A.; Amer. Coll. Surgs.; Soc. Neurol. Surg.; Amer. Acad. Neurol. Surg.; Harvey Cushing Soc.; N. Y. State Med. Soc.; Erie County Med. Soc.; Buffalo Neuropsychol. Soc.; Corresponding Mem., Scandinavian Neurosurgical Soc.; Sigma Xi; Alpha Omega Alpha; Phi Chi Med. Author: The Hosp. Care of Neurosurgical Patients, 1940, 1948; Intracranial Aneurysms, 1952. Contrb. to: Jour. Neurosurgery; N. Y. State Jour. Med.; The Practitioner (London); Jour. Internatl. Coll. Surgeons; Surgery; Jour. A.M.A.; etc. Special Int.: Neurology; Neurosurgery; Vascular Lesions of the Brain.

HAMBURGER, Louis P., Asst. Prof. of Med., Johns Hopkins Univ., 1207 Eutaw Pl., Baltimore, Md. INTERNAL MEDICINE.

HAMILTON, Alice, Prof. Emer., Harvard Univ. Med. Schl., Boston, Mass. INDUSTRIAL MEDICINE.

HAMILTON, Cliff Struthers, Prof. and Chmn., Dept. of Chem., Univ. of Nebr., Lincoln, Nebr. ORGANIC CHEMISTRY.

HAMILTON, Earl Jefferson, Apt. 6H, 5844 Stony Island Ave., Chicago, Ill. ECONOMIC HISTORY.

HAMILTON, Francis Marion, retired, 455 Park Ave., Leonia, N. J. PSYCHOLOGY EDUCATION.

HAMILTON, James Bruce, Prof., Dept. of Anatomy, Long Island Coll. of Med., Brooklyn, N. Y. ANATOMY.

HAMILTON, James Morton, Prof., N. Y. State Agri. Expt. Station, Geneva, N. Y. PLANT PATHOLOGY.

HAMILTON, Robert Houston, Prof. and Hd., Dept. of Physiol. Chem., Temple Univ. Schl. of Med., Broad St. at Ontario, Philadelphia, Pa. MEDICINE, PHYSIOLOGICAL CHEMISTRY.

HAMILTON, Tom Sherman, Prof. Animal Nutrition, Univ. of Ill., Urbana, Ill. ANIMAL NUTRITION AND BIOCHEMISTRY. b. Apr. 21, 1894, Paris, Ill. s. W. F. Hamilton and Rosa (Wetzel). Ancestry: German, Dutch, and English. Edn.: Grad. Paris H. S., 1912; B.S., Univ. Ill., 1917; M.S., ibid., 1922; Ph.D., ibid., 1937. m. Mabel Gaumer, Paris, Ill., 1919. d. W. F. Gaumer. c.: Tom S., Jr.; Jack K. Exp.: Asst. Animal Nutr., Ill. Agri. Exp. Sta., Sept. 1-Nov. 6, 1917; Brevet Capt., A.S.S.E.R.C., U.S.A., Nov. 6, 1917 to Jan. 1, 1929; Asst. Animal Nutr., Ill. Agri. Exp. Sta., 1919-20; First Asst., ibid., 1920-22; Instr. and First Asst., 1922-25; Assoc., ibid., 1925-37; Asst. Prof., 1937-39; Assoc. Prof., 1939-41; Assoc. Chf. Anim. Nutr., 1939; Prof., 1941—; Chf., Anim. Nutr., 1944-47; Present Pos., 1947—. Mem.: Sigma Xi; Amer. Inst. of Nutr.; Amer. Soc. Biol. Chem.; A.A.A.S.; Amer. Soc. Anim. Prod.; Alpha Xi Sigma; Phi Lambda Upsilon; Gamma Sigma Delta; Phi Eta. Author: The Biochem. of the Amino Acids, H. H. Mitchell and T. S. Hamilton. The Chem. Catalog Co., 1929. Contrb. to: Jour. Nutrition; Jour. Biol. Chem.; Jour. Agri. Resch. Ph.D. Dissertation: The Thermogenic Effect and the Net Energy Content of Rations Balanced and Unbalanced with Respect to Protein. War Record: Brevet Capt., A.S.S.E.R.C.; Instr. in Aviation Ground Schl., 1917-19. Recreations and Hobbies: Gladiolus Raising; Bloodlines of Standard-Bred Horses. Listed in: A.M.S.; Rus; Who's Who in Amer.; Who Knows—and What. Special Int.: Energy, Protein, and Mineral Metabolism.

HAMILTON, Walter M., 1512 Granger Ave., Ann Arbor, Mich. ASTRONOMY.

HAMILTON, William Ferguson, Prof. of Physiol., Univ. of Ga. Med. Coll., Augusta, Ga. PHYSIOLOGY.

HAMILTON, William J., Cornell Univ., Ithaca, N. Y. MAMMALOLOGY.

HAMLET, Myers Earl, Independent Rsch., 173 Upper Lighthouse, Pacific Grove, Calif. ECOLOGY OF THE FORAMINIFERA AND THE ENVIRONMENT OF SEDIMENTATION. b. Joliet, Ill., Oct. 16, 1898. s. Henry Myers and Annie (Hamlet) H. Edn.: B.S., State Coll. of Wash., 1921; Ph.D., Scripps Inst. of Oceanography of Univ. of Calif., 1934. m. Ethel Mildred Perkins, July, 1923. Exp.: Staff, Marine Biol. Lab., Plymouth, England, 1938; Staff, Millport Sta., Scotland, 1939; Staff, Monaco Oceanographic Inst., Monaco, 1939; Staff, Villefranche, France, 1939; Staff, Fisheries Lab., Singapore, 1940; Staff, Marine Lab., Batavia, Java, 1940; Staff, Woods Hole Oceanographic Inst., Woods Hole, Mass., 1941; Staff, Scripps Instn. of Oceanography, 1930-34, La Jolla, Calif.; Staff, Hopkins Marine Sta., Pacific Grove, Calif., 1942-46; Staff, Pacific Marine Sta., Dillon Beach, Calif., 1948-52. Contrb. to: Phil. Trans. Amer. Phil. Soc.; Royal Microscopical Soc.; Natl. Acad. of Sci.; Jour. Marine Biol. Assn.; Jour. Sedimentation and Petrol.; Sci. and Scientists in the Netherlands East Indies; Culture Methods for Marine Invertebrates; Amer. Microscopical Soc.; Natl. Rsch. Coun.; Sci.; The Invertebrates; The Protozoa; Prin. of Micropaleontology; Encyclopedia Britannica; Handbook Biol. Data. Gen. Int.: Guggenheim Fellow, 1938-40; Rumphius Fellow, Treub Labs. of Netherland East Indies; Penrose Grant, Geol. Soc. of Amer., 1941-42; Joseph Henry Fund National Acad. of Sci., 1938; Sigma Xi, Grant in Aid; Natl. Rsch. Coun. Comm. on Ecol. in Relation to Paleontol. Special Int.: Biol. of the Foraminifera and the Environment of Sedimentation; Work Forms the Basis of our Knowledge on Life Cycles and Ecol. of this Industrially Important Group; Pioneering a New Field of Investigation which will link the Fields of Zool. and Geol.



France, 1939; Staff, Fisheries Lab., Singapore, 1940; Staff, Marine Lab., Batavia, Java, 1940; Staff, Woods Hole Oceanographic Inst., Woods Hole, Mass., 1941; Staff, Scripps Instn. of Oceanography, 1930-34, La Jolla, Calif.; Staff, Hopkins Marine Sta., Pacific Grove, Calif., 1942-46; Staff, Pacific Marine Sta., Dillon Beach, Calif., 1948-52. Contrb. to: Phil. Trans. Amer. Phil. Soc.; Royal Microscopical Soc.; Natl. Acad. of Sci.; Jour. Marine Biol. Assn.; Jour. Sedimentation and Petrol.; Sci. and Scientists in the Netherlands East Indies; Culture Methods for Marine Invertebrates; Amer. Microscopical Soc.; Natl. Rsch. Coun.; Sci.; The Invertebrates; The Protozoa; Prin. of Micropaleontology; Encyclopedia Britannica; Handbook Biol. Data. Gen. Int.: Guggenheim Fellow, 1938-40; Rumphius Fellow, Treub Labs. of Netherland East Indies; Penrose Grant, Geol. Soc. of Amer., 1941-42; Joseph Henry Fund National Acad. of Sci., 1938; Sigma Xi, Grant in Aid; Natl. Rsch. Coun. Comm. on Ecol. in Relation to Paleontol. Special Int.: Biol. of the Foraminifera and the Environment of Sedimentation; Work Forms the Basis of our Knowledge on Life Cycles and Ecol. of this Industrially Important Group; Pioneering a New Field of Investigation which will link the Fields of Zool. and Geol.

HAMLIN, Marston Lovell, Assoc. Patent Attorney, Amer. Home Products Corp., 22 E. 40th St., N. Y., N. Y. CHEMISTRY.

HAMMER, B. W., Sarasota, Fla. DAIRY BACTERIOLOGY.

HAMMER, Sigmund, Hd., Gravity Interpretation Section, Geophys. Operations Div., Gulf Rsch. and Development Co., P. O. Drawer 2038, Pittsburgh 30, Pa. GEOPHYSICS, EXPLORATION FOR PETROLEUM AND OTHER MINERALS IN THE EARTH. b. Webster, S. Dak., Aug. 13, 1901. s. Rev. L. E. and Laura (Anderson) H. Edn.: B.A., St. Olaf Coll., 1924; Ph.D., Univ. of Minn., 1929. m. Norma Lucille Johnson, Nov. 28, 1925. c.: Sigmund Lewis; Mary Alice (dec.); Laura Blanche; John Phillip; Paul Ludwig; Kirsten Norma; Douglas James; Ludvig Erikson. Exp.: Radium Technician, Univ. of Minn. Hosp., Minneapolis, Minn., 1926-29; Tchng. Fellow, Phys. Dept., Univ. of Minn., 1924-29; Geophysicist, Gulf Rsch. and Development Co., 1929—; Lectr. in Geol., Univ. of Pittsburgh, 1943-44; Pres., Soc. of Exploration Geophysicist, 1951-52. Mem.: A.A.A.S.; Pa. Acad. of Sci.; Amer. Phys. Soc.; Phys. Soc. of Pittsburgh; Amer. Assn. of Petroleum Geologists; Amer. Geophys. Union; Soc. of Exploration Geophysicists; Sigma Xi; Lions. Contrb. to: Geophys.; Trans. Amer. Geophys. Union; Colo. Schl. of Mines Quarterly; Bull. Amer. Assn. of Petroleum Geologists. Special



Technician, Univ. of Minn. Hosp., Minneapolis, Minn., 1926-29; Tchng. Fellow, Phys. Dept., Univ. of Minn., 1924-29; Geophysicist, Gulf Rsch. and Development Co., 1929—; Lectr. in Geol., Univ. of Pittsburgh, 1943-44; Pres., Soc. of Exploration Geophysicist, 1951-52. Mem.: A.A.A.S.; Pa. Acad. of Sci.; Amer. Phys. Soc.; Phys. Soc. of Pittsburgh; Amer. Assn. of Petroleum Geologists; Amer. Geophys. Union; Soc. of Exploration Geophysicists; Sigma Xi; Lions. Contrb. to: Geophys.; Trans. Amer. Geophys. Union; Colo. Schl. of Mines Quarterly; Bull. Amer. Assn. of Petroleum Geologists. Special

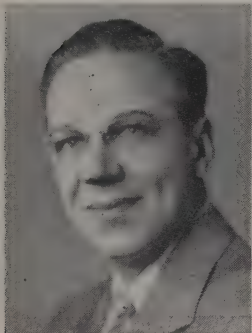
Int.: Gravitational Field of the Earth; Geophys. Exploration; Petroleum Reserves.

HAMMER, Oscar Hugo, Rsch. Entomol., The Dow Chem. Co., 225 Broadway, S. Haven, Mich. **ENTOMOLOGY**. b. Colorado Springs, Colo., May 28, 1907. s. Ludwig O. and Margarethe (Von Bosowick) H. Edn.: A.B., Colo. Coll., 1930; Ph.D., Cornell Univ., 1935. m. Olive Davis, July 2, 1932. c.: Eleanor Olyne; Paul Scott; Alice Elizabeth. Exp.: Asst. in Rsch., N. Y. Agri. Expt. Sta., Ithaca, N. Y., 1930-35; Instr. and Asst. in Entomol., Cornell Univ., Ithaca, N. Y., 1933-42; Agent, Bur. of Entomol. and Plant Quarantine, U.S.D.A., 1936-42; Rsch. Entomol., The Dow Chem. Co., S. Haven, Mich., 1942—. Mem.: A.A.A.S.; Amer. Assn. Econ. Entomol.; Gamma Alpha; Sigma Xi; Phi Kappa Phi; Delta Epsilon; Kiwanis Internatl. Contrb. to: Jour. of Econ. Entomol.; Mich. Hort. Soc. Proc. Special Int.: Biol. and Control of Insect Pests on Agri. Crops; Several Patents held by the Dow Chem. Co. on Insecticides.

HAMMETT, Frederick Simonds, Scientific Dir., The Lankenau Hosp. Rsch. Inst., Philadelphia, Pa. **BIOLOGICAL CHEMISTRY**.

HAMMETT, Louis Plack, Columbia Univ., N. Y. 27, N. Y.

HAMMON, William McDowell, Prof. and Hd., Dept. of Epidemiol. and Microbiol., Grad. Schl. of Public Health, Univ. of Pittsburgh, Pittsburgh 13, Pa. **EPIDEMIOLOGY, VIROLOGY, IMMUNOLOGY**. b. Columbus, Ohio, July 20, 1904. s. William Henry and Adaline (McDowell) H. Edn.: A.B., Allegheny Coll., 1932; M.D., Harvard Med. Schl., 1936; M.P.H., Harvard Schl. of Public Health, 1938; Dr.P.H., *ibid.*, 1939. m. Helen Black, Aug. 3, 1926. c.: William M.; Barbara H. Exp.: Missionary, Belgian Congo, 1926-30; Instr., Harvard Schl. of Public Health, 1939-40; Lectr., Asst.



Prof., Assoc. Prof., and Prof., Univ. of Calif. Hooper Foundation and Schl. of Public Health, 1940-50; Prof. and Hd., Dept. of Epidemiol. and Microbiol., Grad. Schl. of Public Health, Univ. of Pittsburgh, Pittsburgh, Pa., 1950—. Hon. Pos.: Pres., Soc. Amer. Bacteriologists, 1949; Chmn., Rsch. and Standards Com., Amer. Public Health Assn., 1951; Consultant, Surgeon General, U. S. Army. Virus and Rickettsial Disease Com., 1941—; Dir., Tropical Disease Com., 1941; Consultant, U. S. Public Health Service, CDC Center, 1948—. Mem.: Fellow, Amer. Public Health Assn.; Fellow, A.A.A.S.; Soc. Amer. Bacteriologists; Amer. Assn. Immunologists; Soc. Exptl. Pathol.; Soc. Exptl. Biol. and Med.; Soc. Tropical Med. and Hygiene; Assn. Amer. Physician; Phi Beta Kappa; Alpha Omega; Delta Omega; Sigma Xi. Contrb. to: Jour. A.M.A.; Proc. Soc. Exptl. Biol. and Med.; Jour. Immunology; Amer. Jour. Public Health, etc. Special Int.: Encephalitis; Poliomyelitis; Panleucopenia; Staphylococcus Toxin; Streptococcal Antibody; Virology; Immunology; Epidemiol.

HAMMOND, Edward Sanford, Prof. of Math. and Dir. of Admissions, Bowdoin Coll., Brunswick, Maine. **GEOMETRY**.

HAMMOND, Elmer Lionel, Dean, Schl. of Pharmacy, Univ. of Miss., University, Miss.

HAMMOND, George Simms, Assoc. Prof., Dept. of Chem., Iowa State Coll., Ames, Iowa. **PHYSICAL ORGANIC CHEMISTRY**. b. Auburn, Maine, May 22, 1921. s. O. K. and Marjorie (Thomas) H. Edn.: B.S., Bates Coll., 1943; M.S., Harvard Univ., 1947; Ph.D., *ibid.*, 1947. m. Marian Reese, 1945. c. Kenric; Janet; Steven. Exp.: Rsch. Asst., Rohm and Haas Co., Philadelphia, Pa., 1943; Tchr. Fellow, Harvard Univ., Cambridge, Mass., 1943-46;

Rsch. Assoc., Univ. of Calif., Los Angeles, Calif., 1947-48; Asst. Prof., Iowa State Coll., Ames, Iowa, 1948-51; Assoc. Prof., *ibid.*, 1951—. Mem.: Amer. Chem. Soc.; Chem. Soc.; Sigma Xi; Phi Beta Kappa. Contrb. to: Jour. of the Amer. Chem. Soc. Special Int.: Mechanism of Organic Reactions, Application of Theories of Chemical Structure to Rate Processes.

HAMMOND, Thomas Morgan, Hd., Dept. of Engrng. and Physics, Schreiner Inst., Kerrville, Tex. **PHYSICS**.

HAMMOND, William Archie, Prop., W. A. Hammond Drierite Co., 120 Dayton Ave., Xenia, Ohio. **CHEMISTRY**.

HAMMOND, Charles Robert, Instr. Astronomy, Hillyer Coll., Hartford, Conn. **ASTRONOMY (BINARY STARS. METEORITICS), SEISMOLOGY, GLASS TECHNOLOGY**. b. Table Grove, Ill., Nov. 7, 1915. s. Thomas Arthur and Julia Berniece (Parmenter) H. Edn.: A.B., Univ. of Calif. at Los Angeles, 1938. m. Jean Jones, Nov. 16, 1946. c.: Robert Arthur. Exp.: Co-Director La Crescenta Observatory, La Crescenta, Calif., 1938-40; Asst. Lib. Lockheed Aircraft Corp., Burbank Calif., 1940-42; Chief Lib., Vega Aircraft Corp., Burbank Calif., 1940-42; Chief of Lib. Div. and Lib. of Naval Ordnance Lab., Wash., D. C., Member of Navy Indexing Panel, 1944-46; Technical Analyst and Lib., Emhart Manufacturing Company, Hartford, Conn., 1946-53. Hon. Pos.: One of Organizers of Naval Ordnance Lab. Tech. Rsch., Pres. Central Conn. Amateur Astronomers. Mem.: Royal Astronomical Soc. of Canada; Meteoritical Soc.; Middletown Scientific Soc.; Eastern Section of the Seismological Soc. of Amer.; Central Conn. Amateur Astronomers. Author: Annealing of Glass; Glass Molds; Surface Treatment of Glass; Contrb. to: Power Plant Engr.; Popular Astronomy; Bull. of Eastern Sect. of Seismological Soc. of Amer.; Is Sci. Waterloo in the Lib.; Physical and Chemical Characteristics of Tektites. War Record: Naval Ordnance Lab. during war years. Gen. Int.: Constructed Seismographs; Astrophysical Cameras. Special Int.: Meteorites (Tektites); Meteor Photography, Seismology, Glass Technology, Plastics, Infra Red Photography.

HAMNER, Karl Clemens, Dir., U. S. Plants, Soils and Nutrition Lab., Ithaca, N. Y. **PLANT PHYSIOLOGY**.

HAMOR, William Allen, Dir. of Rsch., Mellon Inst., 4400 5th Ave., Pittsburgh 13, Pa. **SCIENTIFIC RESEARCH MANAGEMENT**. b. Du Bois, Pa., Mar. 27, 1887. s. George D. Hamor and Margaret J. (Means) H. Edn.: Univ. of Pittsburgh, 1904-07, M.A., 1913; D.Sc., 1935; Sc.D., Grove City Coll. (hon.), 1932; Sc.D., Univ. of Louisville (hon.), 1947; LL.D., Univ. of Miami (hon.), 1947. Reg. Prof. Eng., Pa. Exp.: Rsch. Chem., Coll. of the City of N. Y., 1907-14; Asst. to the Dir., Mellon Inst. of Indus. Rsch., Pittsburgh, Pa., 1914-16; Asst. Dir., Mellon Inst., 1916-51; Dir. of Rsch., 1951—; Prof. of Chem., Univ. of Pittsburgh, 1915-18; Lectr. in Chem., *ibid.*, 1942—; Adv. Ed., Nutritional Observatory; Contrb. Ed., Pitt (quarterly); Adv. Coun., Indus. Hygiene Found.; Sci. Personnel Com., U. S. Atomic Energy Comm., 1947; Adv. Panel, Sci. Manpower Br., Gen. Staff, U. S. War Dept., 1947. Mem.: Exec. Comm. and Chmn. of the Tech. Adv. Com. of the Greater Pa. Coun., Harrisburg, Pa., 1932-34; Allegheny Conf. for Community Development; Amer. Chem. Soc.; Electrochem. Soc.; Inst. of Metals; Hist. of Sci. Soc.; World Power Conf.; Amer. Pharm. Assn.; Natl. Soc. Prof. Eng.; Pa. Soc. Prof. Eng.; Soc. for Adv. of Management; Amer. Management Assn.; Amer. Soc. for Testing Materials; Amer. Inst. of Chem. (Fellow); Chem. Soc. of London (Fellow); Fellow, A.A.A.S.; Pa. Chem. Soc.; Amer. Dairy Sci. Assn.; Inst. Food Technol.; Sigma Xi; Alpha Chi Sigma; Sigma Gamma Epsilon; Phi Lambda Upsilon; Pi Gamma Mu. Clubs: Univ.; Faculty (Univ. of Pittsburgh); Authors (Pittsburgh); Chemists (Pittsburgh); Chemists (N. Y.). Author: A Hist. of Chem., 1909; The Amer. Petroleum Indus., (with R. F. Bacon), 2 Vol., 1916; The Examination of Petroleum (with F. W. Padgett), 1920; Amer. Fuels (with R. F. Bacon), 2 Vol., 1922; Sci. in Action

(with E. R. Weidlein), 1931; *Glances at Indus. Rsch.* (with E. R. Weidlein), 1936. Chapters in: *Municipal Chem.*, 1911; *The Preparation of Reports*, 1924; *Shale Oil*, 1925. *Contrib. to: Encyc. Britannica*; *Britannica Yearbooks*; *Americana Annuals*; *Indus. and Engrng. Chem.*; *Sci.*; *Adv. Mgt.*; *Pittsburgh Record*. *Rschs.*: Petroleum, Oil Shales, Fuels and Anesthetics. *Mem.*, *Com.* on Airplane Fuels, *Natl. Rsch. Coun.*, 1917. Major, *Chem. Warfare Serv.*, U. S. A., Nov. 28, 1917; served in France ten months as Asst. Chf. of the Tech. Div., C. W. S., A. E. F.; *Hon. Discharge*, Dec. 6, 1918. *Travel*: Shale Oil Specialist, *Dept. of Mines of Canada*, 1908, stationed in Scotland to investigate the oil-shale indus. in that country; traveled extensively throughout Great Britain and France. *Spec. Int.*: Procedures and Value of Indus. *Rsch.*; *Rsch. Mgt.* Editorial Bd., *The Sci. Hist. of the Universe*, 1909; *Editorial Staff*, *Indus. and Engrng. Chem.*, 1912-14; *Various Comm.* of the *Amer. Chem. Soc.*, 1913-48; *Ed.*, *Chem. Monographs*, A.C.S., 1947—; *Companion of the Milit. Order of For. Wars*, of the Order of Wash., and the Order of Lafayette; *Amer. Legion*; V.F.W.; *Rotary*. *Pittsburgh Award*, A.C.S., 1950; *Award in Sci.*, Jr. C. of C., Pittsburgh, 1952.

HAMPEL, Chester William, Prof. of Physiol. and Anatomy, N. Y. Univ. Coll. of Med., 477 First Ave., N. Y., N. Y. **NEURO-PHYSIOLOGY**.

HAMPSON, Ernest Kemp, Mgr., Canada Branch, *Amer. Potash Inst.*, Inc., 507 Bank of Commerce Bldg., Hamilton, Ont., Can. **SOIL MANAGEMENT**.

HAMPTON, Harold Clark, *Rsch. Chemist*, *Canadian Internat. Paper Co.*, 17 Allen St., Hawkesbury, Ont., Can. **CHEMISTRY**.

HAMPTON, Peter Jan, Asst. Prof. of Psychol., Western Res. Univ., 167 Pub. Square, Cleveland, Ohio. **PSYCHOLOGY, INDUSTRIAL AND CLINICAL**. b. Russia, Oct. 19, 1909. s. Peter and Elizabeth (Letkeman) H. Edn.: B.A., Univ. of Manitoba, 1938; M.A., Univ. of Manitoba, 1940; Ph.D., Western Res. Univ., 1950. m. Elsie Saari of Crosby, Minn., Aug., 1943. d. Mat and Jusila S. c.: Peter Todd; Bruce Jan. Exp.: Asst. Prof., Brandon Coll., Univ. of Manitoba, 1940-43; *Clin. Psychol.*, Man. Child Guid. Center, 1941-42; *Army Psychol.*, Can. Army, C.A.S.F., M.D., 1941-43; *Rsch. Asst.*, Univ. of Minn., Summer, 1943; *Asst. Prof.*, Western Coll., 1943-44; *Assoc. Prof.*, *ibid.*, 1944-45; *Ind. Psychol.*, Ohio Psychol. Lab., 1944-45; *Lectr.*, Miami Univ., Summer, 1945; *Asst. Prof.*, Western Res. Univ., 1945—; *Ind. Psychol.*, *Personnel Rsch. Inst.*, 1946-48; *Clin. Psychol.*, *Private Practice*, 1945—; *Tech. Editor*, *Personnel Rsch. Inst.*, 1951—. *Hon. Pos.*: Chmn. of Dept. of Psychol., Western Coll., 1943-45. *Mem.*: *Amer. Psychol. Assn.*; A.A.U.P.; *Can. Psychol. Assn.*. *Author*: Many Articles. Ph.D. Dissertation: A Psychometric Study of Drinkers: The Development of a Personality Questionnaire for Drinkers. *War Record*: *Army Psychol.* *Travel*: Canada; England; Balkan Countries; Russia. *Hobbies*: Writing; Photography; Gardening. *Listed in*: A.M.S.; *Who's Who in the Midwest*.

HANAN, Ernest B., Pathologist, Dir. of Labs., Burge Hosp., 1423 N. Jefferson, Springfield, Mo. **PATHOLOGY**. b. Granger, Mo., Feb. 4, 1894. s. John P. and Ida M. (Jenkins) H. Edn.: A.B., Univ. of Mo., 1923; A.M., Univ. of Buffalo, 1925; M.D., *ibid.*, 1928. m. Jessie Glenn, July 28, 1942. c.: Elliott Byron; Erwin; Ernestine; Joe; Cynthia. Exp.: *Tchr.* in *Public Schls.*, 1913-15; *Sgt.*, *Med. Dept.*, U. S. Army, 1917-19; *Student Asst.*, *Public Health Lab.* and *Dept. of Bacteriol.*, Univ. of Mo., 1922-23; *Rsch. Asst.*, *Dept. of Physiol.*, *Med. Schl.*, Univ. of Mo.,



1922-23; *Assoc. Instr.*, *Asst. Prof.* of Anatomy, *Dept. of Anatomy*, *Med. Schl.*, Univ. of Buffalo,

1922-34; *Assoc. Dir.* of *Pathol. and Bacteriol.*, *Buffalo City Hosp.*, 1928-30; *Dir.* of *Labs.*, *ibid.*, 1930-37; *Ednl. Dir.* of *Post Grad. Studies*, *ibid.*, 1930-37; *Instr.* in *Pharmacol. and Therapeutics*, *Univ. of Buffalo*, 1929-32; *Instr.* in *Med. Bacteriol.*, *ibid.*, 1932-35; *Dir. Med. Tech.*, *ibid.*, 1929-37; *Assoc. Prof.* of *Hygiene and Pub. Health*, *ibid.*, 1934-37; *Consult. Pathol.*, *Neu. State Hosp.*, 1938-39; *Pathol.*, *Humansville Hosp.*, 1937-39; *Pathol.*, *Burge Hosp.*, *Springfield, Mo.*, 1940—; *Consulting Pathologist*, *Christa Hogan Hosp.*, *West Plains, Mo.*, 1950—; *Consulting Pathologist*, *Skaggs Memorial Hosp.*, *Branson, Mo.*, 1950—; *Consulting Pathologist*, *Berry County Hosp.*, *Gassville, Mo.*, 1950—; *Consulting Pathol.*, *Veterans Admin. Hosp.*, *Fayetteville, Ark.*, 1950—. *Mem.*: *Amer. Assn. Anatomy*; *Fellow*, A.A.A.S.; *Sigma Xi*; *Fellow*, A.M.A.; *Amer. Assn. Public Health*; *Fellow*, *Amer. Assn. Clinical Pathologists*; *Mo. Archeol. Soc.*; *Amer. Assn. Pathologists and Bacteriologists*. *Contrib.* to: *Amer. Jour. Anat.*; *Proc. Soc. Exptl. Biol. and Med.*; *Sci.*; *Bull. N. Y. Assn. of Public Health Lab.*; etc. *War Record*: *Sgt.*, *Med. Dept.*, U. S. Army, 1917-19. *Special Int.*: *Fetal Physiol.*; *Diagnostic Tests for Tuberculosis*; *Relation of Allergy to Sili-cosis*; *Brucellosis*.

HAMRE, Dorothy Myrtle (Mrs. K. Alexander Brownlee), *Rsch. Assoc.*, *Dept. of Med.*, Univ. of Chicago, Chicago 37, Ill. **BACTERIOLOGY**. b. Seattle, Wash., Apr. 26, 1915. d. A. H. and O. Bertina (Olsen) H. Edn.: B.S., Univ. of Wash., 1937; M.S., *ibid.*, 1938; Ph.D., Univ. of Colo., 1941. m. K. A. Brownlee, Mar. 26, 1949. Exp.: *Rsch. Asst.*, then *Rsch. Assoc.*, *Squibb Inst. for Med. Rsch.*, *New Brunswick, N. J.*, 1942-51; *Rsch. Assoc.*, *Dept. of Med.*, Univ. of Chicago, Chicago, Ill., 1951—. *Mem.*: *Soc. Amer. Bacteriologists*; *Amer. Assn. Immunologists*; *Soc. for Exptl. Biol. and Med.*; *N. Y. Acad. Sci.*; *Soc. for General Microbiol.*; *Phi Beta Kappa*. *Contrib.* to: *Jour. Bacteriol.*; *Jour. Exptl. Med.*; *Jour. Immunology*; *Proc. Soc. Exptl. Biol. and Med.*; *Amer. Jour. Med. Sci.* *Special Int.*: *Chemotherapy of Bacterial and Viral Infections*; *Characteristics of the Lymphogranuloma-Scitacosis Group of Agents*; *Properties of and Production of Antibiotics*.

HANAU, Richard, *Assoc. Prof.* of Physics, Univ. of Ky., Lexington, Ky. **PHYSICS**. b. N. Y., N. Y., Aug. 1, 1917. s. Leo and Stella (Bloch) H. Edn.: S.B., Mass. Inst. of Tech., 1939; M.S., Univ. of Mich., 1940; Ph.D., *ibid.*, 1947. m. Laia Pearlmuter Jan. 2, 1941. c.: Loren Michael. Exp.: *Tchnng. Asst.* and *Fellow*, *Physics Dept.*, Univ. of Mich., 1941-44; *Rsch. Assoc.*, *Engrng. Rsch. Dept.*, *ibid.*, 1944-46; *Assoc. Prof.*, *Physics Dept.*, Univ. of Ky., Lexington, Ky., 1947—; *Visiting Prof.* *Physics*, Univ. of Puerto Rico, Mayaguez, P. R., 1953-54. *Mem.*: *Amer. Physic-*



cal Soc.; *Optical Soc. Amer.*; A.A.P.T.; *Sigma Xi*; *Sigma Pi Sigma*. *Contrib.* to: *Physical Rev.*; *Jour. Optical Soc. of Amer.*; *Amer. Jour. Physics*. *Special Int.*: *Spectrographic Analysis*; *Spectroscopy*; *Optics*.

HANAWALT, Joseph Donald, General Mgr., *Magnesium Div.*, *Dow Chemical Co.*, *Midland, Mich.* **PHYSICS, METALLURGY**.

HANCHER, Virgil Melvin, *Pres.*, *State Univ.* of Iowa, Iowa City, Iowa. **EDUCATION**.

HANCOCK, J. A., Jr., *Dept. of Chem.*, *Tex. Western Coll.*, *El Paso, Tex.* **PHYSICAL CHEMISTRY**.

HANCOX, R. R., *Rsch. Physicist*, *Midwest Rsch. Inst.*, 4049 Pennsylvania Ave., *Kansas City, Mo.* **PHYSICS, ELECTRICITY**.

HAND, Ervin F. **ASTRONOMY**.

HAND, Irving F., U. S. Weather Bureau, Boston 9, Mass. **SOLAR RADIATION**.

HANDLER, Philip, Chmn. and Prof. of Biochem. and Nutr., Dir., A. E. C. Trng. Program, Duke Univ., Schl. of Med., Durham, N. C. **BIOCHEMISTRY**. b. Aug. 13, 1917; N. Y., N. Y. s. Jacob and Lena (Heisen) H. Edn.: B.S., Coll. of City of N. Y., 1936; Ph.D., Univ. of Ill., 1939. m. Lucille P. Marcus of Maywood, Ill., Dec. 6, 1939. d. Jesse and Dorothy Marcus. c.: Mark and Eric Paul. Exp.: Jr. Chem., U. S. Regional Soybean Lab., Urbana, Ill., 1937-39; Instr. in Physiol., Duke Univ. Schl. of Med., 1939-41; Assoc. Prof. Biochem. and Nutr., *ibid.*, 1941-43; Asst. Prof. Biochem. and Nutrition, *ibid.*, 1943-46; Assoc. Prof. of Biochem. and Nutr., 1946-50; Prof., 1950—. Mem.: Amer. Soc. of Biol. Chem.; A.C.S.; N. Y. Acad. Sci.; Biochem. Soc. (Gt. Britain); Fellow, A.A.A.S.; Soc. for Exp. Biol. Med.; Sigma Xi; Amer. Inst. of Nutr. Contrb. to: Annual Rev. of Biochem.; Jour. Biol. Chem.; Jour. Nutr.; Amer. Jour. Physiol. Hon. Pos.: Secy., S. E. Section of Soc. Exper. Biol. Med.; Secy., Amer. Soc. Biol. Chem. Consultant to: U. S. Veterans Admin., U. S. Public Health Ser., Comm. Growth of N. R. C., Atomic Energy Comm. Ph.D. Dissertation: Synthesis and Metabolism of N-Substituted Amino Acids. Listed in: Who's Who in Amer.; A.M.S.; Who Knows— and What; Biog. Encyc. of the World. Special Int.: Intermediary Metabolism; Renal Hypertension; Nutrition.

HANDLEY, Carroll Alfred, Assoc. Prof. of Physiol. and Pharmacol., Baylor Univ. Coll. of Med., Box 156, Houston, Tex. **PHYSIOLOGY, PHARMACOLOGY**.

HANDY, Edward Smith Craighill, Independent Rsch. and Writing, Twa Burnie Farm, Oakton, Va. **ANTHROPOLOGY**.

HANGER, Franklin M., Assoc. Prof. of Med., Presbyterian Hosp., Columbia Univ., N. Y., N. Y. **MEDICINE**.

HANKE, Martin E., Assoc. Prof. of Biochem., Univ. of Chicago, Chicago 37, Ill. **BIOCHEMISTRY**. b.



Chicago, Ill., June 25, 1898. s. Albert and Amelia (Taute) H. Edn.: S.B., Univ. of Chicago, 1918; Ph.D., *ibid.*, 1921. m. Maude Frances Martin, Sept. 2, 1922. c.: Ruth Frances; Martin E., Jr. Exp.: Asst. in Chem., Univ. of Chicago, 1918; Asst. in Chem., Station for Exptl. Evolution, Cold Spring Harbor, N. Y., 1919; Natl. Rsch. Fellow in Organic Chemistry, Univ. of Chicago, 1921-22; Instr., Asst. Prof. of Biochem., *ibid.*, 1922-30; Asst. in Chem., Rockefeller Inst. for Med.

Rsch., 1930-31; Assoc. Prof. of Biochem., Univ. of Chicago, 1931—; Asst. Dean of Students, *ibid.*, 1949-51. Hon. Pos.: Pres., Assn. of Vitamin Chemists, 1948-49. Mem.: Amer. Chem. Soc.; A.A.A.S.; Amer. Soc. of Biological Chemists; Soc. for Exptl. Biol. and Med.; Assn. of Vitamin Chemists; Inst. of Med. of Chicago; Amer. Assn. for Cancer Rsch.; Phi Beta Kappa; Sigma Xi; Quadrangle Club. Co-Author: Practical Methods in Biochem., 1948. Contrb. to: Jour. Amer. Chem. Soc.; Jour. Biol. Chem.; Archives of Biochem. and Biophys.; Proc. Soc. for Exptl. Biol. and Med.; Sci. Cancer Rsch. Special Int.: Organic Arsenic and Mercury Compounds; Chem. of Gastric Acid Formation; Oxidation-Reduction Potentials in Biological Systems; Amino Acid Decarboxylases; Use of Isotopes, Deuterium and C¹⁴ in Study of Enzymatic Reaction Mechanism; The Serum Proteins in Cancer.

HANKE, Milton Theodore, Rsch. Consultant, 7550 S. Green St., Chicago, Ill. **BIOCHEMISTRY, NUTRITION**.

HANKINS, Orville Berger, Chf. Meat Investigations, Bureau Animal Indus., U. S. D. A., 2704 Brentwood Rd., N. E., Washington, D. C. **MEAT TECHNOLOGY**.

HANLEY, William Andrew, Vice-Pres., Eli Lilly and Co., Box 158, Rt. 17, Indianapolis, Ind. **ENGINEERING**.

HANLON, John J., Assoc. Prof. of Public Health Practice, Schl. of Public Health, Ann Arbor, Mich. **PUBLIC HEALTH**.

HANMER, Hiram Rupert, Dir. of Rsch., Amer. Tobacco Co., 400 Petersburg Turnpike, P. O. Box 4178, Richmond, Va. **CHEMISTRY**.

HANN, Harry Wilbur, Asst. Prof. of Zool., Univ. of Mich., Ann Arbor, Mich. **ORNITHOLOGY**.

HANNA, G. Dallas, Curator, Dept. of Paleontology and Admin. Asst., Calif. Acad. Sci., San Francisco, Calif. **PALEONTOLOGY**.

HANNA, Gordie Consyntine, Lectr. Truck Crops and Assoc. Olericulturist, Univ. of Calif., Davis Calif. **AGRICULTURE**.

HANNA, Marcus Albert, Chf. Paleontologist, Gulf Oil Corp., Houston, Tex. **ECOLOGY, PALEONTOLOGY**.

HANNUM, Clair Arthaud, Assoc. Prof. of Zool., Dept. of Zool., Univ. of Wichita, Wichita 14, Kans. **PARASITOLOGY**. b. Gibson, Iowa, Oct. 19, 1900. s. John Wright and Bertha (Arthaud) H. Edn.: B.S., Univ. of Wash., 1923; M.S., *ibid.*, 1924; Ph.D., *ibid.*, 1942. Exp.: Tchng. Fellow, Univ. of Wash., Seattle, Wash., 1923-25; Assoc. in Zool., *ibid.*, 1925-26; Instr. in Zool., Univ. of Hawaii, Honolulu, Hawaii, 1926-28; Instr. in Zool., Univ. of Ariz., Tucson, Ariz., 1928-34; Asst. Prof. of Zool., *ibid.*, 1934-40; Lectr. in Zool., Univ. of Wash., Seattle, Wash., 1941; Acting Prof. of Bacteriol., Seattle Coll., Seattle, Wash., 1941; Staff, Boeing Air Co., *ibid.*, 1942; Assoc. Prof. of Zoology, Univ. of Wichita, Wichita, Kans., 1946—. Mem.: Amer. Micro. Soc.; Amer. Soc. of Parasitol.; A.A.U.P.; A.A.A.S.; Soc. of Zoologists; Amer. Soc. of Professional Biologists; Soc. of System Zoology; N. Y. Acad. of Sci.; Kans. Acad. of Sci.; Theta Chi; Sigma Xi; Delta Epsilon; Pi Mu Chi; Aesculapius. Author: Lab. Text in Elem. Zool., 1939; Comp. Chordate Anatomy, 1940; Lab. Manual for Animal Histol., 1939. Contrb. to: Biol. Abstracts; Trans., Amer. Micro. Soc.; Yale Jour. of Biol. and Med.; Pub. Puget Sound Biol. St.; Pub. Univ. of Washington, Theses Ser.; Univ. of Arizona Bull.; Biol. Sci. Bull. Special Int.: Bacteriol., Histol. and Helminthol.

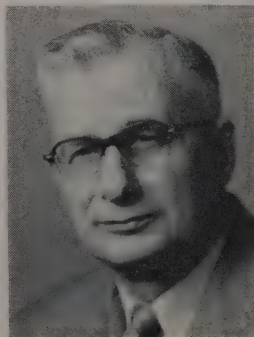
HANSCOM, William Wallace, Consulting Engr., Indus. Plants, 848 Clayton St., San Francisco, Calif. **ENGINEERING**.

HANSELL, James Myron, District Geologist, Sun Oil Co., P. O. Box 2431, Corpus Christi, Tex. **PETROLEUM GEOLOGY**.

HANSEN, Arild Edsten, Prof. and Chmn., Dept. of Pediatrics, Univ. of Tex. Schl. of Med., Galveston, Tex. **PEDIATRICS**.

HANSEN, George Henry, Prof. of Geol., Brigham Young Univ., 1430 N. 316 E., Provo, Utah. **PETROLEUM GEOLOGY**.

b. Richfield, Utah, June 28, 1896. s. Lars Peter and Sorena Marie (Sorenson) H. Edn.: B.S., Utah State, 1918; M.S., Geo. Washington Univ., 1925; Ph.D., *ibid.*, 1927. m. Afton Allred, June 28, 1896. s. Lars Peter Carole; Helen. Exp.: Geologist, Tex. Oil Co., West Tex., 1927; Prof. of Geol., Brigham Young Univ., Provo, Utah, 1927—. Mem.: Geol. Soc. Amer.; Amer. Assn. Petroleum Geologists; Amer. Geophysical Union; Sigma Xi; Gamma Epsilon. Contrb. to: Jour. Paleontol.; Amer. Jour. Physical Anthropology. Special Int.: Petroleum Geol.



HANSEN, Clarence Frederick, Dir. of Rsch. and Planning, W. T. Grant Co., 1441 Broadway, N. Y., N. Y. **PSYCHOLOGY**.

HANSEN, Elmer, Rsch. Assoc. Prof., Dept. of Horticulture, Ore. State Coll., Corvallis, Ore. **AGRICULTURE**.

HANSEN, Hans N., Prof. of Plant Pathol., 108 Hilgard Hall, Univ. of Calif., Berkeley, Calif. **PLANT PATHOLOGY**.

HANSEN, Harold L., Admin. Asst. to Pres., Winthrop Chemical Co., Inc., Rensselaer, N. Y. **CHEMISTRY**.

HANSEN, Henry L., Asst. Prof. of Forestry, Coll. of Agri., Forestry and Home Econ., Univ. Farm, Univ. of Minn., St. Paul, Minn. **FORESTRY, SILVICULTURE**.

HANSEN, J. E., Ferro Corp., 5309 S. District Blvd., Los Angeles 22, Calif. **CERAMICS**.

HANSEN, Lester Arnold, Dir. of Rsch. and Development, Behr-Manning Corp., Averill Park, N. Y. **PHYSICS AND COLLOID CHEMISTRY; ABRA-SIVES AND HIGH POLYMERS**. b. Denmark, Wis., May 19, 1903. s. J. G. and Nellie (Arveson) H. Edn.: B.S., Univ. of Wis., 1928; M.S., ibid., 1930; Ph.D., ibid., 1934. m. Vanessa Orloff, Aug. 22, 1931. c.: Vanessa Elaine; Robert Lester. Exp.: Instr., Univ. of Wis., Madison, Wis., 1928-30; Asst., ibid., 1930-34; Asst. Forestry Technologist, Forest Products Lab., P. S. Forest Service, 1934-36; Asst. Prof. of Colloid Chem., Rensselaer Poly. Inst., 1936-43; Dir. of Rsch. and Development, Behr-Manning Corp., Troy, N. Y., 1943—. Mem.: Sigma Xi; Alpha Chi Sigma; Phi Lambda Upsilon; Councillor, Amer. Chem. Soc., 1952-54. Contrb. to: Jour. Amer. Chem. Soc.; Jour. Phys. Chem.; Indus. and Engrng. Chem. Special Int.: Wood Chem.; Adhesives; Resins; Abrasives; Coated Abrasives.

HANSEN, Lorenz Peter, Assoc. Prof. of Biochem., Jefferson Med. Coll., Philadelphia, Pa. **CHEMISTRY**.

HANSEN, Max Asmus Karl, Manager, Metals Rsch., Armour Rsch. Foundation, Technology Center, Chicago 16, Ill. **PHYSICAL METALLURGY; NONFERROUS METAL-LURGY**. b. Bremerhaven, Germany, Jan. 27, 1901. s. Maximilian J. C. and Helen M. H. (Petersen) H. Edn.: Ph.D., Univ. of Goettingen, Germany, 1924. m. Mary A. L. Tittel, Nov. 28, 1925. c. Helga H. L.; Dagmar W. K.; Burkhard C. R. O. Exp.: Metallurgist, I. G. Farbenindustrie A. G., Bitterfeld, Germany, 1924-25; Metallurgical Rsch., Kaiser Wilhelm Institut fuer Metallforschung, Berlin, Germany, 1925-33; Metallurgical Rsch., Staatliches Materialpruefungsamt, Berlin, Germany, 1933-34; Chf. Metallurgist, Dir. of Rsch., Vice Pres., Duereiner Metallwerke A. G., Duereen and Berlin, Germany, 1934-45; Prof. of Metallurgy, Technische Universitaet, Berlin, 1945-47; Assoc. Prof. of Metallurgical Engrng., Ill. Inst. of Tech., Chicago, Ill., 1947-49; Sr. Metallurgist, Supvr. of Nonferrous Metals Rsch., Asst. Chmn., Metals Rsch., Chmn. and Mgr., Metals Rsch., Armour Rsch. Foundation, Chicago, Ill., 1949—. Mem.: Deutsche Gesellschaft fuer Metallkunde; Sigma Xi; Inst. of Metals, London; Amer. Soc. for Metals; Amer. Inst. of Mining and Metallurgical Engrs. Author: The Constitution of Copper-Zinc Alloys, with O. Bauer 1927; The Constitution of Binary Alloys, 1936; etc. Contrb. to: Zeitschrift fuer anorganische Chemie; Speisewasserpflege; Zeitschrift fuer Metallkunde; Jour. of Inst. of Metals, London; Trans. Amer. Soc. for Metals; Trans. Amer. Inst. of Mining and Metallurgical Engrs.; Jour. of Metals. Special Int.: Constitution of Alloy Systems; Trans-



formation Studies in Alloys; Alloy Development; Specialized Knowledge in the Field of Nonferrous Metals, including Aluminum, Magnesium, Copper, and Titanium.

HANSEN, Robert Suttle, Assoc. Prof. of Chem., Iowa State Coll., Ames, Iowa. **PHYSICAL CHEMISTRY (SURFACE CHEMISTRY)**. b. Salt Lake City, Utah, June 17, 1918. s. Charles Andrew and Bessie (Suttle) H. Edn.: B.S., Univ. of Mich., 1940; M.S., ibid., 1941; Ph.D., ibid., 1948. m. Gilda Cappannari, April 8, 1939. c.: Edward Charles. Exp.: Asst. Prof. of Chem., Iowa State Coll., 1948-51; Assoc. Prof. of Chem., ibid., 1951—; Assoc. Chemist, Ames Lab., Atomic Energy Commn. (joint appointment with Chem. Dept., Iowa State Coll.), 1948—. Hon. Pos.: Secy.-Treas., Colloid Div., Amer. Chem. Soc., 1952-53. Mem.: Amer. Chem. Soc.; A.A.A.S.; A.A.U.P.; Phi Beta Kappa. Sigma Xi; Phi Lambda Upsilon; Phi Kappa Phi. Contrb. to: Jour. Amer. Chem. Soc.; Jour. Physical Chem. War Record: Reserve Officer, active duty, 1942-46. Gen. Int.: Demonstrated Multimolecular Adsorption from solution; Developed Adsorption Separation of Hafnium from Zirconium; Developed Quasi-Thermodynamic Theory of Adsorption from solution. Special Int.: Adsorption; Corrosion; Solution Thermodynamics.



HANSEN, Waldemar Conrad, Mgr. Rsch. Labs., Universal Atlas Cement Co., Buffington, Ind. **CHEMISTRY**.

HANSFORD, R. C., 706 N. Pickering Ave., Whittier, Calif. **PETROLEUM**.

HANSON, Adolph Melanchton, retired, 16 Second Ave., N. W., Faribault, Minn. **NEUROSURGERY**.

HANSON, Alvin Walter, Assoc. Prof. of Physics, The Citadel, Charleston, S. C. **PHYSICS**.

HANSON, George Henry, Sr. Chemical Engr., Atomic Energy Div., Phillips Petroleum Co., 677 Linden Dr., Idaho Falls, Idaho. **CHEMICAL ENGINEERING AND PHYSICAL CHEMISTRY**. b. Alpena, Mich., Jan. 26, 1918. s. Anton and Anna Constance (Halvorsen) H. Edn.: B.S.E., Univ. of Mich., 1939; M.S., ibid., 1940; Ph.D., ibid., 1942. m. Jean Marie Wahl, May 19, 1945. Exp.: Simon Mandelbaum Scholarship, 1937-38; Tau Beta Pi Fellowship, Univ. of Mich. Scholarship, 1939-40; Ethyl Corp. Fellowship, 1940-42; Chem. Engr., Rsch. Div., Phillips Petroleum Co., Bartlesville, Okla. and Borger, Tex., 1942-44; Master Chem. Engr., ibid., 1944-45; Sr. Chem. Engr., ibid., 1945-47; Chem. Engr., on loan to Oak Ridge Natl. Lab., Technical Div., Operated by Monsanto Chem. Co., then by Carbide and Carbon Chem. Co., 1947-48; Group Leader and Asst. Section Chf., Rsch. Div., Phillips Petroleum Co., 1948-51; Sr. Chem. Engr., Atomic Energy Div., ibid., 1951—. Mem.: Amer. Inst. Chem. Engrs.; Amer. Chem. Soc.; Sigma Xi; Tau Beta Pi; Phi Lambda Upsilon; Iota Alpha; Phi Kappa Phi; Phi Eta Sigma. Contrb. to: Trans. Amer. Inst. Chem. Engrs.; Chem. Engrng. Progress; Indus. and Engrng. Chem.; Petroleum Refiner; Oil and Gas Jour.; Natl. Petroleum News. Gen. Int.: U. S. Patent 2,564,970 Liquid-Liquid Contacting Aug. 21, 1951; U. S. Patent, 2,618,667 Catalytic Conversion Process, Nov. 18, 1952; U. S. Patent 2,546,031 Regeneration of Alumina-Chromia Catalyst Mar. 20, 1951. Special Int.: Liquid-Vapor and Liquid-Liquid Equilibria; Catalytic Dehydrogenation of Normal Butane; Physical and Thermodynamic Properties of Hydrocarbons; Low-temperature Calorimetry; Nuclear Chem. and Engrng.; Chem. Separation Processes; Nuclear Reactor Engrng.

HANSON, Lester Eugene, Asst. Prof. of Animal Husbandry, Univ. of Nebr., Lincoln, Nebr. **SWINE NUTRITION**.

HANSON, Wesley Turnell, Jr., Rsch. Chemist, Eastman Kodak Co., Rochester, N. Y. **CHEMISTRY.**

HARDENBURG, Earle Volcart, Prof. of Vegetable Corps, Cornell Univ., Ithaca, N. Y. **HORTICULTURE.**

HARDER, Charles M., N. Y. State Coll. of Ceramics, Alfred, N. Y. **CERAMICS.**

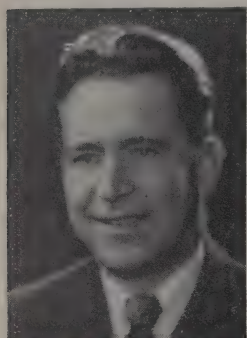
HARDER, Edmund Cecil, Vice-Pres., Aluminum Lab., Ltd., 1800 Sun Life Bldg., Montreal, Que., Can. **ECONOMIC GEOLOGY.**

HARDY, Edward Lawyer, retired, 3525 Wilshire Terrace, San Diego, Calif. **EDUCATION.**

HARDY, John Ira, Box 199, Bowie Rd., Laurel, Md. **AGRICULTURE.**

HARDY, Martha Crumpton, Chmn., Child Rsch. and Asst. Dir., Elizabeth McCormick Memorial Fund, 848 N. Dearborn St., Chicago, Ill. **PSYCHOLOGY.**

HARDY, Ross, Prof. of Zool., Long Beach State Coll., Long Beach 15, Calif. **ECOLOGY OF THE VERTEBRATES, ESPECIALLY THOSE OF THE WESTERN PART OF NORTH AMERICA.**



b. Cleveland, Utah, Apr. 4, 1908. s. John James, Jr. and Ruth Adeline (Oviatt) H. Edn.: B.S., Univ. of Utah, 1933; M.S., *ibid.*, 1938; Ph.D., Univ. of Mich., 1943. m. Hannah Lucile Neff, May 29, 1934. c.: Alan Ross; Kaye Marilyn. Exp.: Instr. in High Schls. of Carbon Co., Utah, 1933-38; Dir., Div. Biol. Sci., Dixie Jr. Coll., St. George, Utah, 1938-46; Hd., Biol. Dept., Weber Coll., Ogden, Utah, 1946-49; Prof. of Zool., Long Beach State Coll., Long Beach, Calif., 1949—. Hon. Pos.: Fellow, Utah Acad. Sci., Arts and Letters; Vice-Pres. and Pres., Western Div., Amer. Soc. of Ichthyologists and Herpetologists, 1947-48, 1949-50, 1950-51; Chmn., Zool. Com. of Southern Calif. Acad. of Sci., 1952-53. Mem.: Sigma Xi; Amer. Soc. Mammalogists; Cooper Ornith. Club; Wilson Ornith. Club; Amer. Ornith. Union; Herpetologists League; Wildlife Soc.; Biol. Soc. Wash.; Amer. Soc. Ichthyologists and Herpetologists; Ecological Soc. Amer.; Phi Sigma; etc. Contrb. to: Jour. Mammalogy; Ecol. Monographs; Proc. Utah Acad. Sci., Arts and Letters; Copeia; Herpetologica; Auk; Condor; Proc. Biol. Soc. Wash.; Biologist; Sci.; Wilson Bull.; Proc. Utah Conf. Higher Edn.; Utah Ednl. Rev.; Scribner; Turtlex News; etc. Gen. Int.: Collector of Vertebrates including a private collection of over 1000 mammal skins and numerous herpetological specimens including paratypes of new mammals named by Dr. Hardy; Also 1200 kodachrome slides on biological subjects. Special Int.: Ecology and Taxonomy of Terrestrial Vertebrates of Western U. S.

HARDY, William G., **SPEECH AND HEARING.**

HARES, Charles Joseph, Rsch. Geologist, The Ohio Oil Co., Box 230, Boulder, Colo. **PETROLEUM GEOLOGY.**

HARGER, Rolla Neil, 5015 Graceland Ave., Indianapolis, Ind. **CHEMISTRY.**

HARGITT, George Thomas, Prof. of Zool., Duke Univ., Durham, N. C. **HISTOLOGY, CYTOLOGY.**

HARING, Clarence Melvin, Prof. of Veterinary Sci. and Veterinarian Expt. Station, Univ. of Calif., Berkeley, Calif. **VETERINARY SCIENCE.**

HARKIN, Duncan, Consultant, Department of Defense, 3000 Crest Ave., Cheverly, Md. **MATHEMATICS.** b. Cameron, W. Va., Sept. 20, 1899. s. Daniel C. and Flora (Duncan) H. Edn.: A.B.,

W. Va. Univ., 1921; A.M., *ibid.*, 1923; Ph.D., Univ. of Chicago, 1927. m. Alice Mildren, Sept. 1, 1925. c. Phyllis; Duncan Alfred; Anita. Exp.: Inst., W. Va. Univ., 1923-25; Instr., Univ. of Fla., 1925-26; Lectr., Univ. of Manitoba, Winnipeg, Can., 1926-27; Prof., Ala. Poly. Inst., 1927-38; Math. Dept., Brooklyn Coll., 1938-46; Hd., Math. Analysis Group, Rsch. Div., U. S. Navy Dept., Consultant in Math. and Hd., Math. Consultant Group, Office of Naval Rsch., Naval Rsch. Lab., 1946-49; Visiting Fulbright Prof., Math. Inst., Univ. of Oslo, Norway, 1950; Consultant in Math., Bureau of Aeronautics, U. S. Navy Dept., Dept. of Defense, 1951—. Hon. Pos.: Chmn. Math. Panel, Potomac River Naval Command Civil Service Commission, 1948-49; Math. Comm. Mem., Wash. Soc., of Amer. Inst. of Elec. Engrs., 1947-48; Fellow, A.A.A.S., 1938. Mem.: Amer. Math. Soc.; Math. Assn. of Amer.; Wash. Philos. Soc.; Phi Beta Kappa; Pi Mu Epsilon; St. Andrew's Soc. Author: Coll. Algebra, 1929; Coll. Algebra, 1939; Fundamental Math., 1940. Contrb. to: Amer. Jour. Math.; Amer. Math. Monthly; Norsk Matematisk Tidsskrift. Special Int.: Theory of Numbers; Modern Algebra; History of Math.; Applied Math.; Stochastic Statistics.

HARKINS, Cloyd S., **SPEECH AND HEARING.**

HARKNESS, William John Knox, Chf., Fish and Wildlife Div., Dept. of Lands and Forests, Parliament Bldgs., Toronto 2, Ont., Can. **LIMNOLOGY AND FISHERIES.** b. Iroquois, Ont., Can., Apr. 28, 1896. s. Adam Dunbar and Mary Alexander (Harvey) H. Edn.: B.A., Univ. of Toronto, 1922; M.A., *ibid.*, 1923; D.Sc., Ohio State Univ., 1946. m. Margaret Blair, 1940. c. William Dunbar. Exp.: Lectr., Univ. of Alberta, Edmonton, Can., 1922-24; Lectr. Asst. Prof. and Assoc. Prof., Univ. of Toronto, Toronto, Can., 1924-46; Dir., Ont. Fish. Rsch. Lab., 1924-46; Exchange Prof., Univ. of Fla., Gainesville, Fla., 1939-40; Chf. Fish and Wildlife Div. Dept. of Lands and Forests, Toronto, Ont., Can., 1946—. Mem.: Amer. Fisheries Soc.; Sigma Xi; Phi Sigma. Contrb. to: Amer. Fisheries Soc. Trans.; Trans., N. Amer. Wildlife Conf.; Trans., Internatl. Assn. of Fish, Game and Wildlife Commrs. Special Int.: Gen. Limnol. and Fisheries.

HARLAN, William Robert, Asst. Dir. of Rsch., Rsch. Labs., Amer. Tobacco Co., Richmond, Va. **PLANT BIOCHEMISTRY.**

HARLEY, Harrison Leroy, 64 Sewall Ave., Brookline, Mass. **PSYCHOLOGY.**

HARLOW, William M., Prof., Wood Tech., N. Y. State Univ., Coll. of Forestry, Syracuse, N. Y. **DENDROLOGY AND MICROCHEMISTRY OF THE CELL WALL IN WOOD.** b. S. Wm. Burt and Ida Gertrude (Morehouse) H. Ancestry: Desc. from Sgt. Wm. Harlow whose House Stands in Plymouth, Mass. Edn.: B.S., N. Y. State Univ., Coll. of Forestry, 1925; M.S., *ibid.*, 1926; Ph.D., *ibid.*, 1928. m. Alma Emily Malcomb, Syracuse, N. Y., 1926. d. Chas. E. and Nellie Carr Malcomb. c.: Chas. Malcomb. Exp.: Since 1928 as Mem. of Faculty, N. Y. State Univ., Coll. of Forestry; Hd., Campcraft Dept. Sr. Coll. of Phys. Edn., June Camp of Boston Univ., 1936-40; Staff Mem., Natl. Camp of Outdoor Edn. Assoc., 1943-49. Mem.: Sigma Xi; Prof. Soc.; Soc. Amer. Foresters. Author: Textbook of Dendrology (with Ellwood S. Harrar), 1937; Trees of the Eastern U. S., 1942. Contrb. to: Jour. Ind. Engr. Chem.; Amer. Jour. Bot.; Amer. Forests. Ph.D. Dissertation: Contributions to the Chem. of the Plant Cell Wall. Achievements of Gen. Int.: Rsch. on Microchem. of Cell Walls in Wood; New Techniques of Outdoor Edn. Recreation: Sailing. Listed in: A.M.S. Special Int.: Chem. Cell Walls of Wood; Dendrol.;



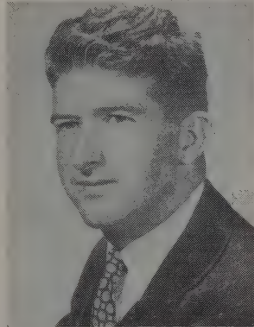
Outdoor Edn.; Time Lapse Motion Picture Photography.

HARLOW, Harry F., Prof. of Psychol., Univ. of Wis., 1602 Hoyt St., Madison, Wis. **LEARNING, PHYSIOLOGY, PSYCHOLOGY, PRIMATE PSYCHOLOGY.** b. Fairfield, Iowa, Oct. 31, 1905. s. Lon H. and Mabel (Rock) Israel. Edn.: A.B., Stanford Univ., 1927; Ph.D., ibid., 1930. m. Clara Mears, 1932 (div. 1946). 2nd m. Margaret Kuenne, 1948. Exp.: Asst. Prof. of Psychol., Univ. of Wis., 1930-38; Assoc. Prof., ibid., 1938-44; Prof., ibid., 1944—; Chmn., Dept. of Psychol., ibid., 1949-50; Carnegie Fellow in Anthropol., Columbia Univ., 1939-40; Chf., Human Resources Rsch. Br., Dept. of Army, 1950-52. Hon. Pos.: Editor, Jour. of Comparative and Physiol. Psychol., 1951—; Pres., Elect., Div. of Psychol. and Anthropol., Natl. Rsch. Council, 1954—. Mem.: Amer. Psychol. Assn.; Midwestern Psychol. Assn.; Natl. Acad. Sci.; Soc. Exptl. Psychologists; Sigma Xi; Gamma Alpha. Contrb. to: Jour. Comparative Physiol. and Psychol.; Jour. Exptl. Psychol.; Jour. General Psychol.; Psychol. Rev.; Annual Rev. Psychol.; etc. Special Int.: Primate Learning; Localization of Intellectual Functions in Monkeys; Motivation and Learning Theory.

HARMAN, C. G., Battelle Memorial Inst., 505 King Ave., Columbus 1, Ohio. **CERAMICS.**

HARMAN, Mary Theresa, Prof. of Zool., Kans. State Coll., Manhattan, Kans. **EMBRYOLOGY, CYTOLOGY.**

HARMAN, Willis W., Assoc. Prof., Elec. Engrng., Dept., Stanford Univ., Stanford, Calif. **ELECTRICAL ENGINEERING.** b. Seattle, Wash., Aug. 16, 1918. s. Fred D. and Marguerite D. (Dresser) H. Edn.: B.S., Univ. of Wash., 1939; M.S., Stanford Univ., 1948; Ph.D., ibid., 1948. m. Charlene R. Reamer of Fort Wayne, Ind., 1941. d. Fana M. Reamer. c.: Charlene C.; Mary E.; Susan L. Exp.: Asst. Prof., Elec. Engrng., Stanford Univ., 1948-49; Assoc. Prof., ibid., Univ. of Fla., 1949-52; Assoc. Prof., Stanford Univ., Stanford, Calif., 1952—. Mem.: Tau Beta Pi; Sigma Xi; Institute of Radio Engrng.; Amer. Soc. for Engrng. Education. Contrb. to: Proceedings of Inst. Radio Engrng.; Jour. Applied Phys. Ph.D. Dissertation: Broadband Tunable Waveguide Cavity Resonators. War Record: 1941-45, U. S. Navy. Travel: Pacific Islands. Gen. Int.: RCA Fellowship in Electronics, 1947-48; Inst. Rad. Engrng. Editor's Award, 1950. Listed in: A.M.S. Special Int.: Microwave Electronics; Engrng. Edn.



HARMON, Gaius E., 183 Middlesex Ave., Wilmington, Mass. **PUBLIC HEALTH.**

HARMON, Paul Montgomery, Prof. and Chmn., Dept. of Physiol., Ind. Univ., Bloomington, Ind. **PHYSIOLOGY.**

HARMS, Ernest, Clinical Psychologist, Editor of The Nervous Child and the Jour. Child Psychiatry, 30 W. 58th St., N. Y., N. Y. **CLINICAL PSYCHOLOGY AND PSYCHOTHERAPY.** b. Alsfeld-Hessen, Germany, Sept. 12, 1895. Edn.: Ph.D., Wuerzburg, 1919. Exp.: Univ. Prof. and Dir. of Internationales Voelkerpsychologisches Institut, 1928-33; Editor of Jahrbuch fuer Idealistische Philosophie und Bibliothek des Idealismus, 1932-37; Dir. of Child Guidance Clinic, St. Vincents Hosp., N. Y., N. Y., 1944-47; Dir. of Child Guidance Clinic, Beth David Hosp., N. Y., N. Y., 1948-51; Editor, The Nervous Child and the Jour. of Child Psychiatry, 1942—. Mem.: Fellow, A.A.A.S.; Soc. for the Advancement of Edn.; Assoc., Amer. Univ. Prof. Assn.; Amer. Psychol. Assn.; Assoc., Internatl. Soc. for Analytical Psychol.; Internatl. Council for the

Mental Health of Children. Author: Essentials of Abnormal Child-Psychol.; Mental Hygiene in Camping. Contrb. to: Psychiatric Quarterly; Gen. Psychol.; Jour. Nervous and Mental Diseases; Amer. Jour. Psychiatry; etc. War Record: German Army, World War I.

HARMS, John, Dir. of Trng., Naval Rsch. Lab., Wash., D. C. **SCIENCE AND EDUCATION.** b. Steamboat Rock, Iowa, Jan. 25, 1905.



s. John and Grace (Sanders) H. Edn.: B.A., Univ. of Ia., 1926; M.A., Univ. of Pittsburgh, 1941. m. Alberta Kaesser of Rochester, N. Y., June 5, 1935. d. Mr. and Mrs. Charles Kaesser. c.: Carla; Joan; John, Jr. Exp.: Somerset, Ky., H. S., Sci. and Math. Tchrr., 1926-27; Ames, Ia. Sr. H. S., Hd. of Sci. Dept., 1927-43; Office of Naval Rsch., Wash., D. C., Sci. Edn. Advisor, 1946-47; Amer. Coun. of Edn., Wash., D. C., Assoc. in Rsch. Studies, 1947-49;

Naval Rsch. Lab., Wash., D. C., Dir. of Trng., 1949—. Mem.: Sigma Delta Kappa. Author: Consumer Sci., 1939. Contrb. to: Jour. of Ind. Trng. War Record: World War II, U. S. Navy. Travel: Europe. Special Int.: Rsch. Studies in Area of Grad. Work for Prof. Employees.

HARNED, Ben King, Assoc. Hd. Pharmacol., Lede " Rsch. Labs., Pearl River, N. Y. **PHARMACOLOGY.**

HARNED, Herbert S., Prof. of Chem., Sterling Chem. Lab., Yale Univ., 225 Prospect St., New Haven, Conn. **PHYSICAL CHEMISTRY.** b. Camden, N. J., Dec. 2, 1888. s. Thomas B. and Augusta Anna (Traubel) H. Edn.: B.A., Univ. of Pa., 1909; B.S., ibid., 1910; Ph.D., ibid., 1913. m. Dorothy Foltz, Sept. 8, 1917. c.: Julia; Herbert S., Jr.; Louise; Eleanor. Exp.: Instr., Univ. of Pa., 1913-17; Asst. Prof., ibid., 1917-26; Prof., ibid., 1926-28; Prof. of Chem., Yale Univ., 1928—. Mem.: Natl. Acad. Sci.; Amer. Chem. Soc.; Faraday Soc.; A.A.-A.S.; Phi Beta Kappa; Sigma Xi; Delta Kappa Epsilon. Co-author: The Physical Chem. of Electrolytic Solutions. Contrb. to: Jour. Amer. Chem. Soc.; Jour. Physical Chem.; Trans. Faraday Soc. War Record: Capt., Chem. Warfare Service, World War I, 1918-19; Official Investigator, O.S.R.D., World War II, 1941-43, Group Leader, Manhattan Project, 1943-45. Special Int.: Solutions of Electrolytics; Electrochem.; Thermodynamics.

HARNED, Joseph Edward, Oakland, Md. **BOTANY.**

HARNED, Robey Wentworth, Prin. Entomologist in Chg. Div. Cotton Insects, Bureau Entomol. and Plant Quarantine, U. S. D. A., 4417 Garfield St., N. W., Washington, D. C. **ENTOMOLOGY.**

HARNLY, Henry Jacob, Prof. Emer. Biol., McPherson Coll., 1322 E. Euclid St., McPherson, Kans. **ZOOLOGICAL SCIENCES.**

HARNLY, Morris H., Dept. of Biol., Wash. Square Coll., Wash. Square, E., N. Y., N. Y. **GENETICS.**

HARNWELL, Gaylord P., Dir. of Physics Lab. and Chmn., Dept. of Physics, Univ. of Pa., Philadelphia, Pa. **PHYSICS.**

HARPER, Horace James, Prof. of Soil, Okla. A. and M. Coll., Stillwater, Okla. **SOIL CHEMISTRY AND FERTILITY.**

HARPER, Merritt Colgate, Owner, J. E. C. P. Harper and Co., 224 East Main St., Madison, Ind. **PHARMACY.**

HARPER, Roland McMillan, Geographer, Geol. Survey of Ala., University, Ala. **ECOLOGY.**

HARRADON, Harry Durward, Librarian, Dept. Terrestrial Magnetism, Carnegie Inst. of Wash., 5241

Broad Branch Rd., Washington, D. C. GEO-MAGNETISM.

HARRAH, Ezra Clarence, Prof. of Zool., Colo. State Coll. of Edn., Greeley, Colo. ZOOLOGY.

HARRAR, J. George, Feld Dir. of Agri., Rockefeller Foundation, Calle Viena 26, Mexico, D. F., Mex.

HARRELL, Thomas Willard, Assoc. Prof. of Psychol., Univ. of Ill., Urbana, Ill. INDUSTRIAL PSYCHOLOGY.
PLANT PATHOLOGY.

HARRINGTON, E. Robert, Jr. SPEECH AND HEARING.

HARRINGTON, Eldred R., Hd., Sci. Dept., Albuquerque H. S., 223 N. Cedar St., Albuquerque, N. Mex. CHEMISTRY, GEOLOGY.

HARRINGTON, George Traver, Tchr. of Biol. and General Sci., Stuyvesant H. S., 32-20 150th Pl., Flushing, N. Y. BIOLOGY.

HARRINGTON, James Bishop, Prof. of Field Husbandry, Univ. of Saskatchewan, Saskatoon, Sask., Can. PLANT BREEDING.

HARRINGTON, John M., Prof. and Hd. Dept. of Math., Mich. Coll. of Mining and Technol., Houghton, Mich. MATHEMATICS. b. Dec. 29, 1892, Ironwood, Mich. s. Daniel John and Anne (Kelley) H. Edn.: B.M., Mich. Coll. of Mines, 1917; B.S., ibid., 1926; Ph.M., Univ. of Wis., 1931. m. Lillian Gustafson of Iron Mtn., Mich., June 28, 1920. d. Albert and Amanda Gustafson. c.: Patricia Ruth. Exp.: Chf. Engr., Lake Copper Co., 1919; Engr., Arthur Iron Mining Co., 1920; Road Engr. and Mining Capt., 1920-23; Math. Instr., Mich. Coll. of Mining and Technol., Houghton, Mich., 1923-49; Prof. and Hd. Dept. of Math., Mich. Coll. of Mining and Technol., 1949—. Mem.: Amer. Inst. of Mining and Metallurgical Engr.; A.A.A.S.; Soc. for Promotion of Eng. Edn.; Theta Tau; Tau Beta Pi; Elks; Amer. Legion; Rotary; Portage Lake Golf Club. War Record: U. S. Army Engr., 1918. Travel: No. Amer. Hobbies: Hunting; Golf; Nature Study. Listed in: Who's Who in Engrng.

HARRINGTON, Louis Clare, Dean, Coll. of Engrng., Univ. of N. Dak., Grand Forks, N. Dak. MINING ENGINEERING.

HARRINGTON, Mark Raymond, Curator, Southwest Museum, Highland Park, Los Angeles, Calif. ANTHROPOLOGY.

HARRINGTON, Marshall Cathcart, Prof. of Physics and Chmn., Div. of Sci., Drew Univ., Madison, N. J. PHYSICS.

HARRIS, Ad. U.S.P.H.S., Chamblee, Ga. SEROLOGY.

HARRIS, Albert Sidney, 3756 Rice Blvd., Houston, Tex. PHYSIOLOGY.

HARRIS, Benjamin B., Dean of Admin., North Tex. State Tchr. Coll., 415 Normal Ave., Denton, Tex. ZOOLOGY, BOTANY.

HARRIS, Chauncy Dennison, Prof. of Geography, Univ. of Chicago, Chicago, Ill. GEOGRAPHY.

HARRIS, Coleman John, Prof. of Biol., Morris Harvey Coll., 3810 Staunton Ave., Charleston, W. Va. BOTANY.

HARRIS, Downey L., Metropolitan Bldg., St. Louis, Mo. PATHOLOGY.

HARRIS, Franklin Stewart, Jr., Prof. of Phys., Univ. of Utah, Salt Lake City 1, Utah. OPTICS. b. Logan, Utah, May 24, 1912. s. Franklin S. and Estella (Spilsbury) H. Edn.: A.B., Brigham Young Univ., 1931; M.A., ibid., 1936; Ph.D., Calif. Inst. of Tech., 1941. m. Maurine Steed, June 7, 1950. c.: Franklin S., III; Jo Anne; Bernie M.; Michael G.; Morgan J.; Wendell L.; Della Elizabeth. Exp.: Lectr. in Phys., Univ. of British Columbia, 1941-43; Asst. Prof. of Phys., Univ. of Utah, 1943-46;

Assoc. Prof., ibid., 1946-52; Prof., ibid., 1952—. Mem.: A.A.A.S.; Utah Acad. Sci., Arts and Letters; Optical Soc. of Amer.; Amer. Assn. Phys. Tchr.; Netherlands Phys. Soc.; Phys. Soc. (London); Sigma Pi Sigma; Sigma Xi; Delta Phi; Alpha Phi Omega. Co-author: Seven Claims of the Book of Mormon, 1936. Contrb. to: Jour. Optical Soc. Amer.; Phys. Rev.; Utah Acad. Proc. Special Int.: Diffraction of Light; Oligodynamics of Silver.

HARRIS, Elwin Elmer, Chemist Specialist, U. S. Forest Products Lab., 4121 Mineral Point Rd.,



Madison 5, Wis. CHEMISTRY OF WOOD—SPECIALIZATION OF FUNDAMENTAL CHEMISTRY OF LIGNIN. b. Wauzeka, Wis., Nov. 11, 1897. s. William and Mary Lena (Paulson) H. Edn.: B.S., Hamline Univ., 1921; M.S., Univ. of Minn., 1922; Ph.D., ibid., 1925. m. Esther L. Cherry, June 28, 1923. c.: Ruth L.; Elwin A.; Marilyn C. Exp.: Instr. in General Chem., Hamline Univ., 1920-23; Instr. in Organic Chem., Univ. of N. Dak., 1923-25; Asst. Prof., ibid., 1925-28; Assoc. Prof., ibid., 1928-30; Assoc. Chemist, U. S. Forest Products Lab., Madison, Wis., 1930-36; Chemist, ibid., 1936-42; Sr. Chemist, ibid., 1942-46; Chemist Specialist, ibid., 1946—. Hon. Pos.: Chmn. N. Dak. Chapter, Sigma Xi, 1926; Chmn., Cellulose Div., Amer. Chem. Soc., 1942. Mem.: Soc. Amer. Foresters; Forest Products Rsch. Soc. Co-author: Chemical Processing of Wood, 1953. Contrb. to: Jour. Amer. Chem. Soc.; Indus. and Engrng. Chem.; Analytical Chem.; Jour. Physical and Colloid Chem.; T.A.P.P.I.; etc. War Record: Pvt., World War I, 1918. Gen. Int.: Pioneered work on Hydrogenation of Lignin as a means of Determining Structure. Special Int.: Fundamental Chem. of Lignin; Chem. of Wood and Sugars Derived from Wood.

HARRIS, Gorham W., Assoc. Prof. Emer. Chem., Simmons Coll., 185 Highland Ave., Newtonville, Mass. ANALYTICAL CHEMISTRY.

HARRIS, Halbert M., Prof. of Entomol. and Rsch. Prof., Agri. Expt. Station, Iowa State Coll., Ames, Iowa. ENTOMOLOGY.

HARRIS, Henry Clayton, Agronomist and Prof. of Agron., Fla. Agri. Expt. Station, Univ. of Fla., Gainesville, Fla. SOILS, PLANT NUTRITION.

HARRIS, Isabel, Assoc. Prof. of Math., Westhampton Coll., Univ. of Richmond, Richmond, Va. MATHEMATICS.

HARRIS, Jerome Sylvan, Prof. of Pediatrics, Assoc. Prof. of Biochem., Duke Hosp., Durham, N. C. PEDIATRICS AND BIOCHEMISTRY. b. N. Y. C., Feb. 27, 1909. s. Mark and Mary (Marcus) H. Edn.: A.B., Dartmouth, 1929; M.D., Harvard, 1933. Exp.: Asst. Pediatrician, Duke Hosp., 1927—. Instr. in Pediatrics and Biochem., ibid., 1937; Prof. of Pediatrics and Assoc. Prof., ibid., 1951—. Mem.: Sigma Xi; Amer. Soc. for Clin. Investigation; Amer. Pediatric Soc.; Southern Soc. for Clin. Rsch.; Soc. for Pediatric Rsch.; Amer. Acad. of Pediatrics; Phi Beta Kappa; Alpha Omega Alpha. Contrb. to: Med. and Sci. Periodicals. War Record: U. S. Army, 1942-46. Special In.: Diseases of Children, especially, Metabolic Disturbances and Cardio Vascular Disease.

HARRIS, John Donald, Hd., Sound Br., Med. Rsch. Lab., Submarine Base, New London, Conn. PSYCHOLOGICAL AND PHYSIOLOGICAL ACOUSTICS. b. Brownsburg, Pa., May 12, 1914. s. Walter W. and Pearl (Graves) H. Edn.: B.A., Maryville Coll., 1935; M.A., Vanderbilt Univ., 1936; Ph.D., Univ. of Rochester, 1942. m. Barbara Nelson, July 12, 1947. c.: John Curtis; Ralph Dexter; Lisa Helene. Exp.: Instr. in English, State of Del., Sr. H. S., 1936-39; Univ. Fellow in Psychol., Univ. of Colo.,

1939-40; Instr. in Psychol., Univ. of Rochester, 1940-43; Hd. Sound Br., Med. Rsch. Lab., Submarine Base, New London, Conn., 1943—. Hon. Pos.: Consultant, Com. on Audiometers, A.M.A.; Consultant, Com. on Hearing, Conn. State Med. Soc.; Liaison, Com. on Hearing, Natl. Rsch. Council. Mem.: Fellow, Amer. Psychol. Assn.; Fellow, Acoustical Soc. of Amer.; Fellow, A.A.A.S.; Mem., Eastern Psychol. Assn. Author: Some Relations Between Vision and Audition, 1950. Contrb. to: Jour. Acoustical Soc. Amer.; Arch. Otolaryngol.; Amer. Jour. Psychol.; Jour. Exptl. Psychol.; etc. War Record: U.S.N.R., Lt. (jg), 1943-45. Special Int.: Conditioning Learning; Audiology; Psychoacoustics; Physiol. Psychol.; Personnel Selection.

HARRIS, John Warton, Prof. and Chmn., Obstetrics and Gynecology, Univ. of Wis., Madison, Wis. **OBSTETRICS, GYNECOLOGY.**

HARRIS, Marion R., Plant Pathologist, Extension Service, Wash. State Coll., Pullman, Wash. **PLANT PATHOLOGY.**

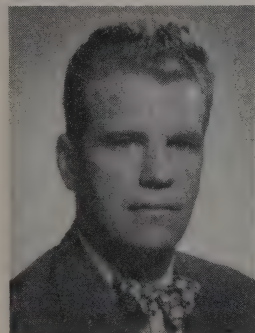
HARRIS, Meyer Mathews, Prin. Rsch. Internist, N. Y. State Psychiatric Inst., 722 W. 168th St., N. Y. **N. Y. MEDICAL RESEARCH.**

HARRIS, Milton, Harris Rsch. Labs., 1246 Taylor Ave., N. W., Washington, D. C., **TEXTILES.**

HARRIS, Norman MacLeod, retired, 53 MacLaren St., Ottawa, Ont., Can. **BACTERIOLOGY.**

HARRIS, Philip L., Hd. Biochem. Dept., Rsch. Lab., Distillation Products, Inc., 755 Ridge Rd., W. Rochester, N. Y. **BIOCHEMISTRY.**

HARRIS, Robert Samuel, Prof. of Biochem. of Nutrition, Mass. Inst. of Tech., Cambridge, Mass.



NUTRITIONAL BIOCHEMISTRY. b. Brookline, Mass., May 10, 1904. s. William and Ann (Bell) H. Edn.: B.S., Mass. Inst. of Tech., 1928; Ph.D., ibid., 1935. m. Helen Harris, 1952. c.: Richard; Donald. Exp.: Rsch. Asst., Research Assoc., Asst. Prof., Assoc. Prof., Prof., Mass. Inst. of Tech. Hon. Pos.: Field Representative, Pan Amer. Sanitary Bureau; etc. Mem.: Sigma Xi; Delta Omega; Omicron Kappa Upsilon; Fellow, A.A.A.S.; Amer. Inst. Nutrition; Amer. Public

Health Assn.; Fellow; Amer. Chemical Society; British Nutrition Society; Acad. Physical Medicine; Amer. Geront. Soc. Gen. Int.: Decorated "Official" Order of Merit, Ecuador. Special Int.: Food, Nutrition, Food Processing and Nutritional Values of Foods.

HARRIS, Thomas Gard, Chemist, Chemtan Co., Nashua, N. H. **CHEMISTRY.** b. Easton, Pa., Nov. 4, 1915. s. William Gard and Emma Gladys (Jago) H. Edn.: B.S., Lehigh Univ., 1937; M.S., ibid., 1939; Ph.D., ibid., 1941. m. Hilda Ruth Snyder, 1941. Exp.: Rsch. Asst., Lehigh Univ., Inst. of Rsch., Bethlehem, Pa., 1941-46; Rsch. Assoc., ibid., 1946-53; Chemist, Chemtan Co., Nashua, N. H. Mem.: Sigma Xi; Amer. Chem. Soc.; Lehigh Valley Chem. Soc. Contrb. to: Jour. Polymer Sci. Special Int.: Paints; Plastics; Synthetic Bristles; Cement; Thixotropic Character-



istics of Oils and Suspensions.

HARRIS, Roscoe E., Prof. of Physics, Lake Forest Coll., Lake Forest, Ill. **PHYSICS, ELECTRONICS.**

HARRIS, T. N., Children's Hosp., 18th and Bainbridge St., Philadelphia, Pa. **VIROLOGY.**

HARRIS, Titus Holliday, Prof. and Chmn., Dept. of Neurology and Psychiatry, Univ. of Tex., Med.



Branch, Galveston, Tex. **PSYCHIATRY; NEUROLOGY.** b. Fulshear, Tex., Nov. 11, 1892. s. Robert L. and Sally B. (Holliday) H. Edn.: B.A., Southwestern Univ., 1915; M.D., Univ. of Tex. Med. Branch, 1919. m. Laura Hutchings, Dec. 17, 1927. c.: Mary Elizabeth; Titus H., Jr.; Anne Hutchings; Edward Randall. Exp.: Instr. of Med. and Assoc. Prof. of Med., Med. Dept., Univ. of Tex., Galveston, Tex., 1920-25; Prof. of Neurol. and Psychiatry, ibid., 1926—; Chmn., Dept. of

Neurol. and Psychiatry, ibid., 1926—; Clin. Dir., Galveston State Psychopathic Hosp., 1932-43; Consult. in Neurol. and Psychiatry, U. S. Marine Hosp., 1931—; Dir., Psychiatric Unit for Private Patients, John Sealy Hosp., 1926—. Mem.: A.M.A.; Amer. Psychiatric Assn.; Amer. Neurol. Assn.; Assn. for Rsch. in Nervous and Mental Diseases; Amer. Acad. of Neurology; Tex. State Med. Assn.; Tex. Soc. for Mental Hygiene; Kappa Sigma; Phi Rho Sigma; Mason; C. of C. Contrb. to: Founder and Editor, Disease of Nervous System; Amer. Jour. of Psychiatry; Arch. of Neurology and Psychiatry; Annals of Internal Med.; Southern Med. Jour.; Tex. State Jour. of Med. Special Int.: Management of Psychiatric Patients in a General Hospital; Tchng. Psychiatry in Med. Schl.; Chmn., Resident Trng. Program in Neurology and Psychiatry.

HARRIS, Walter Donald, Group Leader of Agri. Chemicals Rsch., Naugatuck Chem. Div., U. S. Rubber Co., Naugatuck, Conn. **ORGANIC CHEMISTRY.** b. Holmes Co., Ohio, Feb. 16, 1918. s. William G. and Ida (Ullman) H. Edn.: B.A., Coll. of Wooster 1940; Ph.D., Ohio State Univ., 1944. m. Harriett Klein, June 17, 1942. c.: Ruth Ann; Barbara Jane; Amy Beth. Exp.: Sr. Rsch. Chemist, Agri. Chem. Rsch., Naugatuck Chem. Div., U. S. Rubber Co., 1944-46; Group Leader, ibid., 1946-49; Group Leader, Process Development, ibid., 1949-50; Group Leader, Agri. Chem. Rsch., ibid., 1950—. Mem.: Phi Beta Kappa; Sigma Xi; Sigma Chi Sigma; Gamma Alpha. Contrb. to: Jour. Amer. Chem. Soc.; Analytical Chem. Special Int.: Agri. Chemicals, especially Pesticides.

HARRIS, Zellig, Univ. of Pa., Philadelphia, Pa. **LINGUISTICS.**

HARRISON, Bruce Magill, Prof. of Zool. and Hd., Zool. Dept., Univ. of Southern Calif., Los Angeles, Calif. **ZOOLOGY, EMBRYOLOGY.**

HARRISON, Harold C., Special Asst. Dept. of Attorney General, State of R. I.; Asst. Dir., Univ. of



R. I. Lab. for Scientific Criminal Investigation and Assoc. Prof. of Chem., Univ. of R. I., Kingston, R. I. **CRIMINALISTICS; MICROSCOPY; SPECTROSCOPY.** b. Rutland, Vt., February 10, 1907. s. Charles H. and Elsie H. Edn.: B.S., Wash. and Lee Univ., 1931; Ph.D., Cornell Univ., 1938. m. Rowena Orr of Brevard, N. C., Aug. 17, 1936. d. Charles and Rowena Orr. Exp.: Grad. Asst. in Chem., Cornell Univ., 1933-36; Asst. Prof. of Chem., N. Y. State Coll. of Ceramics, 1936-41; Chief Chemist and Spectroscopist, Ore,

Dept. of Geol. and Mineral Indus., 1941-44; Rsch. Fellow, Dept. of Mineralogy and Petro., Harvard Univ., 1946-49; Assoc. Prof. of Chem., Univ. of R. I., 1949—. Mem.: Amer. Chem. Soc.; A.A.U.P.; A.A.A.S.; New England Assn. Chem. Tchrs.; Ore. Acad. of Sci.; Sigma Xi; Alpha Chi Sigma; Soc. for Applied Spectroscopy; Gamma Sigma Epsilon; Newport Engrng. Soc. Contrb. to: Ceramic Abstracts; Jour. Amer. Ceramic Soc.; Natl. Res. Coun. Ph.D. Dissertation; Photo Voltaic Properties of Germanium. Hobbies: Athletics; Criminalistics. Listed in: A.M.S.; Supplement of Who's Who in Amer.

HARRISON, George John, Supt. and Sr. Agronomist, U. S. Cotton Field Station, Shafter, Calif. **AGRONOMY.**

HARRISON, George Russell, Dean of Sci., Mass. Inst. of Tech., Cambridge, Mass. **PHYSICS.**

HARRISON, James Alexander, Prof. of Biol., Temple Univ., Philadelphia, Pa. **IMMUNOLOGY.**

HARRISON, Jamison Richard, Prof. of Physics and Radio Communications and Hd., Dept. of Physics, Tufts Coll., Medford, Mass. **HIGH FREQUENCY AND PIEZO-ELECTRICITY.**

HARRISON, Julia Peachy, Prof. and Hd., Dept. of Chem., Wilson Coll., Chambersburg, Pa. **CHEMISTRY.**

HARRISON, Kenneth Archibald, Assoc. Plant Pathologist, Lab. Plant Pathol., Kentville, N. S., Can. **PLANT PATHOLOGY.**

HARRISON, Preston Ershell, Assoc. Prof. of Bacteriol. and Immunol., Baylor Univ. Coll. of Med., Houston, Tex. **BACTERIOLOGY, IMMUNOLOGY.**

HARRISON, Roland Wendell, Prof. of Bacteriol. and Dean, Div. of Biol. Sci., Univ. of Chicago, 950 E. Chicago St., Chicago, Ill. **BACTERIOLOGY.**

HARRISON, Ross Granville, Yale Univ., Osborn Zool. Lab., New Haven, Conn.

HARRISON, W. N., Natl. Bureau of Standards, Indus. Bldg., Washington 25, D. C. **CERAMICS.**

HARRISON, William H., Partner, Harrison Projector Co., 6363 Santa Monica Blvd., Hollywood, Calif. **OPTICS.**

HARRY, Robert Rees, Jr., Asst. Curator of Fishes, Acad. of Natural Sciences,



Philadelphia, Pa. **ICHTHYOLOGY.** b. Stockton, Calif., July 2, 1926. s. Robert Rees and Dorothy May (Carrow) H. Edn.: A.A., Univ. of Calif., 1946; A.B., Stanford Univ., 1948; M.A., ibid., 1949; Ph.D., ibid., 1952. Exp.: Asst. Aquatic Biologist, Steinhart Aquarium, Calif. Acad. Sciences, 1941-44; Curatorial Asst., Ichthyology Dept., ibid., 1944-47; Biology Asst., Scripps Inst. of Oceanography, 1945; Curatorial Asst., Natural History Museum, Stanford Univ., 1945-46; Rsch. Asst., Survey Marine

Fishes of Brazil of Commercial Importance, Stanford Univ., 1948; Biologist, Dept. Fish Conservation, Calif. Div. Fish and Game, 1949-50; Ichthyologist, Geo. Vanderbilt Collections, Calif. Acad. Sci., 1951-52; Asst. Curator Fishes, Acad. Natural Sciences, Philadelphia, Pa., 1952—. Mem.: Acad. Natural Sci., Philadelphia; Calif. Acad. Sci.; Calif. Zool. Club; Biol. Soc. Wash.; Amer. Soc. Ichthol. and Herp.; Amer. Fisheries Soc.; Soc. Systematic Zool.; Gamma Alpha; Sigma Xi. Contrb. to: Copeia; Pacific Sci.; Frontiers; Proc. Calif. Zool. Club; Bull. Wash. Acad. Sci.; Zoologica; etc. Gen. Int.: Ichthyologist of Geol. Vanderbilt Pacific Equatorial Expedition, 1951; Ichthyologist, Pacific Sci. Bd. Expedition Tuamotus, 1952; Ichthyologist, Pacific Sci. Bd. Expedition Carolines, 1953. Special Int.:

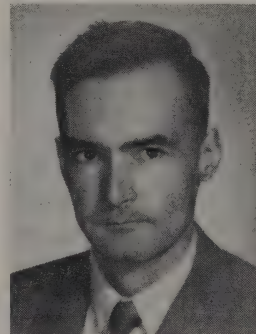
Ichthyology; Fisheries Biol.; Fish Evolution; Fishes Polynesia; Deep Sea Fishes; Aquarium Fishes and Management.

HART, Fanchon, Prof. of Biol., Columbia Univ., Coll. of Pharm., 115 W. 68th St., N. Y. 23, N. Y. **MICROBIOLOGY.** b. N. Y., N. Y., Dec. 22, 1890. s. Leopold and Jennie (Mundheim) H. Edn.: Food and Drug Analyst, Columbia Univ. Coll. of Pharm., 1911; B.S., N. Y. Univ., 1929; A.M., ibid., 1930. Exp.: Asst. Prof. of Botany, Columbia Univ., 1918-26; Assoc. Prof., ibid., 1926-49; Prof., ibid., 1949; Prof. of Biol., ibid., 1949—. Hon. Pos.: Chmn., N. Y. State Curriculum Com. of Bacteriol. Mem.: Soc. Amer. Bacteriologists; Fellow, A.A.A.S.; Fellow, Amer. Public Health Assn.; Amer. Pharmaceutical Assn.; Sigma Xi; etc. Contrb. to: Jour. Amer. Pharmaceutical Assn.; Jour. N. J. Pharmaceutical Assn.; Proc. Internat. Cong. of Plant Sci.; Jour. Lab. and Clinical Med. Special Int.: Bacteriol. and Mycology.

HART, George H., Hd., Div. of Animal Husbandry, Univ. of Calif., Coll. of Agri., Animal Science Bldg., Davis, Calif. **NUTRITION, PHYSIOLOGY.**

HART, Helen, Prof. of Plant Pathol., Univ. of Minn., Plant Pathol. Div., Univ. Farm, St. Paul 1, Minn. **PLANT PATHOLOGY.** b. Janesville, Wis., Sept. 2, 1900. d. Richard Johnson and Alice (Echlin) H. Edn.: B.A., Univ. of Minn., 1922; M.A., ibid., 1924; Ph.D., ibid., 1929. Exp.: Agent, Office of Cereal Crops and Diseases, U. S. Dept. of Agri., 1923-33; Instr. in Plant Pathol., Univ. of Minn., 1924-39; Univ. Asst., Institut für Pflanzenbau und Pflanzenzucht, Universität Halle-Salle, Halle-Salle, Germany, 1937-38; Asst. Prof., Univ. of Minn., 1939-44; Assoc. Prof., ibid., 1944-47; Prof., ibid., 1947—. Hon. Pos.: Editor-in-Chf. of Phytopathol., 1943-52. Mem.: Fellow, A.A.A.S.; A.A.U.P.; Amer. Phytopathol. Soc.; Amer. Soc. Plant Physiologists; Sigma Xi; Gamma Sigma Delta; Sigma Delta Epsilon; Delta Gamma Contrb. to: Phytopathol.; Plant Physiol. Special Int.: Plant Disease Resistance.

HART, Jackson Sanford, Assoc. Rsch. Officer, Natl. Rsch. Council of Can., 27 Birch Ave., Manor Park,



Ottawa, Ont., Can. **ANIMAL PHYSIOLOGY.** b. Toronto, Ont., Can., June 8, 1916. s. R. W. and C. P. (Sanford) H. Edn.: B.A., Univ. of Toronto, 1939; M.A., ibid., 1942; Ph.D., 1949. m. Eleanor M. Street, June 5, 1943. c.: Douglas R. S.; J. Sanford, Jr.; William S. Exp.: No. 1 Clinical Investigation Unit, Royal Canadian Air Force, 1941-45; Fisheries Rsch. Bd. of Can., 1947; Assoc. Rsch. Officer, Natl. Rsch. Council of Can., 1948—. Mem.: Amer. Soc. Limnology and Oceanography; A.A.A.S.; Canadian Physiol. Soc. Contrb. to: Trans. Amer. Fisheries Soc.; Trans. Fla. Acad. Sci.; Canadian Jour. Rsch.; Canadian Jour. Zool. War Record; R.C.A.F., 1941-45. Special Int.: Physiol. of Animals in Relation to Environment; Fish and Mammals; Physiol. of Respiration Man; Oxygen Equipment.

HART, John Lawson, Sr. Biologist, Pacific Biol. Station, Nanaimo, B. C., Can. **FISHERIES.**

HART, Nelson Collins, Hd., Dept. of Botany, Univ. of Western Ont., London, Ont., Can. **BOTANY.**

HART, William L., Prof. Math., Univ. of Minn., 2738 W. River Rd., Minneapolis, Minn. **MATHEMATICS.** b. Oct. 12, 1892, Chicago, Ill. s. Morris Philip and Anna (Hoffman) H. Edn.: S.B., Univ. of Chicago, 1913; Ph.D., Math., ibid., 1916. m. Elizabeth Hughes of Lamont, Mo., Mar. 22, 1924 (died 1944); c.: Helen Hughes. m. Helen Johnston of Chicago, Ill., June 22, 1946; c. Marie Evelyn. Exp.: Benjamin Pierce Instr. Math. Harvard Univ., 1916-17; Asst. Prof., Assoc.

Prof., and Prof. of Math., Univ. of Minn., 1919—, Mem.: A.M.S.; M.A.A.; A.A.A.S.; Inst. for Math. Statistics; Natl. Coun. of Tchrs. of Math.; Phi Beta Kappa; Sigma Xi. Author: Coll. Algebra, 1926; Math. of Investment, 1924; Plane and Spherical Trigonometry, 1933; Brief Coll. Algebra, 1934; Introduction to the Mathematics of Bus., 1936; Introduction to Coll. Algebra, 1937; Plane Trigonometry, Solid Geometry, and Spherical Trigonometry (with W. W. Hart), 1942; First Year Coll. Math. (with W. A. Wilson and J. L. Tracy), 1943; Intermediate Algebra for Colls., 1948; Analytic Geometry, 1950. Contrb. to: Trans., A.M.S.; Bull., Amer. Math. Soc.; Annals of Math.; Amer. Jour. of Math.; Proc. Natl. Acad. of Sci.; Math. Tchrs.; Schl. Sci. and Math. Ph.D. Dissertation: Differential Equations and Implicit Functions in Infinitely Many Variables. War Record: 2nd Lt. to Maj., C.A.C., U. S. Army, 1917-19; Academic Dir., Pre-meteorological Trng. Programs, Army Air Forces, Jan.-Apr., 1943, Civilian. Listed in: A.M.S.; Who's Who in Amer.

HARTER, Isaac, Vice-Pres., Manufacturing, Babcock and Wilcox, Barberton, Ohio. METAL PROCESSES.

HARTLEY, Carl, Div. of Forest Pathol., Plant Indus. Sta., Beltsville, Md. FOREST PATHOLOGY.

HARTLEY, Charles P., 3420 Center St., N. W., Washington, D. C. AGRICULTURE.

HARTLEY, Ralph Vinton Lyon, Rsch. Consultant, Bell Telephone Labs., Inc., Murray Hill, N. J. COMMUNICATION.

HARTLINE, Haldan Keffer, Johns Hopkins Univ., Baltimore 18, Md.

HARTLINE, Opal Cameron, 209 S. Campbell St., Ashley, Ill. BIOLOGY.

HARTMAN, Carl G., Assoc. Dir., Ortho Rsch. Foundation, Raritan, N. J. PHYSIOLOGY. b. Reinbeck, Iowa, June 3, 1879. s. Ossian W. and Sophia (Lemvigh) H. Edn.: B.A., Univ. of Tex., 1902; M. A., ibid., 1904; Ph.D., ibid., 1915. m. Eva Rattenmeyer, June 23, 1919. c.: Carl F.; Philip E.; Paul A.; Grace. Exp.: Co. Supt. Public Instrn., Travis Co., Tex., 1904-09; Prof. of Biol., Sam Houston State Tchrs. Coll., Tex., 1909-12; Instr. to Prof. Dept. of Zoology, Univ. of Texas, Austin, Texas, 1912-25; Rsch. Assoc., Carnegie Inst. of Washington, Baltimore, Md., 1925-41; Prof. of Zoology and Physiol., Univ. of Ill., Urbana, Ill., 1941-47; Assoc. Dir., Ortho Rsch. Foundation, Raritan, N. J., 1947—. Hon. Pos.: Vice-Pres., Amer. Anat. Assn.; Chmn., Sec., F., A.A.A.S.; Pres., Amer. Zool. Soc.; Charter Mem., Soc. for Study of Problems in Aging. Mem.: Natl. Acad. of Sci.; Amer. Anat. Assn.; Amer. Zool. Soc.; A.A.A.S.; N. Y. and Chicago Acad. of Sci.; Amer. Physiol. Soc.; Phi Beta Kappa; Sigma Xi. Author: Hist. Co. Supervision of Schls. in Tex.; with L. Bibb, 1908; The Human Body and Its Enemies and First Book of Health, 1912; Anat. of the Rhesus Monkey, 1937; Time of Ovulation in Women, 1936; Possoms, 1952. Contrb. to: Jour. Morphol.; Amer. Jour. Anat.; Amer. Jour. Physiol.; Mammal.; Bull. Univ. of Tex.; Natl. Hist.; Nature Mag.; Embryol. Gen. Int.; Squibb Award, 1946; Lasker Award, 1949. Special Int.: Physiol. of Reprod.; Embryol. of Opossum and Monkey; Menstruation; Contraception; Solitary Wasps.

HARTMAN, Ernest, Asst. Prof. of Parasitology, Chicago Med. Schl., 710 S. Wolcott, Chicago, Ill. PARASITOLOGY.

HARTMAN, Frank Alexander, Prof., Dept. of Physiol., Ohio State Univ., Columbus, Ohio. PHYSIOLOGY.

HARTMAN, George B., Prof. and Hd., Dept. of Forestry, Iowa State Coll., Ames, Iowa. WOOD PRESERVATION. b. Eddyville, Iowa, Nov. 28, 1894. s. George F. and Bertha Wilhelmina (Schaffer) H. Edn.: B.S., Iowa State Coll., 1917; M.S., ibid., 1941. m. Gertrude Moore, June 23, 1920. c.: Mary Jean; George B., Jr.; James Theodore. Exp.: Foreman and Plant Supt., Wood Preserving Div., Long-Bell Lumber Co., 1919-35; Asst. Prof., Assoc. Prof. and Prof., Iowa State Coll., Ames, Iowa, 1935-

47; Asst. General Mgr., Long-Bell Lumber Co., 1947-48; Prof. and Hd., Dept. of Forestry, Iowa State Coll., 1948—. Hon. Pos.: Chmn., Div. of Edn., Soc. of Amer. Foresters. Mem.: Soc. Amer. Foresters; Iowa Acad. Sci.; Sigma Pi; Alpha Zeta; Gamma Sigma Delta; Phi Kappa Phi; Kiwanis. War Record: 20th Engrs., World War I, 1917-19.

HARTNELL, George, retired, former Magnetician, U. S. Coast and Geodetic Survey, Wyoming, N. Y. PHYSICS.

HARTOUGH, Howard Dale, Asst. to Tech. Dir., Hercules Expt. Station, Wilmington, Del. THIOPHENE CHEMISTRY AND SULFUR CHEMISTRY. b. Fairview, Ill., Dec. 15, 1913. s. Edwin H. and Madge (Myers) H. Edn.: A.B., Hope Coll., 1936; M.S., George Washington Univ., 1938. m. Cornelia Tyssse, Sept. 2, 1938. c.: Howard Dale, Jr. and Linda Ann. Exp.: Asst. Instr., George Washington Univ., Washington, D. C., 1936-38; Rsch. Chemist, Socony-Vacuum Lab., N. J., 1938-51; Rsch. Chemist, Hercules Powder Co., Wilmington, Del., 1951-52; Asst.



to Tech. Dir., Hercules Expt. Station, ibid., 1952—. Mem.: Amer. Chem. Soc.; A.A.A.S.; Chem. Soc. of London; Sigma Xi; Alpha Chi Sigma. Author: Thiophene and Its Derivatives, 1952; Compounds Containing Condensed Thiophene Rings, 1953. Contrb. to: Amer. Chem. Soc. Jour.; Analytic Chem.; Ind. Engrng. Chem. Has More than 60 Patents Issued on Thiophene and Its Derivatives, Oil Additives, Petrochem., etc. Special Int.: Thiophene Chem. and Petrochem.

HARTS, William Wright, retired, Brig. Gen., U. S. Army, Madison, Conn. ENGINEERING.

HARTSELL, Stanley Eugene, Prof. of Bacteriol., Dept. of Biol. Sci., Purdue Univ., Lafayette, Ind. BACTERIOLOGY. b. Benton Harbor, Mich., Apr. 20, 1905. s. William Irving and Precia (King) H. Edn.: B.S., Mich. State Coll., 1927; M.S., Yale Univ., 1929; Ph.D., ibid., 1933. m. Katherine Arford, Aug. 17, 1929. c.: James King. Exp.: Instr. in Bacteriol., Battle Creek Coll., Battle Creek, Mich., 1929-30; Asst. Prof. in Bacteriol., ibid., 1930-31; Rsch. Asst. in Bacteriol., Experiment Station, Storrs, Conn., 1933-36; Instr. in Bacteriol., Purdue Univ., Lafayette, Ind., 1936-38;



Asst. Prof., ibid., 1938-43; Assoc. Prof., ibid., 1943-48; Prof., ibid., 1948—. Mem.: A.A.U.P.; Ind. Acad. of Sci.; Inst. of Food Tech.; A.P.H.A.; S.A.B. Author: Lab. Aspects of Gen. Bacteriol., 1951. Contrb. to: Proc. Ind. Acad. of Sci.; Jour. of Bacteriol.; Proc. of Soc. of Exptl. Biol. and Med. Special Int.: Gen., Pathogenic and Food Bacteriol., Immunol.

HARTSHORN, Elden Bennett, Prof. of Chem., Dartmouth Coll., Hanover, N. H. CHEMISTRY. b. Emmetsburg, Iowa, July 30, 1889. s. Elden J. and Eliza P. (Bennett) H. Edn.: B.S., Dartmouth Coll., 1912; Ph.D., Univ. of Minn., 1922. m. Elsie J. Cunningham, Apr. 14, 1914. Exp.: Shevlin Fellow, Univ. of Minn., 1918-20; Instr. in Chem., Dartmouth Coll., 1913-22; Asst. Prof. of Chem., ibid., 1922-29; Prof. of Chem., ibid., 1929—. Mem.: Amer. Chem. Soc.; Beta Theta Pi; Gamma Alpha; Alpha Chi Sigma; Phi Lambda Upsilon. Contrb. to: Jour. Amer. Chem. Soc. War Record: 1st Lt., Rsch. Div., Chem.

Warfare Service, Amer. Univ., D. C., 1918. Special Int.: Organic Nitrogen Compounds.

HARTSHORNE, R., Dept. of Geography, Univ. of Wis., Madison 6, Wis. GEOGRAPHY.

HARTUNG, Walter, Univ. of N. C., Chapel Hill, N. C. ORGANIC CHEMISTRY.

HARTY, John Henry, Hd. Dept. and Prof. of Physics, N. Mex. Schl. of Mines, Socorro, N. Mex. PHYSICS.

HARTZELL, Albert, Hd. Entomologist, Boyce Thompson Inst. Plant Rsch., 257 Odell Ave., Yonkers, N. Y. ENTOMOLOGY.

HARTZELL, Frederick Zeller, Prof. of Entomol., N. Y. Agril. Expt. Station, Cornell Univ., Geneva, N. Y. ENTOMOLOGY.

HARVEY, Edmund Newton, Henry Fairfield Osborn Prof. of Biol., Princeton Univ., Princeton, N. J. BIOLOGY. b. Nov. 25, 1887, Phila., Pa. s. Wm. and Althea Ann (Newton) H. Edn.: B.S. Univ. of Pa., 1909; Ph.D., Columbia Univ., 1911. Hon. Sc.D., Johns Hopkins Univ., 1950. m. Ethel Nicholson Browne of Baltimore, Md., Mar. 12, 1916. c.: Edmund Newton; Richard Bennett. Exp.: Princeton Univ.: Instr., Biol., 1911-15; Asst. Prof., Biol., 1915-19; Prof. Physiol., 1919-33; Henry Fairfield Osborn Prof. of Biol., 1933—; Mass. Inst. of Tech., Visiting Lect. in Biol., 1940-41. Hon. Pos.: Pres., Internatl. Soc. for Cell Biol.; Pres. Amer. Soc. Zoologists; Vice-Pres., Marine Biol. Lab., Woods Hole, Mass.; Trustee, Bermuda Biol. Sta. Mem.: N.A.S.; Amer. Philosophical Soc.; A.A.A.S.; Amer. Acad. Arts and Sciences; A.A.U.P.; etc. Author: The Nature of Animal Light, 1920; Living Light, 1940; Bioluminescence, 1952. Contrb. to: Sci. Jour. Ph.D. Dissertation: Studies on the Permeability of Cells, 1911. War Record: Sci. Investigation under C.M.R., O.S.R.D. Travel: Europe; Japan; China; P. I.; E. Indies; Australia; India; New Zealand; S. Seas; W. Indies; Brazil. Gen. Int.: Reed. Rumford Medal, Amer. Acad. Arts and Sci., 1948; Certificate of Merit from U. S. Army, 1948; Office of Orden Nacional do Cruzeiro do Sul, Brazil; Wetherill Medal of Franklin Inst., 1934. Hobbies: Tennis; Mus.c; Travel. Listed in: Who's Who in Amer.; A.M.S.; Internatl. Who's Who, etc. Special Int.: Bioluminescence, Cell Surface Tension, Brain Waves, Ultrasonics.

HARVEY, Edward Maris, Sr. Physiologist, Plant Indus. Field Station, U. S. D. A., 305 W. Alvarado St. Pomona, Calif. PLANT PHYSIOLOGY.

HARVEY, Ellery H., Prof. of Food Engrng., Ill. Inst. of Tech., 961 Ridgewood Dr., Highland Park, Ill. CHEMISTRY. b. Lewisburg, Pa., Jan. 13, 1895. s. E. Hale and Mary (Conrad) H. Edn.: Ph.C., Med.co-Chirurgical Coll., 1916; Ph.M., Philadelphia Coll. of Pharm. and Sci., 1921; A.B., Bucknell Univ., 1923; A.M., ibid., 1924; Ch.E., ibid., 1929; Ph.D., Univ. of Wis., 1926; LL.B., John Marshall Law Schl., 1932. m. Ivy Weaver, June 4, 1917. c.: Ellery, III; Glenn. Exp.: Dir. of Labs., Montgomery Ward and Co., Chicago, Ill., 1932-41; Chf. Chemist, Wilson and Co., Chicago, Ill., 1941-44; Dir. of Rsch., Anheuser-Busch, St. Louis, Mo., 1944-47; Dir. of Rsch., Sun Chemical Corp., N. Y., N. Y., 1947-50; Prof. of Food Engrng., Ill. Inst. of Tech., 1950—. Hon. Pos.: Pres., Inst. of Food Technologists; Founder and Pres., Assn. of Rsch. Dirs.; Chmn., Agri. and Food Div., Amer. Chem. Soc. Mem.: Amer. Inst. of Chemical Engrs.; Inst. of Food Technologists; Delta Theta Phi; Sigma Xi; Shriner. Co-author: Elements of Food Engrng., 1952. Contrb. to: Jour. Amer. Chem. Soc.; Jour. Amer. Pharm. Assn.; Amer.



Jour. Pharm.; Indus. and Engrng. Chem.; etc. War Record: 1st Lt., CWS-Res, D. W. I.; Gas Rec. Officer, O. C. D., Presidential Citation for Scientific Contributions to winning of W. W. II. Special Int.: Adhes.ves; Chem., Processing and Nutrition of Foods; Testing of Merchandise; Rsch. Admin.

HARVEY, Ethel Browne, Independent Investigator Biol., Princeton Univ., 48 Cleveland Lane, Princeton, N. J. EXPERIMENTAL CELL RESEARCH. b. Dec. 14, 1885, Baltimore, Md. d. Dr. Bennet Bernard and Jennie R. (Nicholson) Browne. Edn.: Byrn Mawr Schl., Baltimore, 1902; A.B., Goucher Coll., 1906; M.A., Columbia Univ., 1907; Ph.D., ibid., 1913. m. E. Newton Harvey, Mar. 12, 1916. c.: Edmund N., Jr., Richard Bennet. Exp.: Instr. Sci., Bennet Schl., N. Y., 1908-11; Asst. Biol., Princeton Univ., 1912-13; Instr., Dana Hall, Mass. 1913-14; Asst. H.stol.



Med. Coll., Cornell Univ., 1915-16; Biol. Wash Sq. Coll., N. Y. Univ., 1928-31; Investigator Biol. Dept., Princeton, 1931—; Investigator Biol. Lab., Woods Hole, and Naples Zool. Sta.; Trustee Marine Biol. Lab., 1950-54. Mem.: Phi Beta Kappa; Sigma Xi; A.A.A.S.; Soc. Nat.; Soc. Zool.; Genetic Assn.; Soc. Gen. Physiol.; Soc. Devel. and Growth; N. Y. Acad. Sci.; Internatl. Soc. Cell Biol.; Inst. Internatl. Embryol., Utrecht; Corp. Bermuda Lab.; Biol. Photo. Assn. Author: 80 papers in Current Biol. Jour. Contrb. to: Article on Fertilization to the last Encyc. Britannica. Ph.D. Dissertation: Germ Cells of Notonecta. Travel: Europe; Mexico; Egypt. Hobbies: Photography; Travel. Listed in: A.M.S.; Who's Who in the East. Special Int.: Development of egg fractions; centrifuging.

HARVEY, George Graham, Assoc. Prof. of Physics, Mass. Inst. of Tech., Cambridge, Mass. ELECTROMAGNETIC THEORY.

HARVEY, Paul Henry, Agronomist, N. C. State Coll., Raleigh, N. C. CORN BREEDING, GENETICS.

HARVEY, Samuel Clark, Prof. of Surgery, Yale Univ. Schl. of Med. and Surgeon-in-Chf., New Haven Hosp., New Haven, Conn. SURGERY.

HARWOOD, Edward Crosby, Dir. and Trustee, Amer. Inst. for Econ. Rsch., Great Barrington, Mass. ECONOMICS. b. Cliftondale, Mass., Oct. 28, 1900. s. Edward T. and Mary Howe (Pinney) H. Edn.: B.S., U. S. Military Acad., 1920; C.E., Rensselaer Poly Inst., 1922; M.C.E., 1930; M.B.A., 1931. m. Harriet Haynes, Sept. 3, 1921. c.: Marjorie H.; Edward L.; Richard F. 2nd m. Helen L. Fowle, Oct. 29, 1938. c.: William F.; Eve C.; Frederick C.; Katherine S. Exp.: Assoc. Prof. of Military Sci., Mass. Inst. of Tech., 1930-34; Exec. U. S. District Engr., Boston, in Chg. of Cape Cod Canal Improvement Program, 1934-36; In Chg. Flood Control Surveys of New England, 1936; Assoc. Prof. of Military Sci., Mass. Inst. of Tech., 1940-42; Dir. and Trustee, Amer. Inst. for Econ. Rsch., Great Barrington, Mass., 1934—. Hon. Pos.: Mem. of Economists Natl. Com. on Monetary Policy. Mem.: A.A.A.S.; Sigma Xi. Author: Cause and Control of the Business Cycle, 1932; Current Economic Delusions, 1938; What Will Inflation and Devaluation Mean to You?, 1934; Life Insurance and Annuities from the Buyer's Point of View, 1934. War Record: Commissioned 2nd Lt., U. S. Army, 1920, advanced through ranks to Colonel, 1943, retired 1937; Returned to Active Duty, U. S. Army, 1940; Exec. Engr. Service, E. T. O., 1942-43; Chf. of Mobilization Div., War Dept., 1943; Corps of Engrs., XI Corps, 1943-44; Chf. of Staff, Army Service Command, S. W. Pacific Theater, 1944; Retired as Col., 1946; Decorated Legion of Merit, Bronze Star Medal. Special Int.: Economics—Money and Credit.

HARWOOD, Margaret, Dir., Maria Mitchell Observatory, 3 Vestal St., Nantucket, Mass. **PHOTOMETRY**.

HARWOOD, Paul Duane, Dir. of Rsch., Dr. Hess and Clark, 337 W. Walnut St., Ashland, Ohio. **PARASITOLOGY**.

HARWOOD, Robert D., Prof. of Zool., San Diego State Coll., San Diego, Calif. **ENTOMOLOGY**.

HASEL, Alexander Austin, Silviculturist Forest Survey, Calif. Region, Calif. Forest and Range Expt. Station, 2574 Buena Vista Way, Berkeley, Calif. **FORESTRY**.

HASKELL, Earl Stanley, Sr. Economist, Commodity Exchange Admin., U. S. D. A., 3622 T St., N. W., Washington, D. C. **AGRICULTURE**.

HASKELL, Norman A., Geophysicist, U. S. Smelting Refining and Mining Co., 1126 Boylston St., Boston, Mass. **GEOPHYSICS**.

HASKELL, Sidney Burritt, retired, 12 Orsini Dr., Larchmont, N. Y. **AGRONOMY**.

HASLER, Maurice Fred, Dir. of Rsch., Applied Rsch. Labs., 4336 San Fernando Rd., Glendale, Calif. **PHYSICS**.

HASS, H. B., Sugar Rsch. Foundation, Philadelphia, Pa. **CHEMISTRY**.

HASSLER, Jasper Ole, Prof. of Math. and Astron., Univ. of Okla., Norman, Okla. **MATHEMATICS**.

HASSLER, Roy Diehm, Dean and Prof. of Chem., Moravian Coll., Bethlehem, Pa. **CHEMISTRY**.

HASTINGS, Albert Baird, Harvard Univ., Med. Schl., Boston 15, Mass.

HASTINGS, Edwin George, retired, Box 456, Rt. 3, Orlando, Fla. **BACTERIOLOGY**.

HASTINGS, George Tracy, retired, 842 19th St., Santa Monica, Calif. **BOTANY**.

HASTINGS, Russell Byron, Prof. and Hd., Dept. of Physics, Macalester Coll., St. Paul, Minn. **PHYSICS**, **ELECTRONICS**.

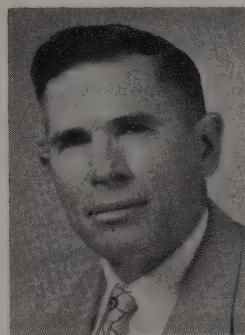
HATCH, Melville Harrison, Prof. of Zool., Univ. of Wash., Seattle 5, Wash. **ZOOLOGY**. b. Detroit, Mich., Nov. 25, 1898. s. Charles Harrison and Katy Helen (Gower) H. Edn.: A.B., Univ. of Mich., 1919; A.M., *ibid.*, 1921; Ph.D., *ibid.*, 1925. m. Estelle Rebecca Jacka, July 31, 1925. c.: Paul Harrison and Suzanne Hatch. Exp.: Grad. Asst. of Zool., Univ. of Mich., Ann Arbor, Mich., 1919-22, 1923-24; Instr., *ibid.*, 1925-26; Instr. of Zool., Syracuse Univ., 1922-23; Assoc. Prof. of Biol., James Millikin Univ., 1924-25; Instr. of Animal Biol., Univ. of Minn., St. Paul, Minn., 1926-27; Asst. Prof. of Zool., Univ. of Wash., Seattle, Wash., 1927-34; Assoc. Prof. to Prof., and Act. Exce. Officer of Dept., *ibid.*, 1934—. Mem.: A.A.A.S.; Entomol. Soc. of Amer.; Hist. Sci. Soc.; Pacific Coast Entomol. Soc. of Wash.; Entomol. Soc. of B. C.; Calif. Acad. of Sci.; Phi Sigma; Sigma Xi; Gamma Alpha. Author: A Century of Entomol. in the Pacific Northwest, 1949. Contrb. to: Various Entomol. Jour. Special Int.: Classification of the Coleoptera and Isopoda, especially of the Pacific Northwest.

HATCH, Winslow Roper, Prof. and Hd., Dept. of Botany, Wash. State Coll., Pullman, Wash. **BOTANY**.

HATHAWAY, Edward Sturtevant, Prof. of Zool. and Dir., Div. of Biol. Sci., Tulane Univ., New Orleans, La. **ECOLOGY**.

HATHAWAY, Starke, Univ. of Minn., Minneapolis, Minn. **PSYCHOLOGY**.

HATHAWAY, Claude M., Pres. and Chf. Engr., Hathaway Instrument Co., 1315 S. Clarkson St., Denver, Colo. **PHYSICAL MEASUREMENTS**.

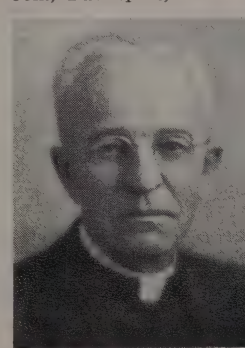


b. Paxton, Ill., Dec. 20, 1902. s. Frank E. and Eva Lillian (Macy) H. Edn.: B.S., Univ. of Colo., 1927; M.S., *ibid.*, 1928. m. Hazel Virginia Wiseman, June 30, 1931. c.: Robert Eugene; Louis Wiseman; Sylvia Wray. Exp.: Instr., Elec. Engrng., Univ. of Colo., 1927-29; Project Engr., Gen. Electric Co., 1929-39; Pres. and Chf. Engr., Consulting Engr., Hathaway Instrument Co., Denver, Colo., 1939—. Mem.: A.I.E.E.; A.S.T.M.; I.R.E.; Tau Beta Pi; Sigma Xi; Lions. Contrb. to: A.I.E.E.; Natl. Electronics Conf.; A.S.M.E. Special Int.: Electronics; Phys. Measurements.

HATKE, Sister Mary Agnes, O. S. F., Hd. Div. of Natural Sci., St. Francis Coll., 2701 Spring St., Ft. Wayne 8, Ind. **MATHEMATICS**; **PHYSICS**. b. July 17, 1902, Lafayette, Ind. d. Frank and Mary (Ruf) H. Edn.: B.S., Purdue, 1924; M.S., Edn., Ind. State Tchrs. Coll., 1933; Ph.D., Purdue, 1947. Exp.: Tehr., 1924—; H.S., 1924-43; St. Francis Coll., Ft. Wayne, Ind. Hd. Math. Dept., 1947-51; Dean of Women, *ibid.*, 1947-50; Coll. of St. Joseph-on-the-Rio Grande, N. Mex., 1951-52; Hd. Div. of Natural Sci., St. Francis Coll., Ft. Wayne, Ind., 1952—. Mem.: Amer. Assn. of Physics Tchrs.; A.M.S.; I.M.S.; Chicago Cath. Schl. Sci. Tchrs.; Kappa Delta Pi; Theta Chi Gamma; Sigma Pi Sigma. Ph.D. Dissertation: A Certain Cumulative Probability Function. Travel: N. Amer. Listed in: A.M.S.

HATT, Robert Torrens, Dir., Cranbrook Inst. Sci., Bloomfield Hills, Mich. **MAMMALOLOGY**.

HAUBER, Ulrich Albert, Prof. Biol., St. Ambrose Coll., Davenport, Iowa. **LIMONOLOGY—CHIRONOMIDS OF IOWA**.



b. June 28, 1885, Germany. s. Joseph and Cecilia (Knauer) H. Edn.: A.B., St. Ambrose Coll., 1905; Ordained, St. Francis, Wis., 1908; M.A., Cath. Univ., 1918; Ph.D., Ia. Univ., 1924. Exp.: Prof. of Biol., St. Ambrose Coll., 1908—; Prof. of Biol., Extension of Cath. Univ., 1918-24; Pres., St. Ambrose Coll., 1926-30. Mem.: Fellow, Ia. Acad. of Sci.; Amer. Soc. of Zool.; Amer. Botanical Soc.; Amer. Genetic Assn.; Sigma Xi; Contemporary Club. Author: Coll. Biol., 1937; Creation and Evolution, 1925; Human Heredity, 1930; Essentials of Zoology, 1949. Contrb. to: Cath. Ed. Rev.; Eccl. Rev.; Thought; New Scholasticism. Ph.D. Dissertation: Heredity in Parasitic Wasp Habrobracon. Travel: Europe. Gen. Int.: Monsignorship, 1937. Hobbies: Bot.; Non-biting Midges. Listed in: Who's Who in Amer.; A.M.S.

HAUCK, Hazel Marie, Prof. of Home Econ., N. Y. State Coll. of Home Econ., Cornell Univ., Ithaca, N. Y. **NUTRITION**.

HAUGE, Sigfred Melanchton, Assoc. Biochem., Dept. of Agri. Chem., Purdue Univ. Agri. Expt. Station, 220 Sheetz St., West Lafayette, Ind. **BIOCHEMISTRY**.

HAUN, Robert Ray, Univ. of Kansas City, Kansas City, Mo. **EDUCATION**, **CHEMISTRY**.

HAUPT, Arthur Wing, Prof. of Botany, Univ. of Calif., Los Angeles, Calif. **PLANT MORPHOLOGY**.

HAUPT, Curtis Raymond, Hd., Combat Inf. Branch, Systems Development Div., U. S. Navy Electronics Lab., San Diego 52, Calif. PHYSICS. b. Williamsport, Ind., Oct. 6, 1903. s. Elmer F. and Magnolia (Kyle) H. Edn.: A.B., Colo. Coll., 1926; M.A., Univ. of Calif., 1928; Ph.D., ibid., 1930. m. Helen Dagmar Nelson, Aug. 12, 1933. c.: Marilyn A. and Bruce N. Exp.: Lab. Asst. in Physics, Colo. Coll., 1921-22; Lab. Instr., ibid., 1922-26; Rsch. Assoc., Carnegie Inst., Washington, D. C., 1925-27; Tehng. Fellow in Physics, Univ. of Calif., 1926-30; Instr. in Physics, Pomona



Coll., Pomona, Calif., 1930-33; Asst. Prof. of Physics, ibid., 1933-42; Staff Physicist, Radiation Lab., Mass. Inst. of Tech., Cambridge, Mass., 1942-46; Hd., Team Trainers Sect. of Trng. Equipment Development Branch, Navy Electronics Lab., San Diego, Calif., 1946-48; Hd., Radio-Radar Equipment Development Branch, ibid., 1948-50; Hd., Combat Inf. Branch, ibid., 1950—. Mem.: Sigma Xi; Delta Epsilon; Gamma Alpha. Contrb. to: Phys. Rev.; Internatl. Photographer. Special Int.: Ionization Potentials; Photosynthesis; Linear Accelerators; Microwave Equipment and Devices; Motion Picture Three Dimensional Photography.

HAURY, Emil Walter, Hd., Dept. of Anthropol., Univ. of Ariz., P. O. Box 4366, Univ. Sta., Tucson, Ariz. ANTHROPOLOGY.

HAURY, Victor Givens, Private Practice Internal Med., Haysville, Kans. PHARMACY, CHEMISTRY.

HAUSCHKA, Theodore Spaeth, Sr. Mem. and Hd., Dept. of Exptl. Zool., Inst. for Cancer Rsch., Fox Chase, Philadelphia 11, Pa. CYTOGENETICS AND IMMUNOGENETICS OF CANCER; MOUSE GENETICS; PHYSIOLOGY OF GROWTH. b. Reichenau, Austria, July 31, 1908. s. Hugo and Carola (Spaeth) H. Edn.: A.B., Princeton Univ., 1930; M.S., Univ. of Pa., 1941; Ph.D., ibid., 1943. m. Elsa Voorhees, Mar. 29, 1938. c.: Stephen Denison; Peter Voorhees; Margaret Spaeth. Exp.: Tehr. of Biol., Chestnut Hill Acad., Philadelphia, Pa., 1935-39; Harrison



Fellow in Zool., Univ. of Pa., 1940-42; Instr. in Zool., ibid., 1942-43; Army Specialist Trng. Program, 1943-44; Rsch. Biologist, Lankenau Hosp. Rsch. Inst., 1943—; Assoc. Dir. of the Institutes' Marine Exptl. Station, Truro, Mass., 1945-47; Sr. Mem., Inst. for Cancer Rsch. and Lankenau Hosp. Rsch. Inst., 1949—. Mem.: Amer. Soc. Zoologists; Amer. Genetic Assn.; Amer. Soc. Parasitologists; Soc. for the Study of Growth and Development; Amer. Assn. for Cancer Rsch.; A.A.A.S.; Sigma Xi. Contrb. to: Sci.; Acta; Jour. Morphology; Jour. Exptl. Cancer Inst.; Acta; Jour. Morphology; Jour. Exptl. Zology; Anatomical Record; Jour. Heredity; Genetics; Hereditas; Growth; Amer. Jour. Tropical Med.; Jour. Parasitology; N. Y. Acad. Sci. Special Int.: Cytogenetics of Cancer; Genetics of Histo-Compatibility; Tumor Immunity; Mouse Genetics in Relation to Cancer Problems; Population Studies on Malignant Cells; Maternal Age Effects on Characteristics of Offspring.

HAUPT, George Webster, Prof. Sci., State Tehrs. Coll., Glasboro, N. J. BIOCHEMISTRY. b. June 1900, Subury, Pa. s. Wilson and Maria (Shindel) H. m. Grace Good of Watontown, Pa., 1925. c.:

Barbara Wilson, Hans Shindel. Edn.: B.S., 1922, Bucknell Univ.; M.A., 1927, Columbia Univ.; Ph. D., 1935, ibid. Exp.: Tehr. of Sci., Hgh Schl., Pa. and N. J., 1922-29; Instr. Sci., Horace Mann Schl., Tehrs. Coll., Columbia Univ., 1929-32; Instr., Tehng. of Sci. Tehrs. Coll., Columbia Univ., 1929-32; Prof. Sci., Tehrs. Coll., Westfield, Mass., 1932-36; Prof. of Sci., State Tehrs. Coll., Glasboro, N. J., 1936—; Tehr. Sci., Summer Sess. of Tehr. Coll., Columbia Univ., Bucknell Univ., Syracuse Univ., Northwestern Univ., John Hopkins Univ., N. Y. State Tehrs. Coll. at Buffalo, Duke Univ. and Univ. of Vt.; Lectr. in Chem., W. J. Hospital, Camden, N. J. Mem.: Pres., Natl. Coun. on Elem. Sci.; Fellow, Amer. Assn. for the Adv. of Sci.; Consult., U. S. Office of Edn.; Consult., Comm. for Sci. Consumer Edn.; Natl. Assn. of Second. Schl. Prins.; Chmn., Comm. on Edn. of Tehrs.; Truman Conf. on Safety Edn. Mem.: Natl. Assn. for Rsch. in Sci. Tehng.; Assn. for Childhood Edn.; Comm. for Evaluation of Edn. Publications. Natl. Fire Prevention Assn.; Comm. on Schl. and Community Coord.; Nat. Elem. Schl. Safety Coun.; Comm. on Home Fire Safety; Safety Rsch. Inst.; U. S. Office of Edn.; Mass. State Dir. of Sci. Instr. for N.E.A.; Kappa Delta Pi; Phi Kappa Psi; Amer. Legion. Ph.D. Dissertation: An Experimental Application of a Philosophy of Sci. Tehng. Contrb. to: Sci. Edn.; Schl. Sci. and Mathematics; Sci. Classroom. Co-Author: Bull. 1946, No. 8, Fed. Security Agency; U. S. Office of Edn., "Curriculum Guide To Fire Safety"; "Aviation Edn. for Tehrs.," D.v. of Higher Edn., N. J. Special Int.: Sci. Edn.—Curriculum and Learning process.

HAUSER, Charles Roy, Assoc. Prof. of Chem., Duke Univ., Durham, N. C. ORGANIC CHEMISTRY.

HAUSER, Ernst A., Prof., Colloid Chem., Mass. Inst. of Tech., Visiting Prof., Colloid Chem., Worcester Polytech. Inst., 15 Robinson St., Cambridge 38, Mass. COLLOID SCIENCE. b. Vienna (Austria), July 20, 1896. s. Alfred Charles and Alice (Sobotka) H. Edn.: Akademisches Gymnasium, Vienna, Baccalaureate, 1914; Ph.D., Univ. of Vienna, 1921. Hon. Degrees: Fellow, Inst. Rubber Ind. (London); Fellow, A.A.A.S.; Sc.D., h.c., Worcester Polytechnic Inst., 1952. m. Vera M. v. Fischer of Vienna, Austria, Apr. 8, 1922. d. Rudolf and Margaretha v. Fischer.



c.: Ernst Felix; Wolf Dieter; George Werner. Exp.: Hd. of Res. Dept., Rohstoff Trocknungs Ges. Frankfurt-o-M., Germany, 1922-25; Chief Chem., Colloid Chem. Lab., Metallges. A. G., Frankfurt, Germany, 1925-32; Chief Chem., Semperit, Austro-Amer. Rubber Works, Ltd., Vienna, 1933-35; Appointed Nonresident Assoc. Prof., Chem. Engrng., M. I. T., 1928; Assoc. Prof. (Res.), Chem. Engrng., M. I. T., 1935-48; Prof., Colloid Chem., 1948; Appointed Visiting Prof., Colloid Chem., W. P. I., 1949—. Hon. Pos.: Sec. Chmn., German Soc. Rubber Chem., 1927-33; Sec.-Treas., Colloid Div., A.C.S., 1938; Vice-Chmn., 1939; Chmn., 1940. Mem.: Amer. Chem. Soc.; Inst. of Rubber Indus.; Amer. Inst. of Chem. Engrng.; Amer. Soc. for Adv. Sci.; Sigma Xi; The Chem. Club of N. Y. Author: Latex (Dresden, 1927; N. Y., 1930); The Colloid Chem. of the Rubber Industry (Oxford Univ. Press, London, 1928); Handbuch der Gesamten Kautschuktechnologie (Union Deutsche Verlagsges., Berlin, 1935); Colloidal Phenomena (McGraw-Hill Book Co., N. Y., 1939); Expt. in Colloid Chem., 1940. Contrb. to: Ind. Engrng. Chem.; y. Physic. and Coll. Chem.; y. Amer. Chem. Soc. Ph.D. Dissertation: Zur Kenntnis der Umkehrbaren Reaktion: $3\text{HNO}_2 = \text{HNO}_3 + 2\text{NO} + \text{H}_2\text{O}$. War Record: Officer in the Austrian Army, 1914-18. Travel: Extensive Travels to the Far East, Japan, China. Achievements of Gen. Int.: Inventor of "Revertex" Process for Latex Concentration; Discoverer of "Alsilum"; New Ultra-microscopic Technique for the Study of Lyogels; New Photomicrographic Technique Using Land

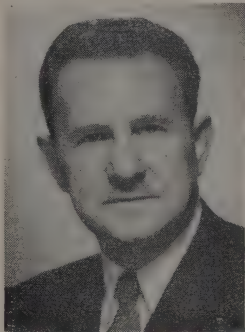
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HAUSER, Phillip Morris, 5729 S. Kimbark Ave., Chicago, Ill. SOCIAL AND ECONOMIC STATISTICS.

HAUSMAN, Leon Augustus, Prof. of Zool., N. J. Coll. for Women, Rutgers Univ., 259 Harrison Ave., New Brunswick, N. J. ORNITHOLOGY, TRICHOLOGY.

HAUSMANN, Erich, Dean Coll., Prof. and Hd., Dept. of Physics, Poly. Inst. of Brooklyn, Brooklyn, N. Y. ENGINEERING, PHYSICS.

HAUSNER, Henry H., Mgr., Atomic Energy Div., Sylvania Elec. Products, Inc., Adj. Prof., Poly. Inst. of Brooklyn, Bay-



side, L. I., N. Y. SOLID STATE PHYSICS, POWDER METALLURGY, CERAMICS. b. Vienna, Austria, June 1, 1901. s. Hans and Helen (Tritsch) H. Edn.: E.E., Tech. Univ., Vienna, 1924; D.Eng., ibid., 1938. m. Elizabeth Wallner, 1927. Exp.: Project Engr., Elin A. G., Vienna, Austria, 1925-38; Dir. of Rsch., ibid., 1938-40; Rsch. Engr., Amer. Electrometal Corp., Yonkers, N. Y., 1940-41; Chf. Elec. Engr., Nichols Engrng. and

Rsch. Corp., N. Y. C., 1942-43; Chf. Rsch. Engr., Gen. Ceramics and Steatite Corp., Keasbey, N. J., 1943-45; Adj. Prof. and Rsch. Assoc., N. Y. Univ., N. Y. C., 1946-48; Adj. Prof., Poly. Inst. of Brooklyn, N. Y., 1952; Mgr., Atomic Energy Div., Sylvania Elec. Products, Inc., Bayside, L. I., N. Y., 1948—. Hon. Pos.: Treas., Soc. for Applied Spectroscopy; Chmn., Publication Comm., Powder Metallurgy Div., A.I.M.E., 1952—. Mem.: A.I.M.E.; A.S.M.; Fellow, N. Y. Acad. of Sci.; Swedish Powder Metallurgy Assn.; German Soc. for Metals; Sigma Xi. Author: Powder Metallurgy, 1947; Powder Metallurgy, with J. Wulff, others, 1943; The Physics of Powder Metallurgy, with W. E. Kingston and Others, 1951; Human Engrng., with L. E. Abt and Others, 1951. Contbr. to: Metal Progress; Trans., A.I.M.E.; Jour. of Amer. Ceramic Soc.; Bull., ibid.; Powder Metallurgy Bull.; Materials and Methods; Prod. Engrng.; Amer. Machinist; Ceramic Age; Ceramic Indus.; Electronics; Nucleonics; Periodicals in Britain, Sweden, Germany, Austria. Special Int.: Rsch. in Powder Metallurgy, Ceramics and Solid State Physics.

HAUSRATH, Alfred Hartmann, Jr., Project Chmn., Operations Rsch. Office, The Johns Hopkins Univ., 6410 Connecticut Ave., Chevy Chase, Md. OPERATIONS RESEARCH; DIRECTOR OF INTERDISCIPLINE RESEARCH; RESEARCH ON HUMAN FACTORS IN MAN-TO-MAN AND MAN-TO-MACHINE SYSTEMS. b. N. Y., N. Y., May 1, 1901. s. Alfred H. and Anna (Bleyer) H. Edn.: M.S., Iowa State Coll., 1929; Doctorate Study, State Univ. of Iowa, 1933-35. m. Mary Glassford, Mar. 23. c.: Alfred H.; Dean Harvey; Don Craig. Exp.: Tchr. of Vocational Agri. and H. S. Prin., Iowa, 1923-28; Dept. of Vocational Edn., Iowa State Coll., Ames, Iowa, 1928-42; Dir., WOI Radio Broadcasts to Schools, 1930-42; Personnel Officer, Office of Emergency Mgt., Exec. Office of the Pres., Washington, D. C., 1942-43; Curriculum Consultant, Office of Civilian Defense, Washington, D. C., 1943; Trng. Officer, Lend-Lease Admin., Federal Bureau of Supply, U. S. Treasury Dept., Washington, D. C., 1943-44; Chf. Trng. Advisor to Federal Depts. and Agencies, U. S. Civil Service Comm., Washington, D. C., 1944-45; Dir., Scientific Personnel Div., Navy Dept., Office of Naval Rsch., Washington, D. C., 1945-49; Lectr. in Trng. and Personnel Admin., Schl. of Social Sciences and Public Admin., Amer. Univ., Washington, D. C., 1946-49; Staff Consultant to Dir., Foreign Military Assistance Program, Secy. of State, State Dept., Washington, D. C., 1949; Dir.

Cooperative Test Div., Ednl. Testing Serv., Princeton, N. J., 1949-51; Project Chmn., Human Resources Rsch., Operations Rsch. Office, Johns Hopkins Univ., Chevy Chase, Md., 1951—. Advisory Com. on Scientific Personnel, U. S. Civil Service Comm., 1946-49; Human Resources Com., Rsch. and Development Bd., Natl. Military Establishment, 1947-48; Advisor, President's Scientific Rsch. Bd., 1947; Supvr., Tchng. Materials Staff, U. S. Armed Forces Inst., Information and Edn. Div., War Dept., Ind. Univ., Bloomington, Ind., 1942; Staff Mem., President's Advisory Com. on Edn., 1937. Mem.: Operations Rsch. Soc. of Amer.; Amer. Personnel and Guidance Assn.; Natl. Voc. Guidance Assn.; A.A.A.S.; Natl. Sci. Tchrs. Assn.; N.E.A.; Amer. Voc. Assn.; Natl. Assn. of Supvrs. of Student Tchng.; Phi Delta Kappa; Gamma Sigma Delta. Author: Forage Crops in Iowa, 1922; Green Manures and Cover Crops, 1922; Pasture Mgt., 1922; The Instincts of Boys, 1924; Consumer Sci., 1939; Let's Investigate, 1942; Fuller Utilization of Present Resources of Scientific Personnel, 1948; Enjoying Sci., 1949. War Record: War Dept., Navy Dept., State Dept., and Exec. Office of the Pres. between 1942 and 1949; Dept. of the Army, 1951—. Special Int.: Edn., Particularly Vocational and Professional; Trng., Personnel; Agril. Sciences; Soc. Sciences and Operations Rsch.

HAUSSMAN, Alfred Carl, Prendergast Prof. of Physics and Astron., Hobart Coll., Geneva, N. Y. PHYSICS.

HAVAS, P., Lehigh Univ., Bethlehem, Pa. PHYSICS.

HAVEMEYER, Loomis, Assoc. Prof., Timothy Dwight Coll., Yale Univ., 105 Grove St., New Haven, Conn. SOCIOLOGY.

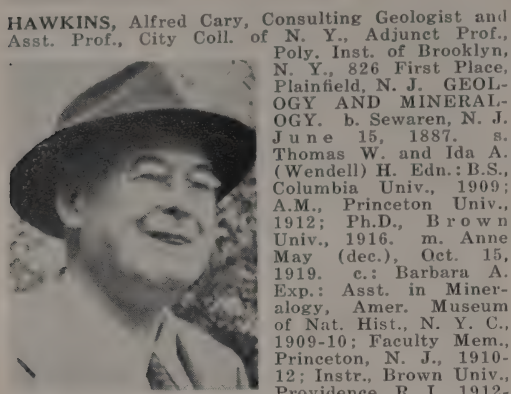
HAVEN, Seth Edson, Assoc. Prof. Psychol., Dept. of Psychol., Wayne Univ., Detroit 1, Mich. PSYCHOLOGY. b. Mar. 5, 1905, Austinville, Pa. s. Austin S. and Myrtle (Shaylor) H. Edn.: Diploma, State Teachers Coll., Mansfield, Pa., 1926; B.S. in Edn., Ohio Univ., 1927; M.A., Ohio State Univ., Columbus, Ohio, 1928; Scholarship, Columbia Univ., N. Y. City, 1929; Ph.D., Ohio State Univ., Columbus, Ohio, 1933. m. Iona M. Jenks of Chagrin Falls, Ohio, June 12, 1948. Exp.: Asst. in Psychol., Ohio Univ., Athens, Ohio, 1927-28; Instr. Psychol., Univ. Ky., Lexington, Ky., 1928-29; Asst. Psychol., Ohio State Univ., 1929-30; Instr. Psychol., ibid., 1930-33; Asst. Prof. Psychol., Denison Univ., Granville, Ohio, 1933-34; Asst. Prof. Psychol., Ohio Wesleyan Univ., Delaware, Ohio, 1934-35; Asst. Prof. Psychol., Ohio State Univ., Columbus, Ohio, 1935-36; Instr. Psychol., Wayne Univ., Detroit, Mich., 1936-38; Asst. Prof. Psychol., ibid., 1938-43; Assoc. Prof. Psychol., ibid., 1943—. Mem.: A.A.A.S. (Fellow); Amer. Statistical Assn.; Amer. Psychol. Assn. (Fellow); Mid-Western Psychol. Assn.; Sou. Soc. for Philosophy and Psychol.; Soc. for Advancement of Edn.; Michigan Acad. of Sci., Arts and Letters; A.A.U.P.; Sigma Xi; Phi Delta Kappa; Kappa Delta Pi; Alpha Psi Delta; F. and A. M.; Square and Compass. Author: Psychology and the Motorist (with H. A. Toops), 1938. Contbr. to: Jour. of Applied Psychol.; Jour. of Ednl. Psychol.; Jour. of Juvenile Rsch. Ph.D. Dissertation: Some Psychological Aspects of Hotel Personnel. Travel: U. S.; Canada. Hobbies: Farming; Collection of Motivation Specifics. Listed in: A.M.S.; Who's Who in Mid-west; Dir. of Amer. Scholars. Special Int.: Psychol. Rsch. in Hotel Industry, Pub. Schls., Highway Traffic Behavior; Personnel Rsch. in Industry.

HAVILAND, Edward Kenneth, Assoc. Prof. of Math., Johns Hopkins Univ., Baltimore, Md. MATHEMATICS, CHEMISTRY.

HAWK, Philip Bovier, Pres., Food Rsch. Labs., Inc., 48-14 33rd St., Long Island City, N. Y. NUTRITION.

HAWK, Sara Stinchfield, SPEECH AND HEARING.

HAWKES, John Ballard, Prof. of Physics, Stevens Inst. of Tech., Hoboken, N. J. PHYSICAL OPTICS.



16; Oil Geologist, 1916-18; Crystallographer, E. I. du Pont de Nemours and Co., 1919-21; Mineral Dept., Ward's Natural Sci. Est., Rochester, N. Y., 1921-23; Instr. of Geol., Rochester Univ., Rochester, N. Y., 1923-26; Acting Assoc. Prof., Rutgers Univ., 1927-28; Assoc. Prof., *ibid.*, 1928-33; Consulting Geologist., 1933-34; Asst. Soil Technol. and Asst. Soil Scientist, Soil Cons. Service, U.S.D.A., 1935-43; Microscopist, Lucius Pitkin, Inc., N. Y., 1943-46; Consulting Geol., 1946—. Mem.: A.A.A.S.; Mineral Soc. of Amer.; Meteorol. Soc. of Amer.; Geophys. Union; Speleol. Soc.; N. Y. Mineral Club; Philadelphia Mineral Soc.; N. Y. Acad. of Sci.; Geol. Soc. of Amer.; Sigma Xi; Phi Lambda Upsilon. Author: *The Book of Minerals*, 1935; *Determinative Mineral.*, with J. V. Lewis, 1931. Contrb. to: Over 72 Published Papers. Special Int.: Structural Geol. of the Triassic Rocks of N. J.

HAWKINS, George Andrew, Prof. Thermodynamics, Westinghouse Rsch. Prof. of Heat Transfer, Assoc. Dir. Engrng. Exp. Sta., Purdue Univ., W. Lafayette, Ind. HEAT TRANSMISSION AND THERMODYNAMICS. b. Dec. 11, 1907, Denver, Colo. s. George H. and Pauline K. Erbschauser (Mrs. C. R. Stratton). Edn.: B.S., M.E., Purdue Univ., 1930; M.S., M.E., *ibid.*, 1932; Ph.D., *ibid.*, 1935. m. Alma M. Williams of Kokomo, Ind., Aug. 15, 1931. d. Mr. and Mrs. D. A. Williams. c.: James Edward. Exp.: Purdue Univ.; Asst. Applied Mech., 1930-32; Instr. Applied Mech., 1932-36; Rsch. Asst., Engr. Exp. Sta., 1934-36; Asst. Prof., Mech. Engrng., 1936-38; Rsch. Assoc., Engrng. Exp. Sta., 1936-50; Assoc. Dir., 1950—; Assoc. Prof. of Mech. Engrng., 1938-42; Prof. Mech. Engrng., 1942-43; Prof., Thermodynamics, 1943—; Westinghouse Rsch. Prof. of Heat Transfer, 1944—; Asst. Dean of the Grad. Schl., 1947-48; Acting Dean, Graduate Schl., 1948-49; Visiting Prof., Div. of Engrng., Univ. of Calif., Los Angeles, 1949-50. Hon. Pos.: Pi Tau Sigma Gold Medal, 1940; Ordnance Dept. Distinguished Service Award. Mem.: Annual Rsch. Award, Purdue Chapt., Sigma Xi; Tau Beta Pi; Pi Tau Sigma; Sigma Pi Sigma; Amer. Soc. of Mech. Engrng.; Amer. Phys. Soc.; Amer. Inst. Chem. Engrs.; Natl. Rifle Assn.; Army Ord. Assn.; A.S.E.E.; Kappa Sigma; Scabbard and Blade; Lions Internatl. Contrb. to: Trans. A.S.M.E.; Power; Indus. Power; Power Plant Engr.; Combustion; Over 75 Tech. Publications. Author: *Thermodynamics*, John Wiley and Sons; *Elements of Heat Transfer and Insulation*, with Max Jakob, John Wiley and Sons. Ph.D. Dissertation: *The Viscosity of Water*. War Record: Reserve Officer, 309th Engrs., 1930-40. Rsch. Dir., Army Ord. Exp. Sta., Small Arms Div., Purdue Univ., 1941—. Gen. Int.: Rsch. Heat Transfer and Thermodynamics. Hobbies: Woodworking; Photography; Rifle and Pistol Shooting. Listed in: *Who's Who in Engrng.*; A.M.S.; *Who's Who*; *Who's Who in Amer.*; *Chem. Who's Who*.

HAWKINS, Harold H., U. S. Geol. Survey, Dept. of Interior, 2800 Woodley Rd., N. W., Apt. 415, Washington, D. C. GEOLOGY.

HAWKINS, J. E. Prof. of Chem. and Dir., Naval Stores Rsch., Univ. of Fla., Gainesville, Fla. PHYSICAL CHEMISTRY.

HAWKINS, Laurence Ashley, Pres., Mohawk Development Service, Inc., 1130 Wendell Ave., Schenectady 8, N. Y. ELECTRICAL ENGINEERING; INDUSTRIAL RESEARCH. b. Pittsfield, Mass., Mar. 22, 1877. s. William J. and Harriet E. (Foxcroft) H. Edn.: B.A., Williams Coll., 1897; B.S., Mass. Inst. of Tech., 1899. Hon. Deg.: Sc.D., Williams Coll., 1944. m. Ann Dale, Dec. 16, 1931. c.: Laurence K.; Elizabeth. Exp.: Engrng. Dept., Staaley Elec. Mfg. Co., 1899-1903; Asst. Attorney, Patent Dept., General Elec. Co., 1903-12; Exec. Engr., Rsch. Lab., *ibid.*, 1912-45; Consultant, *ibid.*, 1945-48; Pres., Mohawk Development Service, Inc., Schenectady, N. Y., 1948—. Mem.: Amer. Inst. Elec. Engrs.; Phi Beta Kappa; Sigma Xi; Theta Delta Chi; Rotary. Author: *Adventure in the Unknown*, 1950; *William Stanley—His Life and Work*, 1951. Special Int.: Rsch. in Industry; Engrng. Developments.

HAWKINS, Ralph Sams, Vice-Dean, Coll. of Agri. and Vice-Dir., Ariz. Agri. Expt. Sta., Univ. of Ariz., Tucson, Ariz. AGRONOMY.

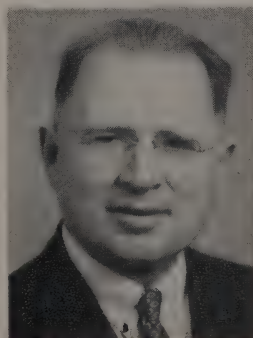
HAWKINS, William Bruce, Assoc. Prof. of Pathol., Univ. of Rochester Schl. of Med., Rochester, N. Y. PATHOLOGY.

HAWLEY, Estelle E., Assoc. Nutrition, Univ. of Rochester Med. Schl., Rochester, N. Y. NUTRITION.

HAWLEY, Ralph Chipman, Morris K. Jesup Prof. of Silviculture, Yale Univ., New Haven, Conn. SILVICULTURE.

HAWORTH, Ellis, Prof. of Chem. and Chmn., Div. of Sci., James Ormond Wilson Tchrs. Coll., Washington 9, D. C. PHYSICAL—ORGANIC CHEMISTRY; SCIENCE EDUCATION; NURSING EDUCATION. b. Washington, D. C., Nov. 11, 1901. s. Thomas Williams and Florence Virginia (Ellis) H. Edn.: A.B., Geo. Washington Univ., 1922; M.A., *ibid.*, 1927; Ph.D., Johns Hopkins Univ., 1928. m. M. Elaine Ervin, July 6, 1940. c.: Thomas Ervin; Helen Ellis. Exp.: Tch. of Sci. and Math., Eastern H. S., Washington, D. C., 1922-31; Hd., Dept. of Sci., Public Schls., Washington, D. C., 1931-36; Mem., Bd. of Examiners, Public Schls., *ibid.*, 1932-36; Prof. of Chem. and Chmn., Div. of Sci., James Ormond Wilson Tchrs. Coll., Wash., D. C., 1936—; Lectr. in Edn., The Catholic Univ. of Amer., Summer Sessions, 1936-50; Lectr. in Edn., Johns Hopkins Univ., 1953-54. Mem.: Fellow, A.A.A.S.; Amer. Chem. Soc.; Amer. Assn. Physics Tchrs.; Biol. Soc. Wash.; Philos. Soc. of Wash.; Natl. Council of Tchrs. of Math.; Natl. Assn. for Rsch. in Sci. Tehng.; N.E.A.; History of Sci. Soc.; A.A.U.P.; Natl. League for Nursing; Sigma Xi; Cosmos Club. Contrb. to: *Jour. Amer. Chem. Soc.*; *Sci. Edn. Gen. Int.*; Mem., Advisory Com., Juvenile Court, D. C., 1937-50. Special Int.: Physical-Organic Chem.; Specific Heats of Organic Compounds; X-Rays and Crystal Structure; Sci. Edn., Elem. and Secondary Schls.; Preparation of Sci. Tchrs.; Nursing Edn.

HAWTHORN, Horace Boies, Prof. of Sociol., Morningside Coll., 825 S. Mulberry St., Sioux City, Iowa. SOCIOLOGY, URBAN AND RURAL. b. Castana, Iowa, Dec. 4, 1889. s. William F. and Annie (Masters) H. Edn.: B.S., Iowa State Coll., 1914; M.S., *ibid.*, 1915; Ph.D., Univ. of Wis., 1922. m. Hazel Maples, Sept. 21, 1916. c.: Miriam Maurine; Clarice Marilyn; Horace Duane. Exp.: Fellow, Univ. of Wis., 1919-20; Asst. Prof. of Rural Sociol., Iowa State Coll., 1921-26; Assoc. Prof. of Sociol., Univ. of Akron, Ohio, 1926-30; Prof. of Sociol., Morningside Coll., 1931—. Hon.



Pos.: Natl. Repr., Alpha Kappa Delta. Mem.: Amer. Sociol. Soc.; A.A.U.P.; Midwest Sociol. Soc.; Phi Kappa Phi; Delta Sigma Rho; Phi Gamma Mu; Alpha Kappa Delta. Author: *Outlines of Sociol.*

1924; Sociol. of Rural Life, 1926; Sociol. of World Crisis, 1947. Gen. Int.: Developed Social-contact and Empressional-Expressional Tests for Measuring Rural and Urban Culture Levels. Special Int.: Personality Adjustment in Rural and Urban Areas; Soc. of Personality, Processes, Functions.

HAWTHORN, Leslie Rushton, Horticulturist, U. S. Dept. of Agri., Campus Box 6, Utah State Agril. Coll., Logan, Utah.



RESEARCH IN VEGETABLE SEED PRODUCTION. b. London, England, Mar. 27, 1902. s. Ernest Paul and Alice Edith (Rushton) H. Edn.: B.S., Cornell Univ., 1924; M.S., *ibid.*, 1928. m. Ruth Reynolds, May 21, 1927. c.: Shirley; Doris. Exp.: Asst. Instr., Botany Dept., Cornell Univ., Ithaca, N. Y., 1924-25; Asst. in Rsch., Vegetable Crops Dept., N. Y. Agril. Expt. Station, Geneva, N. Y., 1925-30; Horticulturist, Tex. Agril. Expt. Sta., and

Agent, U. S. Dept. of Agri., 1930-44; Horticulturist, U. S. Dept. of Agri., Washington 25, D. C., 1944—; Special Inst., Utah State Agril. Coll., Logan, Utah, 1948—. Mem.: Fellow, A.A.A.S.; Amer. Soc. for Horticultural Sci.; Genetics Soc. of Amer.; Sigma Xi. Contrb. to Proc. Amer. Soc. for Horticultural Sci.; Farm and Home Sci. Gen. Int.: Attended Internatl. Genetics Congress in Edinburgh, Scotland, 1939; Invited as a Lectr. and Appointed Official U. S. Delegate to the 13th Internatl. Hort. Congress in London, Sept. 1952. Special Int.: Vegetable Varieties: Breeding Developed Geneva Cucumber, Summerset Tomato, and Tex. Early Grano Onion; Commercial Cultural Practices with Vegetables, Particularly with Carrot, Onion, and Lettuce.

HAWTHORNE, Mary Elizabeth, Instr. in Botany, Pa. State Coll., State College, Pa. CYTOLOGY. b.



New London, Conn., Nov. 9, 1916. d. Frederick A. and Bridget (Sullivan) H. Edn.: B.S., Univ. of R. I., 1937; M.S., Pa. State Coll., 1940; Ph.D., Mich. State Coll., 1951. Exp.: Instr. in Botany and Zool. in Undergraduate Centers of Pa. State Coll. assigned to the Schuykill Center at Pottsville, Pa., 1940-42; Instr. in Botany and Zool., *ibid.*, Altoona Center, Pa., 1942-44, 1946-48; Grad. Tehng. Asst. in General Botany and Natural Sci., Univ. of Minn., 1948-49; Grad.

Tehng. Asst. in Basic Biol., Mich. State Coll., 1949-51; Instr. in Botany, R. I. Univ., 1951-52; Instr. in Botany, R. I. Univ., 1951-52; Instr. in Botany, Pa. State Coll., State Coll., Pa., 1952—. Hon. Pos.: Dir., Pa. Jr. Acad. of Sci., 1943-44. Mem.: Phi Kappa Phi; Sigma Xi; Sigma Delta Epsilon; Botanical Soc. Amer.; Genet. Soc. Amer.; A.A.A.S.; A.A.U.P.; A.A.U.W.; Pa. Acad. Sci.; Mich. Acad. Sci.; Chi Omega. Contrb. to: Cytology; Jour. Heredity. War Record: U. S. Naval Reserve (Waves) 1944-46. Special Int.: Cytological Effects of Antibiotics on Mitosis.

HAWXHURST, Robert, Jr., Consulting Engr., Private Practice, 2 Presidio Terrace, San Francisco, Calif. MINING ENGINEERING, PETROLEUM GEOLOGY.

HAY, Clarence Leonard, Rsch. Assoc., Mexican and Central Amer. Archaeol., Amer. Museum Natural History, Central Park W. at 79th St., N. Y., N. Y. ANTHROPOLOGY.

HAYDAK, Mykola H., Assoc. Prof., Univ. of Minn., Univ. Farm, St. Paul 1, Minn. APICULTURE AND BEE NUTRITION. b. Ukraine, May 12, 1898. s. Hryhor and Hanna (Filipovich) H. Edn.: Ph.D., Univ. of Wis., 1933. m. Pauline Rychley, Sept. 19, 1943. Exp.: Staff, Bee Culture Inst., Dol, Czechoslovakia, 1928-39; Asst. to Assoc. Prof., Univ. of Minn., Univ. Farm, St. Paul, Minn., 1933—. Mem.: A.A.A.S.; A.A.E.E.; Entomol. Soc. of Amer.; Sigma Xi; A.A.U.P.; Sci. Schevchenko Soc. Author: Beekeeping in Minn., 1948. Contrb. to: Jour. Econ. Entomol.; Annals Entomol. Soc. of Amer.; Jour. of Nutrition; Sci.; Amer. Jour. of Med. Sci.; Annals of Biochem. Special Int.: Bee Nutrition and Biol.; Food Value of Honey; Pollen Substitute; Vitamin Content of Bee Foods; Ukrainian Question.

HAYDEN, Ada, Rsch. Asst. Prof. of Botany, Iowa State Coll., Ames, Iowa. ECOLOGY, TAXONOMY.

HAYDEN, Arthur Gunderson, Retired, St. Michaels, Md. CIVIL ENGINEERING. b. Akron, Ohio, Oct. 10, 1874. s. Charles Albert and Helen Marie (Gunderson) H. Edn.: A.B., Ripon Coll., 1898; B.S., Mass. Inst. of Tech., 1901. Hon. Deg.: D.Sc., Ripon Coll., 1951. m. Florence Ketcham, June 1, 1905. c.: Helen Gertrude; George Gunderson; Robert Riggs. Exp.: Instrument Man on Preliminary and Maintenance Surveys, Chicago and Alton R. R., Ill., 1900; Structural Detailer, Amer. Bridge Co. and McClintic-Marshall Constrn. Co., Pittsburgh, Pa., 1901-04; Structural Engr. and Asst. Engr., N. Y. State Barge Canal, N. Y. C., 1904-20; Chf. Designing Engr., Bronx Parkway Commn., N. Y. C., 1920-26; Westchester Co. Park Commn., 1925-37; Retired, 1937—. Mem.: Amer. Soc. of Civil Engrs.; N. Y. State Soc. of Prof. Engrs.; Natl. Soc. of Prof. Engrs. Contrb. to: Various Tech. Periodicals and Papers in Engrng. Soc.

HAYDEN, Charles Ernest, Prof. of Veterinary Physiol., Cornell Univ., 110 Irving Pl., Ithaca, N. Y. PHYSIOLOGY.

HAYDEN, Rev. Charles Kavanagh, Assoc. Prof. and Dir. Physics Dept., Creighton Univ., Omaha, Nebr. PHYSICS.

HAYDEN, J. David, Eastern Mgr., Gelatin Products Corp., 630 Fifth Ave., N. Y., N. Y. PHARMACEUTICS.

HAYDEN, James J., Dean of Schl. of Law, Columbus Univ., 1323 18th St., N. W., Washington, D. C. LAW.

HAYDEN, Margaret Alger, Prof. of Zool., Wellesley Coll., Wellesley, Mass. CYTOLOGY.

HAYES, Anson, Dir. of Rsch. Labs., Amer. Rolling Mill Co., Middletown, Ohio. CHEMISTRY.

HAYES, Herbert Kendall, Emeritus Prof., Univ. Farm, St. Paul, Minn. PLANT GENETICS; PLANT

BREEDING; CROP AGRONOMY. b. Granby, Conn., Mar. 11, 1884. s. Marshall Clark and Mary Ella (Merriam) H. Edn.: B.S., Mass. Agril. Coll., 1908; M.Sc., Harvard Univ., 1911; Sc.D., *ibid.*, 1921. Hon. Deg.: Sc.D., Univ. of Mass., 1948. m. Anna Almning Cushman (dec.), Sept. 28, 1911. c.: Mary Cushman (dec.); H. Kendall, Jr. 2nd m. Rachel Rude Gortner, Mar. 26, 1952. Exp.: Plant Breeder and Agronomist, Conn. Agril. Expt. Sta., 1909-14; Assoc. Prof., Prof. and



Chf., Div. of Agri. and Plant Genetics, Univ. of Minn., 1914-52; Emeritus Prof., *ibid.*, 1952—. Mem.: Amer. Soc. Agronomists; A.A.A.S.; Genetics Assn. of Amer.; Kappa Sigma; Sigma Pi; Alpha Zeta; Phi Kappa Phi. Author: Breeding Crop Plants, with R. J. Garber, 1917, 1921; Method of Plant Breeding, with F. R. Inner, 1942. Contrb. to: Jour. Amer. Soc. Agron.; Genetics. Special Int.: Agron.; Plant Genetics; Plant Breeding.

HAYES, Mary H. S., Rsch. Asst., Great Island Conf., 783 Fifth Ave., N. Y., N. Y. VOCATIONAL GUIDANCE AND PERSONNEL.

HAYHURST, Emory Roe, 1925 Concord Rd., Columbus, Ohio. INDUSTRIAL HYGIENE.

HAYNES, Caroline Coventry, 910 Park Ave., N. Y., N. Y. BOTANY.

HAYNES, Edith, Bacteriologist, Ind. Univ. Med. Center, 1040-1232 W. Michigan St., Indianapolis, Ind. BACTERIOLOGY.

HAYNES, Eli Stuart, Prof. of Astron., Univ. of Mo., Columbia, Mo. ASTRONOMY.

HAYNES, Winthrop Perrin, Geologist, Standard Oil Co. of N. J., Rm. 2150, 30 Rockefeller Plaza, N. Y., N. Y. PETROLEUM GEOLOGY.

HAYS, Frank Alfred, Poultry Dept., Mass. State Coll., Amherst, Mass. POULTRY GENETICS.

HAYWARD, Herman Eliot, Dir., U. S. Regional Salinity Lab., Riverside, Calif. PLANT ANATOMY.

HAYWOOD, Charlotte, Prof. of Physiol., Mt. Holyoke Coll., South Hadley, Mass. GENERAL PHYSIOLOGY.

HAYWOOD, Oliver G., Jr., Chf. of Scientific Rsch., Headquarters, Air Rsch. and Development Command,

P. O. Box 1395, Baltimore 3, Md. CIVIL ENGINEERING. b. Highland Mills, N. Y., Nov. 29, 1911. s. Oliver G. and Anna Olive (Wiggins) H. Edn.: B.S., U. S. Military Acad., 1936; M.S., Harvard Univ., 1940; D.Sc., Mass. Inst. of Tech., 1940. m. Helen Salisbury, June 12, 1936. c.: Barbara; Betty; Richard; Robert. Exp.: Various Command, Staff and Technical Assignments as Officer, Corps of Engrs., U. S. Army, 1936-47; *ibid.*, U. S. Air Force, 1947—. Mem.:

Natl. Rsch. Council; Sigma Xi; Army-Navy Country Club. Contrb. to: Air Univ. Quarterly Rev. War Record; Caribbean and European Theatres, Awarded Legion of Merit with Oak Leaf Cluster. Special Int.: Rsch. Admin.

HAZEL, John J., Republic Bldg., Rm. 1526, Hazel Steel Corp., Cleveland 1, Ohio. CERAMICS.

HAZEL, L. N., Iowa State Coll., Ames, Iowa. POULTRY BREEDING.

HAZELTINE, Karl Snyder, Prof. of Sci., San Jose State Coll., San Jose, Calif. SCIENCE EDUCATION.

HAZELTINE, Louis Alan, Prof. of Physical Math., Stevens Inst. of Tech., Hoboken, N. J. MATHEMATICS.

HAZEN, Myron Smith, Consulting Expert Agronomist, Rt. 1, Milton, N. Y. AGRONOMY, SOIL CHEMISTRY.

HAZEN, Thomas, Physicist, Bakelite Corp., 230 Grove St., Bloomfield, N. J. PLASTICS, DIELECTRICS.

H'DOUBLER, Francis Todd, Physician and Surgeon 800 Medical Arts Bldg., Springfield, Mo. SURGERY.

HEAD, George Douglas, Private Practice, 1731 Medical Arts Bldg., Minneapolis, Minn. INTERNAL MEDICINE.

HEADLEE, William Hugh, Prof. of Parasitic Diseases, Ind. Univ. Schl. of Med., Indianapolis, Ind. PARASITOLOGY. b. Morristown, Ind., 1907. s.

Walter C. and Nellie (Adams) H. Edn.: A.B., Earlham Coll., 1929; Rockefeller Foundation Scholar, Univ. of Ill., 1932-33, M.S., 1933; Rockefeller Foundation Fellow, Tulane Univ. of La., 1933-34, Ph.D., 1935; John and Mary Markle Foundation Fellow, Army Med. Schl., 1943, Cert. of Proficiency in Tropical and Milit. Med., 1943; Markle Foundation Fellow for Studies on Tropical Diseases in Central Amer., Under the Auspices of the Assn. of Amer. Med. Colls., 1944. m. Gabrielle Mills of Denver, Colo., Aug. 4, 1937. d. Clifford W. and Maude K. M. c.: Joan, Anne. Exp.: Lab. Instr. of Biol., Earlham Coll., 1927-29; Collector, Marine Biol. Lab., Woods Hole, Mass., Summer, 1928; Instr. of Biol., Amer. Univ. at Cairo, Egypt, 1929-31; Rsch. Asst., Internatl. Health Div., Rockefeller Foundation, Cairo, 1930-32; Asst. Prin., Friendsville Acad., Tenn., 1933-34; Instr. of Biol., Purdue Univ., 1935-42 (on leave, 1937-38); Biologists and Parasitologist, Natl. Ministry of Edn., Venezuelan Govt., 1937-38; Hd., Dept. Biol. Natl. Pedagogic Inst., Caracas, Venezuela, 1937-38; Planned and Equipped Labs. of the Inst. of Tropical Medicine and Surgery, Caracas, 1937-38; Trained (in field work in parasitology) Hygienists of the Rural Missions, Venezuelan Ministry of Edn., 1937-38; Survey of Helminth infections of Schl. Children of State of Cojedes, Venezuela, 1937; Ranger Naturalist, Yellowstone Natl. Park, Summer, 1939; Asst. Prof. Zool., Purdue Univ., 1942-43; Asst. Prof. Parasitic Diseases, Ind. Univ. Schl. of Med., 1943-46, Assoc. Prof., 1946—; Parasitologist, Ind. Univ. Med. Center Hosps., 1943—; Parasitologist, Dept. Dermato-Syphilology, Gen. Hosp., Indianapolis, 1947—; by Invitation, Scientific Exhibits on "Parasitic and Tropical Diseases" Before Meetings of Ind. Acad. Sci., Ind. St. Med. Assn., Amer. Soc. Clin. Pathologists, Southern Med. Assn., Amer. Med. Assn., 1943-44. Mem.: Fellow, A.A.A.S.; Fellow, Royal Soc. Trop. Med. and Hyg., London; Fourth Internatl. Congress on Trop. Med. and Malaria, 1948, Mem. Comm. (Sect. on Protozoal Dis.) to Consider the Organization of an "Internatl. Cent. for the Study of Human Intestinal Protozoa"; A.A.U.P.; Amer. Soc. Trop. Med.; Amer. Soc. Parasitologists; Natl. Malaria Soc.; Ind. Acad. Sci., Mem. Exec. Comm., 1944, Chmn., Sect. on Zool., 1944; Sigma Xi; Phi Sigma; Beta Mu; Rsch. Club of Ind. Univ., Chmn., 1947—; Indianapolis Earlham Men's Club. Contrb. to: Amer. Jour. Trop. Med.; Jour. of Parasitol.; Jour. Lab. and Clin. Med.; Jour. Ind. State Med. Assn.; Quarterly Bull. Ind. Univ. Med. Center; Proc. Ind. Acad. Sci. Ph.D. Dissertation: The Epidemiology of Human Ascariasis in the Metropolitan Area of New Orleans, La. Other Prof. Act.: Epidemiology of Helminth Infections in Egyptian Villages; Diagnosis of Pinworm Infection; Incidence of Helminth Infections in Venezuela; Epidemiology of Human Parasite Infections in Ind.; Tehng. of Parasitic and Tropical Diseases in Schls. of Medicine. Travel: U. S.; Canada; Mexico; Guatemala; Honduras; Nicaragua; El Salvador; Costa Rica; Canal Zone; Panama; Colombia; Venezuela; Haiti; Jamaica; England; France; Germany; Switzerland; Italy; Austria; Hungary; Yugoslavia; Bulgaria; Turkey; Greece; Syria; Lebanon; Palestine; Egypt. Listed in Amer. Men of Sci.

HEADINGTON, Clifford E., Divisional Rsch. Dir., The Atlantic Refining Co., 2700 Passyunk Ave., Philadelphia, Pa. ANALYTICAL CHEMISTRY.

b. Burr Oak, Iowa, May 1, 1905. s. E. A. and Nellie (Masters) H. Edn.: A.B., Upper Iowa Univ., 1927; M.S., Iowa State Coll., 1929. m. Marion Hull, 1931. c.: Edward. Exp.: Rsch. Chem., The Atlantic Refining Co., Philadelphia, Pa., 1929-44; Divisional Dir. of Rsch., *ibid.*, 1944—. Hon. Pos.: Chmn. of Amer. Petroleum Inst. Com. on Analytical Rsch. Mem.: Amer. Chem. Soc.; Amer. Petroleum Inst.; Pi Kappa Delta. Special Int.: Analytical Chem.; Application of Mass, Infra-



red, Ultraviolet and Raman Spectroscopy to Petroleum Composition; Mineralogy.

HEADLEY, Frank Burdette, Chf., Dept., Farm Development, Univ. of Nev., Reno, Nev. **AGRICULTURE**.

HEADRICK, Lewis B., Mgr., Cathode Ray Tube Development Engr., RCA Victor Div., 75 Jackson Dr., Lancaster, Pa. **PHYSICS**.

HEALD, Frederick DeForest, Hd., Dept. of Plant Pathol., State Coll. of Wash., 312 Howard St., Pullman, Wash. **BOTANICAL SCIENCES**.

HEALD, Henry Townley, Pres., Ill. Inst. of Tech., Chicago, Ill. **CIVIL ENGINEERING**.

HEALD, Kenneth Conrad, Vice-Pres., Gulf Oil Corp., Box 1166, Pittsburgh, Pa. **GEOLOGY**.

HEALEA, Monica, Assoc. Prof. and Chmn., Dept. of Physics, Vassar Coll., Poughkeepsie, N. Y. **SECONDARY ELECTRON EMISSION, DISCHARGES, GASES**.

HEALTH, Eugene Schofield, Dir., Ga. Botanical Garden, 934 Waverly Way, N. E., Atlanta, Ga. **BOTANY**.

HEATH, Harold, Prof. Emer. Embryol., Stanford Univ. Marine Lab., 181 Ocean Ave., Pacific Grove, Calif. **EMBRYOLOGY**.

HEATH, Louise Robinson, Prof. and Hd., Dept. of Philos. and Psychol., Hood Coll., Frederick, Md. **CONCEPT OF TIME**.

HEATON, Kenneth L., Dean of Admin., Boston Univ., Boston, Mass. **PSYCHOLOGY, EDUCATIONAL RESEARCH**.

HECHLER, Fred George, Pa. State Coll., State College, Pa. **ENGINEERING**.

HECK, Nicholas Hunter, retired, 3421 Northampton St., Washington, D. C. **SEISMOLOGY**.

HECKERT, John Walter, Emer. Prof. of Edn., Miami Univ., 18 Tallawanda Rd., Oxford, Ohio. **EDUCATION**.

HECKMAN, Samuel B., Prof. Emer. of Ednl. Psychol., City Coll. of the City of N. Y., N. Y., N. Y. **PSYCHOLOGY**.

HEDENBURG, Oscar Fred, Sr. Industrial Fellow Mellon Inst., Pittsburgh, Pa. **CHEMISTRY**.

HEDGES, Florence, retired, c/o McLachlen Banking Corp., Washington, D. C. **PHYTOPATHOLOGY**.

HEDRICK, Glen Willard, Supvr. Special Project, Ditto, Inc., Chicago, Ill. **ORGANIC CHEMISTRY**.

b. Fisher, Ill., Jan. 28, 1906. s. Edwin L. and Minnie M. (Warner) H. Edn.: B.S., Eureka Coll., 1930; M.S., Univ. of Ill., 1935; Ph.D., Mich. State Coll., 1937. m. Phyllis L. Hough, Aug. 30, 1940. c.: David Russell; Glen Willard, Jr. Exp.: H. S. Tchr., Christopher, Ill., 1930-35; Natl. Aniline Div., Allied Chem. and Dye Corp., Buffalo, N. Y., 1937-44; E. F. Houghton and Co., Philadelphia, Pa., 1944-46; Publicker Industries, Philadelphia, Pa., 1946-48; Supvr., Organic Chem. Rsch., Armour

Rsch. Foundation, Chicago, 1948-51; Supvr., Special Project, Ditto, Inc., Chicago, 1951. Mem.: Sigma Xi; Amer. Chem. Soc.; A.A.A.S.; Fellow, A.I.C. Special Int.: Organic Chem.; Dyes; Surface Active Agents; Acetylene Chem.; Graphic Arts.

HEDRICK, Ulysses Prentiss, retired, 600 S. Main St., Geneva, N. Y. **HORTICULTURE**.

HEFFNER, Roe-Merrill Secrist, Prof. of German, Univ. of Wis., Madison, Wis. **GERMANIC PHILOLOGY**.

HEFNER, Robert Arthur, Prof. of Zool. and Chmn. of Dept., Miami Univ., Oxford, Ohio. **ZOOLOGY**.



b. Allen Co., Ohio, Apr. 24, 1892. s. John and Flora (Growden) H. Edn.: B.S., Ohio Northern Univ., 1923; M.S., Ohio State Univ., 1924; Ph.D., *ibid.*, 1929. m. Rowena Ilo Hardin, May, 1921. c.: Marcine; Willis (dec.); Carolyn; John H.; Robert A., Jr. Exp.: Tchr., Rural Schl., Ohio, 1912-17; Tchr., H. S., Ohio, 1921-23; Instr. in Biol., Heidelberg Coll., Heidelberg, Ohio, 1924-25; Asst. Prof. to Prof. of Zool. and Chmn. of Dept., Miami Univ., Oxford, Ohio, 1925—. Mem.:

A.A.A.S.; Amer. Micro. Soc.; Amer. Genetic Assn.; Amer. Soc. of Human Genetics; Soc. of Systematic Biologists; Gamma Alpha; Sigma Xi; Phi Sigma; Fellow in Zool., Ohio State Univ.; Fellow, A.A.A.S.; Fellow, Ohio Acad. of Sci. Contrb. to Jour. of Heredity; Trans. Amer. Micro. Soc.; Open Court; World Affairs Interpreter; Jour. of Morphol. and Physiol. Special Int.: Taxonomy of the Diplopoda; Human Heredity.

HEID, John Laurence, Dir. of Control and Rsch., Fla. Citrus Canners Cooperative, Lake Wales, Fla. **FOOD TECHNOLOGY**.

HEIDBREDER, Edna Frances, Prof. Psychol., Wellesley Coll., Wellesley, Mass. **PSYCHOLOGY**. b. May 1, 1890, Quincy, Ill. d. William Henry and Mathilda Emelie (Meyer) Heidbreder. Edn.: A.B., Knox Coll., 1911; A.M., Univ. of Wis., 1918; Ph.D., Columbia Univ., 1924. Exp.: Instr. in Psychol., Univ. of Minn., 1924-26; Asst. Prof. of Psychol., *ibid.*, 1926-28; Assoc. Prof., *ibid.*, 1928-34; Prof., Chmn. Dept., Wellesley Coll., 1934—; Prof., Univ. of Calif., Berkeley, summer, 1950; Pres., Eastern Psychol. Assn., 1943-44; Bd. of Dir., Eastern Psychol. Assn.; Assoc. Ed., Jour. of Abnormal and Soc. Psychol.; Assoc. Ed., Psychological Monographs; Assoc. Ed., Personality. Mem.: Phi Beta Kappa; Sigma Xi; Amer. Psychol. Assn. Coun. of Dir., 1940, 1942-45; Pres., Section of Gen. Psychol., 1949-50; Eastern Psychol. Assn.; Vice-Pres., A.A.A.S., 1947, Chmn. Sect. 1, 1947, Sec., Sect. 1, 1942-45, N.R.C. Author: The Minn. Mech. Ability Tests; Seven Psychols. Contrb. to Jour. of Exptl. Psychol.; Psychol. Rev.; Psychol. Bull.; Jour. of Abnormal and Soc. Psychol.; Jour. of Applied Psychol.; Jour. of Gen. Psychol. Ph.D. Dissertation: An Experimental Study of Thinking, Archives of Psychol. Travel: Europe. Listed in: A.M.S.; Women of Distinction in Amer.; Who's Who in New England; Who's Who in Ill.; Who's Who in Amer. Special Int.: Personality Tests; Concept Formation; Schl. and Systems of Psychol.

HEIDELBERGER, Michael, 620 W. 168th St., N. Y. 32, N. Y.

HEIDENREICH, William Charles, Jr., Works Mgr., Canadian Resins and Chemicals Ltd., P. O. Box 39, Shawinigan Falls, Que., Can. **CHEMICAL ENGINEERING; WORKS OPERATION FOR THE PRODUCTION OF SYNTHETIC ORGANIC CHEMICALS AND PLASTICS**. b. Terre Haute, Ind., May 28, 1911. s. William C., Sr. and Sadie (Evelo) H. Edn.: B.Sc. in Ch.E., Rose Poly. Inst., 1933. m. Rose E. Carr, Mar. 30, 1932. c.: Alice Jane; John William; James Carr. Exp.: Chem. Engr., Dept. Hd., Production Area Supvr., Carbide and Carbon Chemicals Co., South Charleston, W. Va., 1934-47; Works Mgr., Canadian Resins Ltd., 1947—. Mem.: Amer. Inst. of Chem. Engrs.; Alpha Chi Sigma; Tau Beta Pi; Rotary. Special Int.: Successfully Produced a number of Synthetic Chemicals, Vinyl Resins and Vinyl Compounds.

HEIDENTHAL, Gertrude Antoinette, Visiting Assoc. Geneticist at the Brookhaven Natl. Lab., Upton, L. I., N. Y. GENETICS. b. Carbondale, Pa., June 9, 1908. d. Warren C. and Etta (Tut-hill) H. Edn.: A.B., Mt. Holyoke Coll., 1930; A.M., *ibid.*, 1932; Ph.D., Univ. of Chicago, 1938. Exp.: Tech. Asst., Rockefeller Inst. for Med. Rsch., Princeton, N. J., 1933-37; Rsch. Asst., Univ. of Rochester, Rochester, N. Y., 1938-41; Rsch. Asst., Univ. of Pa., Philadelphia, Pa., 1941-43; Instr. in Zool., Wellesley Coll., Wellesley, Mass., 1943-45; Asst. Prof. of Biol., Russell Sage Coll., Troy, N. Y., 1945-48; Assoc. Prof. of Biol., *ibid.*, 1948-53; Rsch. Assoc., Union Coll., Schenectady, N. Y., 1951—. Mem.: Genetics Soc. of Amer.; Amer. Naturalists; Amer. Soc. of Zool.; Human Genetics Soc.; Soc. for Study of Evolution; Radiation Rsch. Soc.; A.A.A.S.; Sigma Xi; Sigma Delta Epsilon. Contrb. to: Genetics; Prof. of Natl. Acad. of Sci.; Jour. of Exptl. Zool. Special Int.: Genetics of Guinea-pig Coat Color; Drosophila Position Effect; Habrobracon, Radiation Genetics.



HEIDT, Lawrence Joseph, Assoc. Prof. of Chem., Mass. Inst. of Tech., 77 Massachusetts Ave., Cambridge, Mass. PHOTO-CHEMISTRY, CHEMICAL KINETICS.

HEILBRUNN, L. V., Prof. of Zool., Univ. of Pa., Philadelphia, Pa. GENERAL PHYSIOLOGY.

HEILEMANN, John Jacob, Assoc. Prof. of Physics, and Hd. Dept., Ursinus Coll., Collegeville, Pa. PHYSICS.

HEILIGMAN, Harold A., General Mgr., Technical Dept., E. J. Lavino and Co., P. O. Box 29, Norristown, Pa. CHROMITE AND MAGNESIA REFRACORIES; MANGANESE DIOXIDE DEPOLARIZERS. b. Reading, Pa., Jan. 8, 1900. s. S. M. and Bertha (Fidler) H. Edn.: Ch.E., Lehigh Univ., 1921. m. Marion E. Bailey, Mar. 15, 1933. Exp.: Chemist, E. J. Lavino and Co., Sheridan Plant, 1922; Chf. Chemist, *ibid.*, Plymouth Meeting Plant, 1922-26; Rsch. Engr., *ibid.*, 1926-30; Asst. Technical Dir., *ibid.*, 1930-43; General Mgr., Technical Dept., *ibid.*, 1943—. Hon. Pos.: Pres., Pa. Ceramics Assn., 1952; Chmn., Philadelphia Section, Amer. Ceramic Soc., 1946; Chmn., Pa. Chapter, Amer. Inst. of Chemists, 1944. Mem.: Amer., Canadian and British Ceramic Soc.; Amer. Inst. of Mining and Metallurgical Engrs.; Amer. Inst. Chem. Engrs.; Amer. Chem. Soc.; Amer. Inst. of Chemists; Amer. Soc. for Metals; The Electrochem. Soc.; Pa. Ceramics Assn.; Amer. Soc. for Testing Materials. Contrb. to: Amer. Ceramic Soc. Bull.; Analytical Chem.; Amer. Gas Jour.; etc. Special Int.: Basic Refractories; Dry Batteries and Dry Purification of Gases.



HEIN, Illo, Plant Pathologist, U. S. D. A., 1803 Riverside Dr., N. Y., N. Y. BOTANY, MYCOLOGY.

HEIN, Mason August, Sr. Agronomist, Bureau Plant Indus. Sta., Div. Forage Crops and Diseases, U. S. D. A., Beltsville, Md. AGRONOMY.

HEINDL, Raymond A., 4917 43rd St., N. W., Washington 16, D. C.

HEINE, Harold Warren, Assoc. Prof. of Chem., Bucknell Univ., 304 N. 4th St., Lewisburg, Pa. BIO-CHEMISTRY. b. Sept. 14, 1922, Highland Park, N. J. s. Charles Heine and Elizabeth (Gabriel) H. Edn.: B.Sc., Rutgers Univ., 1944; Ph.D., *ibid.*, 1948. Exp.: Rsch. Asst., Rutgers Univ., 1947; Wm. Meredith Fellow, 1945-47; Asst. Prof. of Chem., Bucknell Univ., 1948-50; Assoc. Prof., *ibid.*, 1950—. Mem.: Sigma Xi; Phi Lambda Upsilon; Alpha Chi Sigma; A.C.S.; Lions. Contrb. to: Chem. Jours. Ph.D. Dissertation: On the Role of Cyclic Intermediates in Substitution Reactions. Travel: U. S. Hobbies: Camping; Photography. Listed in: A.M.S. Special Int.: The Binding of Tetanus Toxin by Cerebral Tissue; The Hydrolysis of Chlorohydrins; Ethylenimine.

HEINEMAN, Robert Emil, Partner, Durand and Co., Tucson, Ariz. MINERALOGY.

HEINES, Neal John, Mem. I. A. U. and I. A. Solar Commission, 560 Broadway, Paterson, N. J. ASTRONOMY.

HEINICKE, Arthur John, Dir., N. Y. State Agri. Expt. Station, and Hd. Pomology Dept., Cornell Univ., Ithaca, N. Y. POMOLOGY.

HEINRICH, Edwin P., Adjunct Prof. of Physics, Amer. Univ., Wash., D. C. PHYSICS. b. Aug. 8, 1905, Berlin, Germany. s. Carl and Rosie (Priester) H. Edn.: Univ. of Berlin; Univ. of Heidelberg; Univ. of Geneva; Johns Hopkins Univ.; Univ. of Md.; M.A., Geo. Wash. Univ., 1943. m. Dorothy Becker of Jacksonville, Fla., Aug. 27, 1940. d. E. J. and Eva Hanson B. c.: Sue Aldine; Edwin P., Jr. Exp.: Pub. Schls., Berlin, Germany, Tehr. Math., Sci., Phys. Edn., 1926-33; Scuola Nuova, Brusata di Novazzano, Ticino, Switzerland, Codir., 1933-34; Codir., Kaliski Schule, Berlin, Germany, 1934-37; Tehr., Sci., McDonough Schl., Md., 1938-42; Hd. of Sci. Dept., Landon Schl., Wash., D. C., 1942-44; Asst. to Hdmstr., Perkiomen Schl., Pennsburg, Pa., 1944-45; Sidwell Friends Schl., 1945—; Instr., Univ. of Md., 1941-42; Instr., Geo. Wash. Univ., 1943-45; Adjunct Prof. of Physics, Amer. Univ., Wash., D. C., 1945—. Mem.: N.E.A., Life Mem.; Amer. Assn. of Phys. Tchrs.; A.A.S.S.P.; Sigma P. Sigma; Phi Delta Kappa; Boy Scouts of Amer.; Cum Laude Soc.; Lions Club. Author: 1931, Schwingen und Schweben, Limpert Verlag, Dresden, Germany, 1953; Tachistofilms. Travel: Europe. Gen. Int.: Dir., Development of Course of Study in Aeronautics for H. S. Hobbies: Sailing; Skiing. Special Int.: Detention Devices, Invention, Actinoscope.

HEINRICH, Ross Raymond, Prof. of Geophys., St. Louis Univ., St. Louis, Mo. GEOPHYSICS. b. Dec. 12, 1915, St. Louis, Mo. s. Edward E. and Mary Rose (Busch) H. Edn.: B.A., Univ. of Mo., 1936; M.S., St. Louis Univ., 1938; Ph.D., *ibid.*, 1944. m. Marie F. McKinnon of St. Louis, Mo., June 3, 1948. d. Chas. P. and Fern McKinnon. c.: Ross Thaddeus; Christopher Edward. Exp.: Summer Party GSA to Measure Radioactivity of Western Springs, 1936 Summer; Grad. Fellow Geophys., St. Louis Univ., 1936-38; Geophys. Instr., 1938-45; Asst. Prof., 1945-48; Assoc. Prof., Geophys., 1948-51; Prof. Geophys., 1951—. Mem.: Fellow and Mem. of Coun. of A.A.A.S.; A.S.E.E.; A.I.M.M.E.; Amer. Meteorol. Soc.; Fellow, Geol. Soc. of Amer.; Amer. Geophys. Union; Seismological Soc. of Amer.; Alpha Chi Sigma; Pi Mu Epsilon; Sigma Xi; Alpha Sigma Nu. Author: The Interpretation of Seismograph Records: Part I, 1951. Contrb. to: Sci. Pubs. Ph.D. Dissertation: Equivalent-Potential Temperature and the Air Mass Climate of St. Louis, Mo. Hobbies: Music; Gardening; Sci. Field Trips. Listed in: A.M.S.; Who's Who in the Midwest; Who Knows— and What; Amer. Cath. Who's Who.

HEINZE, Peter H., Biochemist, Div. Fruit and Vegetable Crops and Diseases, Plant Indus. Sta., Beltsville, Md. PLANT BIOCHEMISTRY.

HEISE, George William, Dept. Hd., Natl. Carbon Co., Rsch. Labs., Cleveland, Ohio; 18550 Rivercliff Dr., Rocky River, Ohio. ELECTROCHEMISTRY.

HEISER, Victor George, Med. Consultant, Natl. Assn. Manufacturers, 14 W. 49th St., N. Y., N. Y. INDUSTRIAL HEALTH.

HEISIG, Gladstone Bering, Assoc. Prof. of Inorganic Chem., Univ. of Minn., Minneapolis. INORGANIC CHEMISTRY.

HEISING, Raymond Alphonsus, Patent Engr., Bell Telephone Labs., Inc., 463 West St., N. Y., N. Y. RADIO ENGINEERING.

HEIZER, Edwin E., Chmn., Dept. of Dairy Husbandry, Univ. of Wis., Madison, Wis. DAIRY HUSBANDRY.

HEKTOEN, Ludvig, 21 W. Elm St., Chicago, Ill. MEDICAL SCIENCES.

HELDT, Thomas Johannes, Physician in Chg., Div. of Neuropsychiatry, Henry Ford Hosp., Detroit, Mich. MEDICINE (NEUROLOGY, PSYCHIATRY).

HELFF, O. M., Assoc. Prof. of Biol., N. Y. Univ., Univ. Heights, N. Y., N. Y. EXPERIMENTAL EMBRYOLOGY.

HELGESON, Earl Adrian, Hd., Dept. of Botany, Agri. Expt. Station, N. Dak. Agri. Coll., Fargo, N. Dak. BOTANY.

HELLBAUM, Arthur Alfred, Prof. of Pharmacol., Okla. Univ. Schl. of Med., Oklahoma City, Okla. PHARMACOLOGY.

HELLEBRANDT, Frances Anna, Prof. of Phys. Med. and Hd. Dept. of Phys. Med. and Rehabilitation, Univ. of Ill., 1819 W. Polk St., Chicago 12, Ill. CLINICAL PHYSIOLOGY AND PHYSICAL MEDICINE AND REHABILITATION. b. Chicago, Ill., Aug. 26, 1901. d. Frank J. and Anna Mary (Preucil) H. Edn.: B.S., Univ. of Wis., 1928; M.D., *ibid.*, 1929. Exp.: Asst. in Anatomy, Univ. of Wis., 1924-27; Instr., Asst. Prof. and Assoc. Prof. of Physiol., *ibid.*, 1928-42; Assoc. Prof. of Phys. Med. and Rsch. Assoc. in Physiol., *ibid.*, 1942-44; Prof. of Phys. Med., Med. Coll. of Va. and Dir. of the Baruch Center of Phys. Med. and Rehabilitation, 1944-51; Prof. and Hd., Dept. of Phys. Med. and Rehabilitation, Univ. of Ill., 1951—. Hon. Pos.: Chmn., Com. on Rsch., Amer. Acad. for Cerebral Palsy. Mem.: Amer. Physiol. Soc.; A.A.A.S.; A.M.A.; Amer. Acad. for Cerebral Palsy; Amer. Acad. Phys. Edn.; Amer. Congress of Phys. Med.; Amer. Soc. of Phys. Med.; Chicago Soc. of Phys. Med.; Amer. Phys. Therapy Assn.; Amer. Assn. for Health, Phys. Edn. and Recreation; Natl. Rehabilitation Assn.; Assn. for Phys. and Mental Rehabilitation; Internatl. Soc. for the Welfare of Cripples; Sigma Xi. Contrb. to: Physiol. Rev.; Federation Proc.; Amer. Jour. Physiol.; Jour. Applied Physiol.; Arch. Phys. Med.; Va. Rehabilitator; Southern Med. Jour.; etc. Gen. Int.: First Woman Ever Appointed to Head a Dept. in the Med. Schl. of the Univ. of Ill. Special Int.: Exercise Physiol.; Biomechanics; Motor Learning.

HELLER, George Louis, Dir. of Development, Columbian Carbon Co., Box 1562, Monroe, La. CARBON BLACK AND NATURAL GAS. b. Albany, N. Y., Dec. 5, 1908. s. Frederick L. and Christine (Dorn) H. Edn.: Ch.E., Rensselaer Poly. Inst., 1931; M.Ch.E., *ibid.*, 1933. m. Marguerite R. Hoffman, Oct. 12, 1935. c.: Richard; Robert; Frederick; George and Thomas. Exp.: Asst. Bridge Engr., D. and H. R.R. Co., Albany, N. Y., 1933; Dir. of Rsch., Gen. Atlas Carbon Co., N. Y., 1933-41; Dir. of Dev., Columbian Carbon Co., Monroe, La., 1941—. Mem.: Amer. Chemical Society; A.I.Ch.E.; A.A.S.; Sigma Xi; Knights of Columbus. Special Int.: Carbon Black, Refractoris, Alloy Steels; Natural Gas; Heavy Oils and Plant Design.

HELLER, Noah Clinton, Asst. Prof. of Sci., Ind. State Tchrs. Coll., Terre Haute, Ind. CHEMISTRY. b. Columbia, Mo., Feb. 17, 1906. s. Thomas and Barbara (Carl) H. Edn.: A.B., Central Mo. State Tchrs. Coll., 1931; B.S., *ibid.*, A.M., Univ. of Mo., 1933; M.Ed., *ibid.*, 1938. m. Ida G. Stubblefield, Aug. 27, 1943. Exp.: H. S. Prin. Ashland, Mo., 1933; H. S. Supt., Halls-ville, Mo., 1934-37; Sci. Tch., Columbia, Mo., 1937-39; Co. Supt. of Schls., Boone Co., Columbia, Mo.,

1939-42; Chem. Engr., Oak Ridge Atomic Plant, 1945-46; Assoc. Prof. of Chem., Morehead State Tchrs. Coll., Morehead, Ky., 1946; Asst. Prof. of Sci., Ind. State Tchrs. Coll., Terre Haute, Ind., 1947—. Mem.: Amer. Chem. Soc.; Phi Delta Kappa; Ind. Acad. of Sci.; A.A.U.P.; Elks; Mason; Jr. C. of C. Author: Studies in the Thiobarbituric Acid Series, 1933. War Record: Lt., U. S. Navy, 1942-45. Travel: Mex.; Australia; Hawaiian Islands; South Pacific. Hobbies: Farming; Hunting. Special Int.: General Edn. in Sci.

HELLERMANN, Leslie, Assoc. Prof. of Physiol. Chem., Johns Hopkins Univ., Med. Schl., Washington and Monument Sts., Baltimore, Md. CHEMISTRY.

HELMER, Oscar Marvin, Hd., Dept. of Physiol. Chem., Lilly Lab. Chem. Rsch., Indianapolis City Hosp., 5015 N. Illinois St., Indianapolis, Ind. BIOCHEMISTRY.

HELMHOLZ, August Carl, Asst. Prof. of Physics, Univ. of Calif., Berkeley, Calif. PHYSICS.

HELMICK, Homer Henry, Prof. of Chem., Elmhurst Coll., Elmhurst, Ill. INORGANIC CHEMISTRY.

HELSER, Perry D., Methodist Bldg., Apt. 303, 100 Maryland Ave., N. E., Washington 2, D. C. CERAMICS.

HELSON, Harry, Univ. of Tex., Austin, Tex. PSYCHOLOGY.

HELTMAN, Harry Joseph, SPEECH AND HEARING.

HEMENWAY, Leland David, Assoc. Prof. of Math. and Physics, Simmons Coll., 300 The Fenway, Boston, Mass. MATHEMATICS.

HEMEON, W. C. L., Engrng. Dir., Indus. Hygiene Foundation, 4400 5th Ave., Pittsburgh 13, Pa. AIR POLLUTION; INDUSTRIAL DUST CONTROL AND VENTILATION. b. Leominster, Mass., Dec. 26, 1903. s. Chester O. and Edith A. (Kaiser) H. Edn.: B.S., Mass. Inst. of Tech., 1926; M.S., *ibid.*, 1927. m. Catherine A. Daunt, July, 1937. Exp.: Chem. Engr., Rockland and Rockport Lime Corp., Rockland, Maine, 1927-30; Supt., Hoosac Valley Lime Co., N. Cambridge, Mass., 1931-32; Rsch. Engr., Dewey and Almy Chem. Co., N. Cambridge, Mass., 1933-35; Mass. Dept. of Labor and Industry, 1935-43; Engrng. Dir., Indus. Hygiene Found., 1943—. Mem.: Amer. Soc. of Heating and Ventilating Engrs.; Assn. of Iron and Steel Engrs.; Amer. Meteorol. Soc.; Air Pollution Control Assn.; Amer. Indus. Hygiene Assn.; Amer. Chem. Soc. Contrb. to: Heating and Ventilating; Heating, Piping and Air Conditioning; Jour. Indus. Hygiene and Toxicol.; Industry; Meteorol. Monographs; Indus. and Engrng. Chem., etc.

HEMINGWAY, Allan, Assoc. Prof. of Physiol., Univ. of Minn. Med. Schl., Minneapolis, Minn. PHYSIOLOGICAL CHEMISTRY, BIOPHYSICS.

HEMPSTEAD, Jean Charles, Prof. of Gen. Engrng., 1002 Brookridge, Ames, Iowa. (Absent on milit. leave.) Instr., Marine Engrng., U. S. N. Acad., Annapolis, Md. MATHEMATICS. b. Aug. 6, 1904, Woden, Iowa. s. Carl Watson and Mertie (Lemmon) H. Edn.: B.S., Civil Engr., Iowa St. Coll., 1926; M.A., Univ. of Pa., 1930; C. E., Iowa State Coll., 1942. m. Edna Walton of Belle Plaine, Iowa, Sept. 8, 1928. d. James O. and Carrie Walton. Exp.: Instr. in Math., Drexel Inst., Phila., Pa., 1927-30; Instr. in Math., Temple Univ., Night Schl., 1928-30; Instr. in Gen. Engrng., Iowa State Coll., 1930-31; Asst. Prof. Gen. Engrng., *ibid.*, 1932-36; Assoc. Prof. Gen. Engrng., Iowa State Coll., 1936-48; Valuation Engr., Dept. of Int., Bonneville Dam Project, Portland, Ore., Summer, 1950; Prof. Gen. Engrng., Iowa State Coll., 1948-51; Instr., Marine Engrng., U. S. Naval Academy, 1952—. Mem.: A.S.E.E.; Pi Mu Epsilon; Tau Beta Pi; Phi Kappa Phi; Scabbard and Blade; A.A.U.P.; Theta Xi; Kiwanis. War Record: Reserve Officer, 1926-36, 1946-51; Active Duty in U.S.A.A.F., Maj., 1942-46 and since June, 1951.

Co-author: "Engineering Valuation and Depreciation"; Morstor, Winfrey and Hempstead. 2nd Ed., McGraw-Hill Book Co., New York, 1953. Travel: U. S. Hobbies; Travel; Reading; Men's Chorus Music. Listed in: Who's Who in Engrng.

HENBEST, Lloyd George, Geologist, U. S. Geol. Survey, 2229 Bancroft Pl., N. W., Washington, D. C. MICROPALEONTOLOGY.

HENBEST, Orrin John, 504 W. Oregon St., Urbana, Ill. PLANT ECOLOGY.

HENDEL, James M., Assoc. Prof., Hunter Coll., 695 Park Ave., N. Y., N. Y. PHYSICAL CHEMISTRY.

HENDERSON, Archibald, Hd. Dept. of Math., Univ. of N. C., Chapel Hill, N. C. MATHEMATICS.

HENDERSON, Charles Franklin, Entomologist, U. S. D. A., Bureau Entomol. and Plant Quarantine, P. O. Box 989, Gulfport, Miss. ENTOMOLOGY.

HENDERSON, Earl Wilton, Rsch. Assoc. Prof. of Poultry Husbandry, Mich. Agri. Expt. Station, East Lansing, Mich. POULTRY GENETICS, BIOMETRY.

HENDERSON, Edward P., Assoc. Curator, U. S. Natl. Museum, Washington 25, D. C. METEORITES. b. Columbus, Ohio. s. Charles B. and Elizabeth (Porter) H. m. Rebecca R. Rogers, Aug. 15, 1941. Exp.: Asst. Chemist, U. S. Geol. Survey, Washington, D. C., 1920-29; Assoc. Curator, U. S. Natl. Museum, Washington, D. C., 1929—. Mem.: Amer. Mineral. Soc.; Washington Acad. of Sci.; A.A.A.S., etc. Contrb. to: Numerous Articles Dealing with Mineralogy, Meteorites and Gems. War Record: W.W.I., U. S. Marine Corps.

HENDERSON, Frederick C., Royal China, Inc., Sebring, Ohio. CERAMICS.

HENDERSON, Harry Oram, Prof. of Dairy Husbandry and Dairy Husbandman, W. Va. Univ., Morgantown, W. Va. DAIRY HUSBANDRY.

HENDERSON, Judson Pulford, Astro Physicist, Time Service, Dominion Observatory, Ottawa, Ont., Can. ASTRONOMY.

HENDERSON, Lawrence Melvin, Supvr. of Rsch., Pure Oil Co., 35 E. Wacker Dr., Chicago, Ill. PETROLEUM CHEMISTRY.

HENDERSON, Lena Bondurant, Assoc. Prof. of Biol., Randolph-Macon Woman's Coll., 219 Norfolk Ave., Lynchburg, Va. BOTANY.

HENDERSON, Melvin Starkey, Prof. of Orthopaedic Surgery, Mayo Foundation, 801 Ninth Ave., S. W., Rochester, Minn. ORTHOPAEDIC SURGERY.

HENDERSON, R. W., Sandia Corp., Sandia Base, Albuquerque, N. M. NUCLEAR ENGINEERING.

HENDERSON, William Edwards, Prof. Emer. Chem., Ohio State Univ., 214 16th Ave., Columbus, Ohio. CHEMISTRY.

HENDREN, Linville L., Prof. of Physics and Astron., Univ. of Ga., Athens, Ga. PHYSICS.

HENDRICKS, Sterling Brown, U. S. Dept. of Agri., Beltsville, Md.

HENLE, Werner, Children's Hosp., 18th and Bainbridge, Pa. VIROLOGY.

HENLEY, Robert Roy, Biochemist, Pathol. Div., Bureau Animal Indus., U. S. Dept. of Agri., 410 Aspen St., N. W., Washington 12, D. C. CHEMISTRY OF BIOLOGICAL PRODUCTS USED IN DIAGNOSING OR TREATING DISEASES OF ANIMALS. b. Norfolk, Va., Mar. 6, 1886. s. Robert C. and Laura A. (Kunkel) H. Edn.: B.S., Va. Poly. Inst., 1906; M.S., *ibid.*, 1922. m. Nellie M. Creevey, Dec. 12, 1908. c.: Robert Creevey; Doris Lee. Exp.: Instr., Va. Poly. Inst., 1906-07; Chemist, Bureau of Animal Indus., Washington, D. C., 1908—. Mem.: Amer. Vet. Med. Assn.; Wash.

Acad. of Sci.; Natl. Conf. Rsch. Worker in Animal Diseases; A.A.A.S.; Phi Kappa Phi. Contrb. to: Amer. Rev. Tuberc.; Jour. Amer. Vet. Med. Assn.; Jour. Agri. Rsch.; Jour. Lab. and Clin. Med.; Jour. Indus. and Engrng. Chem.; etc. Special Int.: Chem. of the Tubercle Bacillus and Its Products, Chiefly Tuberculin, Hog Cholera Virus, Antiserums and Vaccines, and of Diagnostic Agents for Diseases Other Than Tuberculosis.

HENLINE, Henry Harrison, Secy., Amer. Inst. Elec. Engrs., 33 W. 39th St., N. Y., N. Y. ELECTRICAL ENGINEERING.

HENN, Arthur W., Editor, Publications, Carnegie Museum, Pittsburgh, Pa. ZOOLOGY.

HENNING, Francis Louis, Exec. Vice-Pres. and General Mgr., Nion Corp., 1001 North McCadden Pl., Los Angeles, Calif. PHARMACY.

HENNING, William Lewis, Hd. Dept. Animal Husbandry, Pa. State Coll., State College, Pa. ANIMAL BREEDING; GENETICS. b. Hicksville, Ohio, Jan. 4, 1900. s. George Frederick and Elizabeth S. (Brinck) H. Edn.: B.Sc., Ohio State Univ., 1921; M.Sc., Pa. State Coll., 1923; Ph.D., Univ. of Wis., 1937. m. Harriet M. Harry, May, 1942. c. William Lewis, Jr.; George Frederick. Exp.: Grad. Asst., Ohio State Univ., 1921-22; Instr. Asst. Prof., Assoc. Prof., Prof., and Hd. Dept. of Animal Husbandry, Pa. State Coll., State Coll., Pa., 1922—. Mem.: Amer. Soc. Animal Production; Amer. Genetic Assn.; A.A.A.S., Amer. Edn. Assn.; Alpha Zeta; Acacia; Gamma Sigma Delta; Phi Sigma; Sigma Xi; Phi Kappa Phi; Rotary. War Record: Navy, World War I. Special Int.: Breeding, especially Sheep, Wool, X-breeding; Hot-House Lambs.

HENNY, George Christian, Hd., Dept. of Physics and Prof. of Medical Physics, Temple Univ. Med. Schl., Philadelphia, Pa. MEDICAL RESEARCH.

HENRICKSEN, Henry Christian, retired, Eustis, Fla.

HENRIKSON, Ernest H., SPEECH AND HEARING.

HENRIQUES, Anna Stafford, Asst. Prof. of Math., Univ. of Utah, Salt Lake City, Utah. MATHEMATICS.

HENRY, Arthur Malcolm, Chf. Chemist, Atlanta Sta., U. S. Food and Drug Admin., 416 Federal Annex, Atlanta, Ga. ANALYTICAL CHEMISTRY.

HENRY, Arthur Wellesley, Prof. of Plant Pathol., Univ. of Alberta, 11612 Edinboro Rd., Edmonton, Alberta, Can. PLANT PATHOLOGY.

HENRY, David W., 2538 Goddard Rd., Toledo, Ohio. EDUCATION.

HENRY, Edward C., Div. of Ceramics, Pa. State Coll., State College, Pa. CERAMICS.

HENRY, Edwin Ruthvan, Chf., Personnel Rsch., Adjutant General's Office, War Dept., 270 Madison Ave., N. Y., N. Y. PSYCHOLOGY.

HENRY, Frank R., Simonds Worden White Co., N. Summit St. and Negley Pl., Dayton 7, Ohio. CERAMICS.

HENRY, Kenneth M., Kimble Glass Co., Box 1035, Toledo 1, Ohio. CERAMICS.

HENZE, Henry Rudolf, Prof. of Pharmaceutical Chem., C. B. 336, Univ. of Tex., Austin, Tex. PHARMACEUTICAL ORGANIC CHEMISTRY.

HEPBURN, Ann Braid, c/o Hilberry, 5737 Dorchester Ave., Chicago, Ill. COSMIC RAYS.

HEPLER, Opal Elsie, Asst. Prof. of Pathol., Northwestern Univ. Med. Schl., 303 E. Chicago Ave., Chicago, Ill. PATHOLOGY.

HEPPLEWHITE, J. W., Box 260, East Liverpool, Ohio. CERAMICS.

HEPTING, George H., Southeastern Forest Expt. Sta., Asheville, N. C. FOREST PATHOLOGY.

HERB, R. G., Dept. of Physics, Univ. of Wis. Madison, Wis. **EXPERIMENTAL NUCLEAR PHYSICS.**

HERBER, Elmer Charles, Prof. of Biol., Dickinson Coll., Carlisle, Pa. **BIOLOGY.** b. New Tripoli, Pa., Jan. 26, 1900. s. Alfred James and Amanda (Sieger) H. Edn.: A.B., Ursinus Coll., 1925; M.A., Univ. of Pa., 1929; Sc.D., Johns Hopkins Univ., 1941. m. Verna Weiss, June 15, 1929. c.: Charles Joseph. Exp.: Instr., Assoc. Prof., Prof. of Biol., Dickinson Coll., 1929—. Hon. Pos.: Pres., Pa. Acad. Sci. Mem.: Amer. Micro. Soc.; Pa. Acad. of Sci.; A.A.A.S.; Amer. Soc. Parasitologists; Sigma Xi Contrb. to Jour. Parasitology; Proc. Pa. Acad. Sci.; Physiol. Zool. Special Int.: Physiol. of Parasites; Life Cycles of Parasites.

HEREFORD, Frank Loucks, Jr., Prof. of Physics, Rouss Physical Lab., Univ. of Va., Charlottesville, Va. **NUCLEAR PHYSICS.** b. Lake Charles, La., July 18, 1923. s. Frank Loucks and Marguerite (Roussel) H. Edn.: B.A., Univ. of Va., 1943; Ph.D., *ibid.*, 1947. m. Ann Lane, Jan. 3, 1948. c. Frank Lane, Sarah Seward. Exp.: Instr. in Physics, Univ. of Va., 1942-43; Instr., Pre-meteorological Schl., Army Air Force, 1943; Rsch. Assoc., Office of Scientific Rsch. and Development, 1943-45; Natl. Rsch. Fellow, Univ. of Va., 1945-47; Physicist, Bartol Rsch. Foundation of Franklin Inst., 1947-49; Assoc. Prof. of Physics, Univ. of Va., Charlottesville, Va., 1949-52; Prof. of Physics, *ibid.*, 1952—. Mem.: Fellow, Amer. Physical Soc.; A.A.A.S.; Va. Acad. Sci.; Phi Beta Kappa; Sigma Xi; Alpha Tau Omega. Contrb. to: Physical Rev.; Jour. Franklin Inst.; Rev. Scientific Instruments; Jour. Jour. Sci. Gen. Int.: Natl. Rsch. Fellow; U. S. Naval Ordnance Development Award; J. Shelton Horsley Rsch. Award of Va. Acad. Sci. Special Int.: Interactions of Polarized Gamma Rays; Ionization and Energy Loss of High Energy Electrons; Cosmic Rays; Electron Accelerators.

HERGET, Paul, Prof. of Astron. and Dir., Cincinnati Observatory, 3442 Oakview Pl., Cincinnati, Ohio. **CELESTIAL MECHANICS.**

HERMAN, Fred Louis, Prof. of Physics and Hd. Dept., Colo. State Coll. of Edn., Greeley, Colo. **PHYSICS.**

HERMANSON, Joe L., Dean, Coll. of Liberal Arts, Bethany Coll., Lindsborg, Kans. **CHEMISTRY.** b. Garretson, S. Dak., Dec. 14, 1904. s. Herman J. and Marie (Winjum) H. Edn.: B.S., S. Dak. State Coll., 1927; M.S., Univ. of Iowa, 1928; Ph.D., State Univ. of Iowa, 1933. m. Lena A. Webb, Aug. 15, 1933. c.: Jane Marie; Mary Ellen. Exp.: Instr., Fort Scott Jr. Coll., 1928-29; Prof. of Chem., N. Dak. Tchrs. Coll., Valley City, N. Dak., 1929-30; Chemist, Yale Oil Corp., Billings, Mont., 1934-36; Asst. Prof. of Chem., Bethany Coll., Lindsborg, Kan., 1936-43, 1943-44; Asst. Prof. of Organic Chem., N. Dak. Agri. Coll., Fargo, N. Dak., 1942-43; Prof. and Hd., Dept. of Chem., Gustavus Adolphus Coll., St. Peter, Minn., 1944-48; Dean, Coll. of Liberal Arts and Prof. of Chem., Bethany Coll., Lindsborg, Kans., 1948—. Mem.: Amer. Chem. Soc.; Amer. Inst. of Chemists; Kans. Acad. Sci.; Alpha Chi Sigma; Rotary. Contrb. to: Jour. Amer. Chem. Soc. Special Int.: Zinc Alkyls with Monochloroamine and Nitrogen Trichloride.

HEROLD, Paul G., Mo. Schl. of Mines, Rolla, Mo. **CERAMICS.**

HERR, Gertrude Anne, Assoc. Prof. of Math., Iowa State Coll., Ames, Iowa. **GEOMETRY.**

HERRE, Albert W. C. T., 1216 W. Harrison St., Olympia, Wash. **ICHTHYOLOGY.**

HERRICK, Carl A., Prof. of Math. and Mechanics, Univ. of Minn., Minneapolis, Minn. **MECHANICS.**

HERRICK, Charles Judson, 236 Morningside Dr., S. E., Grand Rapids, Mich.

HERRICK, Chester Albern, Prof. of Zool. and Veterinary Sci., Univ. of Wis., Madison, Wis. **PARASITOLOGY.**

HERRICK, Earl Howard, Prof. of Zool., Kans. State Coll., Manhattan, Kans. **ENDOCRINOLOGY.**

HERRICK, Glenn W., Prof. of Entomol., Emeritus, Cornell Univ., 219 Kelvin Place, Ithaca, N. Y. **BIOLOGY AND CONTROL OF INSECTS INJURIOUS TO THE HOUSEHOLD AND TO SHADE TREES.** b. Otto, N. Y., Jan. 5, 1870. s. Stephen M. and Marion (Botsford) H. Edn.: B.S., Cornell Univ., 1896; Grad. Study at Cornell and Harvard, 1896-97. m. Nannie Burke of Statesville, N. C., Aug. 17, 1898. d. Mr. and Mrs. Theodore B. c.: Marvin T.; Stephen M.; Ann B. (Mrs. John M. Raines). Exp.: Prof., Biol., Miss. St. Coll., 1897-1908; V.-Dir., Miss. Agri. Expt. Sta., 1906-08; Prof., Entomol., Tex. State Coll., 1908-09; Prof., Entomol., Cornell Univ., 1912—. Hon. Pos.: Pres., Amer. Assn. Econ. Entomol., 1915. Mem.: A.A.A.S. (Fellow); Sigma Xi; Entomol. Soc. Amer. (Fellow); Amer. Assn. Econ. Entomol.; Biol. Soc. of Wash.; N. Y. Acad. of Sci.; A.A.U.P.; Fellow, Amer. Geog. Soc.; Acad. of Polit. Sci.; Alpha Gamma Rho; Pi Gamma Mu; Family Welfare Soc. of Ithaca. Author: A Textbook of Gen. Zool., 1907; Insects Injurious to the Household and Annoying to Man, 1914; Man. of Injurious Insects, 1925; Insect Enemies of Shade Trees, 1935; Man. for the Study of Insects (with John Henry Comstock and Anna Botsford Comstock), 1938. Contrb. to: Sci.; Sci. Mo.; Ency. Britannica. Travel: England; France; Italy; Switzerland; U. S. Special Int.: Hist. Biol. and Control of Injurious Insects.

HERRICK, James Bryan, Emeritus Prof. of Med., Rush Med. Coll., 70 East Cedar St., Apt. 902, Chicago, Ill. **INTERNAL MEDICINE, PARTICULARLY CARDIO-VASCULAR DISEASE.** b. Oak Park, Ill., Aug. 11, 1861. s. Origen White and Dora Ellen (Kettlestrings) H. Edn.: A.B., Univ. of Mich., Ann Arbor, Mich., 1882; M.A., *ibid.*, 1907; LL.D., *ibid.*, 1932; Sc.D., Univ. of Chicago, 1938; Sc.D., Northwestern 1940. m. Zella P. Davies, Oct. 10, 1889. c.: Helen Powers, John Origen. Exp.: Instr. and Prof. of Med., Rush Med. Coll., 1890-1926; Emer. Prof., *ibid.*, 1926—. Hon. Pos.: Distinguished Service Medal, A. M. A., 1939; Mem.: A.M.A., Ill. State and Chicago Med. Soc. Chicago Pathological, Chicago, Amer. Assn. of Physicians; Psi Upsilon, Univ. Club of Chicago. Author: Short History of Cardiology, 1941; Memories of Eighty Years, Univ. of Chicago Press, 1949. War Record: World War I. Mem. Exemption Bd. Gen. Int.: Generally Credited with Putting the Recognition of Coronary Thrombosis on the Map. Special Int.: Clinical Feature of Disease Particularly Those of the Heart.

HERRICK, James Arthur, Assoc. Prof. of Biol., Kent State Univ., Kent, Ohio. **PLANT PATHOLOGY.**

HERRICK, Joseph Cawdell, Rector, Church of St. John the Evangelist, Lake Mahopac, N. Y. **BIOL- OGY.**

HERRINGTON, William C., 48 Linden St., Arlington Hgts., Mass. **ZOOLOGICAL SCIENCES.**

HERRMANN, George R., Prof. of Med., Med. Schl. Univ. of Tex., 1409 Market St., Galveston, Tex. **ACADEMIC INTERNAL MEDICINE.**

HERRMANN, Louis G., Assoc. Prof. and Asst. Dir., Dept. of Surgery, Cincinnati General Hosp., Cincinnati, Ohio. **SURGERY.**

HERRON, James Hervey, Pres., James H. Herron Co., 1360 W. Third St., Cleveland, Ohio. **ENGINEERING.**

HERSAM, Ernest A., Prof. Emer. of Metallurgy, Univ. of Calif., 100 Arden Rd., Berkeley, Calif. **METALLURGY.**

HERSH, Amos H., Prof. of Biol., Western Reserve Univ., Cleveland, Ohio. **GENETICS.**

HERSHEY, Howard Garland, Assoc. State Geologist, Iowa Geol. Survey, Geol. Annex, Iowa City, Iowa. **GEOLOGY.**

HERSKOVITS, Melville Jean, Chmn. and Prof., Dept. of Anthropol., Northwestern Univ., Evanston, Ill. **ETHNOLOGY.**

HERTEL, Elmer W., Prof. of Biol., Wartburg Coll., Waverly, Iowa. **ZOOLOGY, GENETICS.** b. Clay Center, Nebr., Oct. 9, 1909. s. Charles and Sophia Marie (Meyer) H. Edn.: A.B., Peru State Tchrs., Coll., 1931; M.A., Denver Univ., 1934; Ph.D., Univ. of Nebr., 1941. m. Dorothy Mae, June 20, 1946. c. Gary William; Diane Marie. Exp.: Jr. Coll., Hebron, Nebr., 1931-33; Tchrr., Alexandria High Schl., Alexandria, Nebr., 1933-34; Prof. of Biol., Wartburg Coll., Waverly, Iowa, 1934—. Mem.: Sigma Xi; Beta Beta Beta; Phi Sigma; Kappa Delta Pi. Contrb. to: *Physiological Zoology*; *Ecological Monographs*.

HERTEL, Kenneth LaDoyt, Prof. and Hd., Dept. of Physics, Univ. of Tenn., Knoxville, Tenn. **PHYSICS.**

HERTY, Charles Holmes, Jr., Bethlehem Steel Co., Inc., Bethlehem, Pa.

HERTZFELD, Karl Ferdinand, Prof. of Physics and Hd. Dept. of Physics, Catholic Univ. of Amer., Washington, D. C. **THEORY OF PHYSICS.**

HERZBERG, G. Natl. Rech. Council of Can., Ottawa, Ont., Can. **MOLECULAR STRUCTURE.**

HERZOG, George, Asst. Prof. of Anthropol., Columbia Univ., N. Y., N. Y. **PRIMITIVE LINGUISTICS.**

HESLER, Lexemuel Ray, Prof. of Botany and Dean, Coll. of Liberal Arts, Univ. of Tenn., Knoxville, Tenn. **MYCOLOGY.**

HESS, Frank L., retired, 5509 Roosevelt St., Bethesda, Md. **ECONOMIC GEOLOGY.**

HESS, George Wellman, 8009 Fourth Ave., S. Birmingham, Ala. **MATHEMATICS.**

HESS, Harry A. **GEOPHYSICS.**

HESS, Harry Hammond, Prof., Geol. Dept., Princeton Univ., Princeton, N. J. **GEOLOGY.** b. N. Y., May 24, 1906. s. Julian S. and Elizabeth (Engel) H. Edn.: B.S., Yale Univ., 1927; Ph.D., Princeton Univ., 1932. m. Annette Burns Aug. 15, 1934. c.: George Burns; Frank Deming; Mather. Exp.: Geologist, Loangwa, Concessions, Ltd., Northern Rhodesia, 1928-29; Instr., Rutgers Univ., 1932-33; Instr. to Prof., Princeton Univ., Princeton, N. J., 1934—; Chmn., Dept. Geol., ibid., 1950—; Visiting Prof., Univ. of Cape Town, 1949-50. Hon. Pos.: Pres., Section Geodesy, Amer. Geophys. Union, 1950-53. Mem.: Geol. Soc. Amer.; Geol. Soc. S. Africa; Mineralogical Soc. Amer.; Mineralogical Soc. London; Amer. Geophys. Union; Soc. Econ. Geol.; Soc. Econ. Mineralogists and Paleontologists; Natl. Acad. Sci.; Cosmos Club; Nassau Club. War Record: Comdr., U.S.N.R. Special Int.: Mineralogy, Submarine Geol., Gravity Anomalies in Island Arcs.

HESS, Robert William, Assoc. Prof. of Forest Products, Schl. of Forestry, Yale Univ., 205 Prospect St., New Haven, Conn. **XYLOLOGY.**

HESS, Victor F., Physics Dept., Fordham Univ., Bronx 58, N. Y. **RADIOACTIVITY, COSMIC RAYS.**

HESELTINE, H(enry) Close, Prof. and Sec. Dept. of Obs. and Gyn., Univ. of Chicago, 5841 Maryland Ave., Chicago 37, Ill. **OBSTETRICS AND GYNECOLOGY (SPECIAL RESEARCH IN MICROBIOLOGY IN OBSTETRICS AND GYNECOLOGY).** b. Near Promise City, Ia., May 10, 1901. s. Henry Elmer and Armina Alice (Close) H. Edn.: B.S., Univ. of Ia., 1923; M.D., ibid., 1925; M.S., ibid., 1928. m. Grayce Chapman of North English, Ia., Dec. 19, 1925. c.: Glen C., Marvin H. Exp.: Internship Res., Univ. of Ia., 1925-27; Instr. in Obs. and Gyn., Univ. of Ia., 1927-30; Assoc., ibid., 1930-31; Instr. Obs. and Gyn., Univ. of

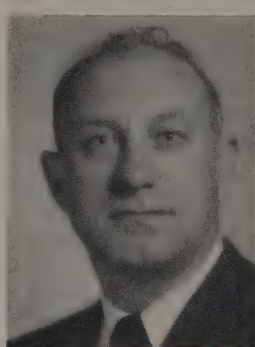


Chicago, 1931-34; Asst. Prof., ibid., 1934-42; Attend. Gynecologist, Albert Merritt Billings Hosp., 1935—; Assoc. Prof. in Obs. and Gyn., Univ. of Chicago, 1942-48; Prof. and Sec., Dept. of Obs. and Gyn., ibid., 1948—. Hon. Pos.: Consultant, Man Power Conserv. Comm., 1951-52; Trust., Ill. Med. Serv. Plan. Mem.: A.A.A.S.; Amer. Gyn. Soc.; Amer. Venereal Disease Soc.; A.A.O.B.G. and Abdominal Surg.; Chicago Gyn. Soc.; Chicago Med. Soc.; Diplomate, Amer. Bd. of Obs. and Gyn.; Fellow, A.M.A.; Fellow, Soc. Exptl. Biol. and Med.; Ill. Med. Soc.; Soc. of Amer. Bacteriol.; Soc. of Ill. Bacteriol.; Sigma Xi; Central Travel Club; Univ. of Ia. Alumni Club of Chicago; Quadrangle. Contrb. to: Obs. and Gyn., Vol. I and II, 1940, by Adair; Current Therapy, 1951; Textbook of Surg., by Christopher; Amer. Jour. of Obs. and Gyn.; Jour. of Amer. Med. Assn. Travel: Canada; Mexico. Listed in: Who's Who in Med.; A.M.S.; Who's Who in Chicago and Ill.; Dir. of Med. Specialists.

HESS, Walter Norton, Prof. of Biol. and Hd. Dept., Hamilton Coll., Clinton, N. Y. **PHYSIOLOGY.**

HESTENES, Magnus Rudolph, Assoc. Prof. of Math., Univ. of Chicago, Chicago, Ill. **MATHEMATICS.**

HESTER, Jackson Boling, Soil Technologist, Campbell Soup Co., Riverton, N. J. **SOIL AND PLANT**



NUTRITION. b. Easley, S. C., Jan. 15, 1904. s. Michael Washington and Nora (Boling) H. Edn.: B.S., Clemson Coll., 1926; M.S., Fla. Univ., 1930; Ph.D., Rutgers Univ., 1932. m. (Div.). c.: Jackson B., Jr.; Martha Jane. Exp.: Asst. Chemist, Tex. A. and M., 1926-27; Asst. Chemist, Fla. Univ., 1927-30; Asst. Chemist, Rutgers Univ., 1930-32; Soil Technologist, Va. Truck Expt. Sta., 1932-37; Soil Technologist, Campbell Soup Co., Riverton, N. J., 1937—. Hon. Pos.: Chmn., Fertilizer Div. of Amer. Chem. Soc.; Chmn., Natl. Joint Com. on Fertilizer Application. Mem.: Fellow, Amer. Inst. of Chemists; Fellow, A.A.A.S.; Alpha Zeta; Phi Kappa Phi; Sigma Xi; Gamma Sigma Epsilon; A.S.H.S.; S.S.S.A. Contrb. to: Soil Sci. Jour. Horticultural Sci.; Plant Physiol. War Record: Major, Air Corps, World War II. Special Int.: Atlantic Seaboard, Canada, Honduras, Venezuela, Middle West.

HETHERINGTON, Duncan Charteris, Prof. Anatomy, Duke Hosp., Durham, N. C. **TISSUE CULTURE AND MICROSCOPIC ANATOMY.** b. Aug. 8, 1895, Denver, Colo. s. Thompson Duncan and Anne (Welsh) H. Edn.: A.B., Colo. Coll., 1919; M.A., Univ. of Ill., 1920; Ph.D., ibid., 1922; M.D., Johns Hopkins Med. Schl., 1926. Exp.: Instr., Histol. and Neuroanat., Med. Schl., Vanderbilt, 1926-30; Assoc. Prof., Anat., Schl. Med., Duke Univ., 1930-45; Prof., 1945—. Hon. Pos.: Mem. of Comm. on Admissions, Duke Univ. Schl. Med.; Fellow of A.A.A.S.; Charter Mem. of Amer. Soc. of Parasitol.; Amer. Assn. of Anatomists; Mem., Amer. Stain Comm.; Exec. Mem. of Tissue Culture Comm., Sec.-Treas. of Tissue Culture Assn.; Mem. Soc. Exptl. Biol. and Med.; Soc. for Cell Biol.; Nu Sigma Nu; Sigma Xi; Phi Beta Kappa. Author: Ill. Biological Monographs, 1927; Scientific Articles on Tissue Culture and Histological Tech. Ph.D. Dissertation: Some Comparative Features of Nematodes and Their Significance. Travel: British Isles; France. Hobby: Books. Listed in: A.M.S.; Amer. Young Men; Who's Important in Med.; Who's Who in Amer. Med.; Who's Who Among Physicians and Surgeons; Who's Who in N. C.

HETLER, Donald McKinley, Prof. and Chmn., Dept. of Bacteriol., Mont. State Univ., Missoula, Mont. **BACTERIOLOGY, IMMUNOLOGY.**

HEUER, George J., Prof. of Surgery, Cornell Univ. Med. Coll., Surgeon-in-Chg., N. Y. Hosp., 91 Captains, Lane, Rye, N. Y. **SURGERY.**

HEUER, Russell P., General Refractories Co., 1520 Locust St., Philadelphia 2, Pa. CERAMICS.

HEUSE, Edward Otto, Prof. of Chem., Southern Methodist Univ., Dallas, Tex. GENERAL AND PHYSICAL CHEMISTRY.

HEUSER, Chester Henry, Rsch. Assoc., Johns Hopkins Univ., Med. Schl. Baltimore, Md. MEDICAL SCIENCES.

HEUSER, Gustave Frederick, Prof. Poultry Husbandry, Cornell Univ., Ithaca, New York. POULTRY HUSBANDRY. s. Gustave Frederick and Louise (Tenjost) H. Edn.: B.S., Cornell Univ., 1915; M.S.A., *ibid.*, 1916; Ph.D., *ibid.*, 1918. m. Mabel Catherine Bohall of Lowville, New York, 1918; d. Mr. and Mrs. Elton Bohall, m. Mildred Lind Livingston of Livingston, Wis., 1940. d. Mr. and Mrs. Robert N. Livingston. c.: Gustave F., Jr.; Elton Bohall; Richard Allen; Arthur Robert; Robert Livingston. Exp.: Instr., N. Y. St. Coll. of Agri., 1916-18; Asst. Prof., *ibid.*, 1918-22; Prof., *ibid.*, 1922—. Mem.: Sigma Xi; A.A.A.S.; A.A.U.P.; Poultry Sci. Assn.; Ed., Poultry Sci., 1936-41; World's Poultry Sci. Assn., Sec.-Treas., 1923—; Ed., World's Poultry Sci. Jour., 1945—; Officer, du "Merite Agricole" Govt. of France, 1951; Acacia: Hobasco Lodge 716, F. and A. M., Master, 1934; Chmn., Local Boy Scout Troop. Author: Feeding Poultry, 1946 (John Wiley and Sons, N. Y.); Poultry Management, Heuser, Hall and Bruckner, 1952, (J. B. Lippincott Co., Chicago.). Contrb. to: Poultry Sci.; Jour. Nutrition; Editor, Poultry Sci. Ph.D. Dissertation: Growth and Development of the Domestic Fowl with Special Reference to the Male. Travel: Europe; Canada; U. S.; Mexico; Alaska. Recreations and Hobbies: Photography. Special Int.: Animal and Poultry Nutrition.

HEUSINKVELD, David, Asst. Agronomist, Dept. of Agron., Agr. Expt. Sta., Univ. of Ill., Urbana, Ill. BOTANICAL SCIENCES.

HEWETSON, Frank Nutter, Assoc. Prof. of Pomology, Pa. State Coll., Arendtsville, Pa. HORTICULTURE.

HEWETT, Donnel Foster, Staff Geologist, U. S. Geol. Survey, Rsch. Assoc., Calif. Inst. of Tech., 1460 Rose Villa St., Pasadena 4, Calif. GEOLOGY, GEOLOGY OF MINERAL DEPOSITS OF THE WESTERN U. S. b. Irwin, Pa., June 24, 1881. s. George Claud and Hetty Barclay (Foster) H. Edn.: Metallurgical Engr., Lehigh Univ., 1902; Ph.D., Yale Univ., 1924. Hon. Deg.: D.S., Lehigh Univ., 1942. m. Mary Amelia Hamilton, Jan. 14, 1909. Exp.: Asst. in Metallurgy, Lehigh Univ., 1902-03; Mining Engr., Pittsburgh Testing Lab., 1903-09; Geologist, U. S. Geol. Survey, 1911—; Rsch. Assoc., Calif. Inst. of Tech., Pasadena, Calif., 1947—. Hon Pos.: Pres., Soc. Econ. Geologists, 1937; Vice-Pres., Geol. Soc. Amer., 1935 and 1945. Mem.: Geol. Soc. Amer.; Soc. Econ. Geologists; Mineralogical Soc. Amer.; Natl. Acad. Sci.; Amer. Acad. Arts and Sci.; Amer. Chem. Soc.; Wash. Acad. Sci.; Amer. Inst. of Mining and Metallurgical Engrs.; Tau Beta Pi; Phi Beta Kappa; Sigma Xi. Gen. Int.: First Amer. to Recognize Vanadium Deposit at Minas Ragra, Peru in Jan., 1906; One of U.S.G.S. party to First Recognize Rare-earth Deposit at Minas Ragra, Peru in Jan., 1906; One of and Ore Deposits of the Mohave Desert, Calif.

HEWITT, Earl Albon, Prof. of Veterinary Physiol., Iowa State Coll., Ames, Iowa. BLOOD, PHYSIOLOGY OF POULTRY.

HEWITT, Harold George, Univ. of Conn., Coll. of Pharmacy, 150 York St., New Haven, Conn. CHEMISTRY.

HEWITT, L. C., Laclede-Christy Co., 4705 Ridge-wood Ave., St. Louis 16, Mo. CERAMICS.

HEYER, George Gustav, Chmn. and Dir., Museum Amer. Indian, Heye Foundation, Broadway at 115th St., N. Y., N. Y. ANTHROPOLOGY.

HEYL, Paul Renno, retired, Natl. Bureau of Standards, 2800 Ontario Rd., N. W., Washington, D. C. PHYSICS.

HEYROTH, Francis Farnham, Asst. Prof. of Applied Physiol., Coll. of Med., Univ. of Cincinnati, Cincinnati, Ohio. TAXICOLOGY.

HEYS, Florence Mary, Dept. of Pediatrics, Baylor Univ., Coll. of Med., Houston, Tex. INFECTIOUS DISEASES.

HEYWANG, Burt Walter, Poultry Husbandman, Chf. Southwest Poultry Expt. Station, Rt. 1, Box 44, Glendale, Ariz. AGRICULTURE.

HIBBARD, Hope, Prof. of Zool., Oberlin Coll., Oberlin, Ohio. ZOOLOGY, CYTOLOGY.

HIBBEN, Frank Cummings, Assoc. Prof. of Anthropol., Univ. of N. Mex., Albuquerque, N. Mex. ARCHAEOLOGY.

HICKMAN, Cleveland P., 315 Greenwood Ave., Greencastle, Ind. ZOOLOGICAL SCIENCES.

HICKMAN, James Blake, Asst. Prof. of Chem., W. Va. Univ., Morgantown, W. Va. CHEMISTRY. b. Charleston, W. Va., Nov. 29, 1921. s. James Howard and Bessie (Barnsgrove) H. Edn.: B.S., W. Va. Univ., 1942; M.S., *ibid.*, 1943; Ph.D., Pa. State Coll., 1950. m. Martha Louise Hornor, June 25, 1948. Exp.: Chemist, Carbide and Carbon Chemicals Corp., South Charleston, W. Va., 1943-45; Instr., Dept. of Chem., W. Va. Univ., Morgantown, W. Va., 1946-49, 1950; Asst. Prof., *ibid.*, 1951—. Hon. Pos.: Chmn.-Elect, Northern W. Va. Section, Amer. Chem. Soc. Mem.: Chem. Soc. (London); A.A.A.S.; N.E.A.; W. Va. Acad. Sci.; Phi Beta Kappa; Sigma Xi; Phi Lambda Upsilon; Pi Mu Epsilon; Delta Phi Alpha. Contrb. to: Jour. Amer. Chem. Soc.; Jour. Phys. Chem.; Jour. Chem. Edn.; Science; Proc. W. Va. Acad. Sci. Special Int.: Binary Liquid Mixtures.

HICKMAN, Kenneth Claude Deveraux, Vice-Pres. and Dir. of Rsch., Distillation Products, Inc., 755 Ridge Rd. West, Rochester, N. Y. VACUUM CHEMISTRY.

HICKMAN, Roger Wayne, Assoc. Dir., Physical Labs., Harvard Univ., Cambridge, Mass. PHYSICS.

HICKS, Lawrence Emerson, Dir., Ohio Wildlife Rsch. Sta., U. S. Biol. Survey and Asst. Prof. of Zool., Ohio State Univ., Columbus, Ohio. BOTANICAL SCIENCES.

HICKS, Victor, Tech. Physicist, Ansco Corp., 224 LeRoy St., Binghamton, N. Y. PHYSICS.

HIEDEMANN, Egon A (Ilfred) J (oseph), Hd., Dept. Physics and Astron., Mich. State Coll., E. Lansing, Mich. ULTRASONICS. b. Feb. 1, 1900, Cologne, Ger. s. Hans and Mathilde (Hilgers) H. Edn.: Ph.D., Univ. Goettingen, 1921. m. Ruth Weichert of Allenstein, Ger., Feb. 29, 1944. d. Otto and Margaret Weichert. c.: Robert; Annette. Exp.: Asst., Phys. Dept., Univ. of Cologne, 1922-31; Priv. Doc., *ibid.*, 1931-38; Assoc. Prof., *ibid.*, 1938-41; Prof., Hd. Dept., Strasburg Univ., 1941-45; Prof., Dept., Karlsruhe, Inst. Tech., 1946; Dean, *ibid.*, 1946; Lectr., U. S. D. A., Wash., D. C., 1950. Mem.: Acoustical Soc. of Amer.; Sigma Chi; Sigma Pi Sigma; Fellow, Amer. Phys. Soc. Travel: Europe; U. S. Hobby: Philosophy. Listed in: A.M.S. Special Int.: Ultrasonics Colloidal Physics, Molecular Physics.

HIERS, George Octavius, 21 Coventry Rd., Baldwin, N. Y. PHYSICS.

HIESEY, William McKinley, Staff Mem., Carnegie Inst. of Wash., Stanford Univ., Calif. EXPERIMENTAL TAXONOMY.

HIESTAND, William Andrew, Prof. of Physiol., Purdue Univ., Lafayette, Ind. PHYSIOLOGY.

HIGBEE, Edward C., Assoc. Prof., Graduate Schl. of Geo., Clark Univ., Worcester, Mass. SOILS AND AGRICULTURAL LAND USE. b. New York City, Dec. 29, 1910. s. Roscoe B. and Celia (Walker) H. Edn.: B.A., Univ. of Wis., 1932; M.A., *ibid.*, 1938; Ph.D., Johns Hopkins 1949. m. Florence, 1938. c.: Joan. Exp.: Senior Agronomist, U. S. Dept. of Agri., Wash., D. C., 1943-46; Foreign

Service, *ibid.*, 1941-46; Soil Conservation Service, *ibid.*, 1939-41; Head, Div. of Agronomy, Instituto Agropecuario Nacional, Guatemala City, Guatemala, 1945-46; Fellow, Asst. Prof. and Rsch. Assoc., Johns Hopkins, Baltimore, Md., 1947-49; Visiting Lectr. and Assoc., Prof., Yale Univ., New Haven, Conn., 1950; Assoc. Prof., Clark Univ., Worcester, Mass., 1951—. Mem.: Sigma Xi; Soil Sci. Soc. of Amer.; Amer. Soc. of Agronomy; Amer. Geographical Soc. Contbr. to: The Geographical Review; Scientific Monthly; Economic Botany. Gen. Int.: Specific Agronomic Experience in Brazil, Peru, Ecuador, Panama, Nicaragua, Puerto Rico, Guatemala, El Salvador, and the U. S. Special Int.: Tropical Soils and Agronomy. Soils and Land Use of the U. S.

HIGDON, Archie, Instr. of Mechanics, U. S. Military Acad., West Point, N. Y. **APPLIED MATHE-**



MATICS; MECHANICS. b. Oct. 22, 1905, Saline, Mo. s. James C. and Angeline H. Edn.: B.S., S. Dak. State Coll.; M.S., Ia. State Coll.; Ph.D., *ibid.*, m. Alice Mae Cole, Sept. 7, 1931. d. Henry E. and Rhoda Cole. c.: Mary Jane; Sarah Ann and Martha Jean. Exp.: Grad. Asst., Math., Ia. State Coll., 1928-30; Instr., Math., N. Dak. State Coll., 1930-34; Part-time Instr., Math., Ia. State Coll., 1934-36; Instr., Theor. and Applied Mech., 1936-38; Asst. Prof., Theor. and Applied

Mech., Ia. State Coll., 1938-42; Maj., U. S. Army Air Corps, 1942-46; Lt. Col., U. S. Army Air Corps, June-Oct., 1946; (while on leave from Ia. State); Assoc. Prof. T. and A.M. Sept., 1946-July, 1948, Prof., Ia. State Coll., 1948-Apr., 1951; Lt. Col., U.S.A.F. Hq. 15th A. F., 1951-52; (Military leave from Ia. State Coll.); Lt. Col., U.S.A.F., Instr. of Mechanics, U. S. Military Acad., West Point, N. Y., 1952—. Published: Engrng. Mech., Dec. 1949, Prentice-Hall, Inc., Joint Author with Wm. B. Stiles. Mem.: Phi Kappa Phi; Sigma Xi; Pi Mu Epsilon; Pi Kappa Delta (Natl. Speech). Ph.D. Dissertation: Stresses in Moderately Thick Rectangular Plates. Special Int.: Engrng. Mechanics and Mechanics of Materials.

HIGGINS, Edith C., Supvr. State Seed Lab., N. Dak. Agri. Coll., Fargo, N. Dak. **SEED-TESTING.**

HIGGINS, George Marsh, Prof. of Experiment Biol., Univ. of Minn., Mayo Foundation, 515 15th Ave., S. W., Rochester, Minn. **EXPERIMENTAL BIOLOGY.**

HIGGINS, Harold Leonard, 322 Franklin St., Newton, Mass. **MEDICINE.**

HIGGINS, John Woodman, Chmn. of Bd. and Treas., Worcester Pressed Steel



Co., 100 Barber Ave., Worcester 6, Mass. **HISTORY OF WORLD'S STEEL INDUSTRY; RESEARCH AND PRODUCTION OF ALLOY STEEL.** b. Worcester, Mass., Sept. 1, 1874. s. Milton Prince and Katharine (Chapin) H. Edn.: B.S., Worcester Poly. Inst., 1896. Hon. Deg.: D.Eng., Worcester Polytech. Inst., 1953. m. Clara Louise Carter, Jan 17, 1906. c.: Carter Chapin; Bradley Carter; Mary Louise. Exp.: Supt. and Secy., Plunger Elevator Co., Worcester, Mass., 1896-1905; Gen. Mgr., Worcester, Mass., 1905-12; Pres. and Treas., *ibid.*, 1912-50; Chmn. of Bd. and Treas., *ibid.*, 1950—. Hon. Pos.: Donor and Founder, Pres. and Treas. of John Woodman Hig-

gins Armory, Inc. Mem.: Natl. Assn. of Mfgs.; Amer. Soc. of Automotive Engrs.; Amer. Antiquarian Soc.; Medieval Acad. of Amer.; Amer. Soc. of Mech. Engrs.; Inst. of Coimbra; Royal Acad. of Sci.; Soc. des Amis du Musee de l'Armee; Junta de Estudios Hist. de San Jose de Buenos Aires; Royal Acad. of Fine Arts; Royal Acad. of Hist. Sci.; Epsilon Pi Tau; Sigma Alpha Epsilon; Armor and Arms Club of N. Y.; Rotary; Business Hist. Soc.; Worcester Hist. Soc.; Econ. Club of Worcester; Engrs. Club of N. Y. Contbr. to: Mech. Engrng.; Iron Age; Indus. Edn. Mag.; Harvard Bus. Rev.; Indus. Edn. Mag. War Record; Mem. of Adv. Committee of Boston Ordnance Dist., W. W. II. Gen. Int.: Founder of Steel Museum; The John Woodman Higgins Armory, Inc., Worcester, Mass., Devoted to the Hist. of World's Steel Indus. of All Times and Places. Special Int.: Metal Stampings; Hist. of Steel; Armor and Arms; First Iron Works of Saugus, Mass.; Ex-Trustee, Worcester Independent Trade H. S.

HIGGINS, Montgomery Earle, 2914 45th St., N. W., Washington, D. C. **CARDIOLOGY.**

HIGGINS, Waldo W., 655 S. Harrison Ave., Kankakee, Ill. **CERAMICS.**

HIGGINSON, Gordon Kenneth, Dir., Psychological Services, Univ. of Portland, Portland 3, Ore. **COUNSELING AND PSYCHOTHERAPY.** b. Millet, Alberta, Can., July 5, 1919. s. F. J. and M. C. (Howard) H. Edn.: B.S., Univ. of Alberta, 1948; M.S., Univ. of Ore., 1949; Ph.D., Univ. of Portland, 1951. m. Margaret Grant, Aug. 23, 1945. c. Howard Duane; Kenneth Grant. Exp.: Asst. Prof. of Clinical Psychol., Univ. of Portland, Portland 3, Ore., 1951—; Consulting Psychologists, McLain Schl. for Boys, Dir. Psychological Service, Portland, Ore., 1953—. Mem.: Amer. Psychological Assn.; Ore. Psychological Assn.; Portland Assn. of Clinical Psychologists; Amer. Assn. for Adv. of Sci. Special Int.: Comparing Different Methods of Psychotherapy with different population. Psychotherapy with Juvenile Delinquents.

HIGHBERGER, John Henry, Hd., Leather Technical Dept., General Dyestuff Corp., N. Y., N. Y.; 1108 Belle Ave., West Englewood, N. J. **PROTEIN CHEMISTRY.**

HIGHTOWER, Raymond Lee, Prof. and Hd., Dept. of Sociol., Kalamazoo Coll., Kalamazoo, Mich. **SOCIOLOGY.**

HIGINBOTHAM, Noe, Asst. Prof., Dept. of Botany, State Coll. of Wash., Pullman, Wash. **PLANT PHYSIOLOGY.**

HIGLEY, Louis Allen, Dean, King's Coll., New Castle, Del. **GEOLOGY.**

HILBERRY, Norman, Assoc. Dir., Argonne Natl. Lab., P. O. Box 5207, Chicago, Ill. **PHYSICS.**

HILBORN, Merle Tyson, Assoc. Plant Pathologist, Maine Agri. Expt. Station, Orono, Maine. **PLANT PATHOLOGY.**

HILDEBRAND, Alexander Anderson, Agril. Scientist, Dominion Lab. Plant Pathol., Harrow, Ont., Can. **PLANT PATHOLOGY.**

HILDEBRAND, Earl Martin, Assoc. Prof. of Biol., Tex. A. and M. Coll., College Station, Tex. **PLANT PATHOLOGY, BACTERIOLOGY.**

HILDEBRAND, Joel Henry, Univ. of Calif., Berkeley 4, Calif.

HILDEBRAND, Samuel Frederick, Sr. Ichthyologist, Fish and Wildlife Service, Div. Fishes, Natl. Museum, Washington, D. C. **ICHTHYOLOGY.**

HILDEBRANDT, Frank Merrill, Chg. Fermentation Rsch., U. S. Indus. Chemicals, Inc., 60 E. 42nd St., N. Y., N. Y. **FERMENTOLOGY.**

HILDEBRANDT, Theophil Henry, Prof. and Chmn., Dept. of Math., Univ. of Mich., Ann Arbor, Mich. **MATHEMATICS.**

HILDING, Anderson C., Clinical Prof. of Otolaryngology, Univ. of Minn., Minneapolis, Minn. **OTOLOGY.**

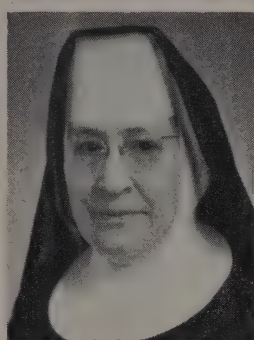
HILDRETH, Aubrey C., Prin. Plant Physiologist and Supt., U. S. D. A., Cheyenne Horticultural Field Station, P. O. Box 1250, Cheyenne, Wyo. **PLANT PHYSIOLOGY.**

HILDRETH, Gertrude, 415 W. 118th St., N. Y., N. Y. **EDUCATION.**

HILE, Ralph Oscar, Aquatic Biologist, Fish and Wildlife Service, U. S. Dept. of Interior, Univ. Museums Bldg., Ann Arbor, Mich. **FISHERY BIOLOGY.**

HILGARD, Ernest Ropiequet, Stanford Univ., Stanford, Calif.

HILGER, Mary Inez (Sister of the Order of St. Benedict), Rsch. Ethnol., St. Benedict's Convent, St. Joseph, Minn. **ETHNOLOGICAL RESEARCH DEALING WITH THE GROWTH, DEVELOPMENT AND CULTURAL BACKGROUND OF THE PRIMITIVE CHILD.** b. Oct. 16, 1891, Roscoe, Minn. d. Frederick William and Elizabeth (Terres) H. Edn.: B.A., Univ. of Minn., 1923; M.A., Cath. Univ., 1925; Ph.D., *ibid.*, 1939. Awarded Anna Hope Hudson Scholarship for Grad. Studies, Cath. Univ., Two Yrs. Exp.: Tchr., Cathedral Grade Schl., St. Cloud, Minn.;



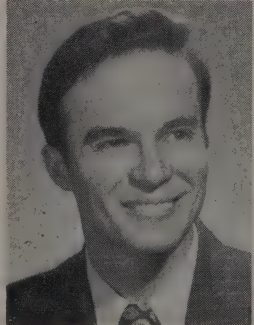
Tchr., Cathedral H. S., St. Cloud; Tchr. and Dir. of Studies, St. Mary's Acad., Altoona, Wis.; Hd., Dept. of Sociol., Coll. of St. Benedict, St. Joseph, Minn.; Dean of Coll.; Rsch. Ethnol., St. Benedict's Convent; Lectr., Sociol. and Psychol. in Schls. of Nursing Connected with St. Cloud Hosp., St. Cloud, Minn., Mercy Hosp., Charlotte, N. C., and St. Alexis Hosp., Bismarck, N. Dak., World War II; Fellow of Amer. Anthropological Assn. Mem.: Amer. Anthropol. Assn.; Catholic Anthropol. Conf.; A.A.A.S.; Amer. Catholic Sociol. Soc.; Instituto Indigenista Interamericano. Author: Chippewa Child Life and Its Cultural Background; Bur. of Amer. Ethnology Bull., 146; Arapaho Child Life and Its Cultural Background, B.A.E. Bull., 148; Arcaucanian Child Life and Its Cultural Background (forthcoming publication); etc. Ph.D. Dissertation: Social Survey of One Hundred Fifty Chippewa Indian Families on the White Earth Reservation of Minn. (Published). War Record: See Above. Travel: N. Amer.; Central and S. Amer.; Caribbean Seas.

HILL, Albert Frederick, Rsch. Fellow, Botanical Museum, Harvard Univ., Cambridge, Mass. **ECOLOGICAL BOTANY.**

HILL, Arthur Joseph, Whitehead Prof. of Organic Chem. and Dir., Sterling Chem. Lab., Yale Univ., New Haven, Conn. **ORGANIC CHEMISTRY.**

HILL, Ben H., Prof. of Biol., High Point Coll., High Point, N. C. **ZOOLOGICAL SCIENCES.**

HILL, David Lawrence, Assoc. Prof. of Physics, Vanderbilt Univ., Nashville, Tenn. **NUCLEAR PHYSICS.** b. Booneville, Miss., Nov. 11, 1919. s. David Alexander and Mabel Clare (Brown) H. Edn.: B.S., Calif. Inst. of Tech., 1942; Ph.D., Princeton Univ., 1949. m. Mary M. Shadow, Dec. 31, 1950. c. David Albert. Exp.: Assoc. Physicist and Group Leader, Metallurgical Lab., Argonne Natl. Lab., Chicago, Ill., 1942-46; Asst. Prof. of Physics, Vanderbilt Univ., Nashville, Tenn., 1949-52; Assoc. Prof. of Physics, *ibid.*, 1952—; (on leave from Vanderbilt Univ.), Consultant



1952-54. Hon. Pos.: Guest Scholar at Inst. for Theoretical Physics, Copenhagen, by invitation of Niels Bohr. Mem.: A.A.A.S.; Amer. Physical Soc.; Pi Kappa Alpha; Pi Kappa Delta; Sigma Xi; A.A.-U. P. Contbr. to The Physical Rev.; Rev. Scientific Instruments. Gen. Int.: Mem. of Council, 1951-53, and Chmn., 1953-54, Federation Amer. Scientists. Special Int.: Dynamics of Nuclear Fission; Collective Model of Nucleus; Ranges of Coincidence Techniques in Measuring Heavy Particle Distributions in Energy; Programmed Electronic Computation; Fission Physics.

HILL, Clyde Milton, Sterling Prof. and Edn. and Chmn. Dept., Yale Univ., New Haven, Conn. **EDUCATION.**

HILL, Edward Lee, Prof. of Physics, Univ. of Minn., Minneapolis, Minn.

HILL, Ercell C., O. W. Ketcham, Crum Lynne, Pa. **CERAMICS.**

HILL, G. Albert, Conn. State Hwy. Comm., 165 Capitol Ave., Hartford, Conn. **CHEMISTRY AND HIGHWAY ADMINISTRATION.**

HILL, George Edward, Hd., Dept. of Edn. and Supvr. Tchr. Trng., Kans. State Tchrs. Coll., Emporia, Kans. **EDUCATION.**

HILL, George R., Dir., Dept. of Agril. Rsch., Amer. Smelting and Refining Co., Salt Lake City, Utah. **PLANT PHYSIOLOGY.**

HILL, George W., Prof. of Rural Sociol., Univ. of Wis., Madison, Wis. **RURAL SOCIOLOGY.**

HILL, Harry, Assoc. Prof. of Physics, Wash. and Jefferson Coll., Washington, Pa. **PHYSICS.**

HILL, Henry Harris, Hd., Dept. of Agri. Chem. and Chemist, Va. Agri. Expt. Station, Va. Poly. Inst., Blacksburg, Va. **CHEMISTRY.**

HILL, Henry Osborne, Supt., Blackland Expt. Sta., Box 414, Temple, Tex. **SOIL CONSERVATION RESEARCH.**

HILL, John Arthur, Dean, Coll. of Agri., Dir., Expt. Sta., Prof. of Wood Tech. and Wood Specialist, Univ. of Wyo., Laramie, Wyo. **WOOD TECHNOLOGY.**

HILL, Justina, 6 E. 30th St., Baltimore, Md. **MEDICAL SCIENCES.**

HILL, Samuel E., Rsch. Chemist, Behr-Manning Corp., Troy, N. Y. **PHYSIOLOGY.**

HILL, Theron Silas, Hd., Dept. of Neurol. and Psychiatry, Univ. of Tenn., 874 Union Ave., Memphis, Tenn. **NEUROLOGY AND PSYCHIATRY.**

HILL, Thomas Joseph, Prof. of Clinical and Oral Pathol. and Therapeutics, Inst. Pathol., Western Reserve Univ., Cleveland, Ohio. **ORAL PATHOLOGY.**

HILLE, Carl Einer, Prof. of Math., Yale Univ., New Haven, Conn. **MATHEMATICS.**

HILLE, Hermann, Pres., Hille Lab., 4849 N. Western Ave., Chicago, Ill. **COLLOID CHEMISTRY.**

HILLEBOE, Guy Leonard, Supvng. Prin., Public Schls., 176 Park Ave., Rutherford, N. J. **EDUCATION.**

HILLEGAS, Arthur Burdette, Sr. Scientist in Chg. Med. Mycology, Rsch. Labs., Parke, Davis and Co., Detroit, Mich. **MYCOLOGY.**

HILLENBRAND, Harold, Asst. Prof. of Ethics and Social Relations, Loyola Univ., 1757 W. Harrison St., Chicago, Ill. **DENTISTRY.**

HILLIARD, Curtis Morrison, Prof. of Biol. and Public Health, Simmons Coll., Boston, Mass. **PUBLIC HEALTH SCIENCE.**

HILLIER, James, Chf. Fundamental Rsch. Electron Microscopy and Rsch. Physicist, RCA Lab., Princeton, N. J. **ELECTRON MICROSCOPY.**

in Theoretical Physics, Los Alamos Scientific Lab.,

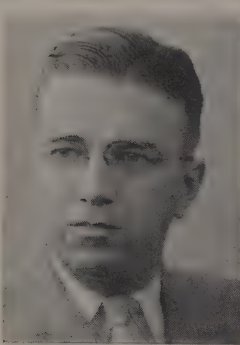
HILLKOWITZ, Philip, Dir. of Trng. Schl. Med. Technologists, Univ. of Denver, Denver, Colo. **PATHOLOGY**.

HILLMAN, Charles Clark, Dir., Jackson Memorial Hosp., Miami, Fla. **HOSPITAL ADMINISTRATION**.

HILLS, Joseph Lawrence, Dean and Emer. Dir., Coll. of Agri., Univ. of Vt., 59 N. Prospect St., Burlington, Vt. **AGRONOMY**.

HILLS, Thomas McD., Prof., Vassar Coll., Poughkeepsie, N. Y. **GEOLOGY**.

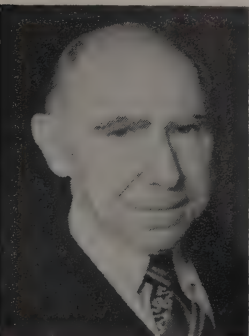
HILTON, Wallace Atwood, Prof. and Head, Dept. of Physics, William Jewell Coll. Address: 322



Arthur, Liberty, Mo. **ACOUSTICS**. b. Aug. 17, 1911, Hardin, Mo. s. Ruby Clare and Mary Elizabeth (Atwood) H. Edn.: A.B., Wm. Jewell Coll., 1933; A.M., Mo., 1939; Ed.D., ibid., 1941; M.S., Univ. of Ark., 1948. m. Ruth Brooks of Warrensburg, Mo., Aug. 25, 1940. c.: John Wallace, Robert Brooks. Exp.: Student Asst. in Phys. and Math., Wm. Jewell Coll., 1932-33; ibid., summer, 1935; Instr., Sci. and Math., Statesbury, Mo., H. S.; Supt. of Schls., ibid., 1936-38; Instr. in Phys.

and Chemistry, Hickman High Schl., Columbia, Mo., 1939-42; Graduate Asst. in Edn., Univ. of Mo., summers, 1939-41; Instr., ibid., Lab. Schl., summer, 1942; Asst. Prof. in Physics, Eastern Ill. State Tchrs. Coll., August, 1942, but Resigned to Enter Armed Forces, Sept., 1942; Instr. in Meteor. and Navigation, A.A.F.T.C., 1942-46; Asst. in Physics, Univ. of Ark., 1946; Prof. of Phys., Wm. Jewell Coll., 1946—; Hd. Dept. of Physics, 1948—. Mem.: Chmn., Comm. Course of Study in Phys., State Dept. of Edn., Mo., 1940; Chmn., Comm., Emergency Phys., Mo. High Schl., 1942; A.A.A.S.; A.P.S.; A.S.E.E.; A.S.A.; A.A.P.T.; R.E.S.A.; I.R.E. (Inst. Radio Engrs.); Phi Delta Kappa; Kappa Mu Epsilon; Sigma Pi Sigma; Phi Gamma Delta; Bpt. Contrb. to: Amer. Jour. Phys.; Phi Gamma Delta; Schl. and Comm.; Amer. Schl. Bd. Jour.; Schl. Exec.; Schl. Activities; Schl. Sci. and Math.; Sci. Leaflet; Jour. of Higher Edn.; Gamma News; etc. Ed.D. Dissertation: Some Functions of Edn. at the Jr. Coll. Level. War Record: Enlisted, A.U.S., Sept., 1942; Capt., Instr. with Air Corps; Served 42½ months. Hobbies: Photography; Telescope making. Listed in: A.M.S.; Who Knows—and What. Special Int.: Acoustical Impedance and Absorption Coefficients of acoustical tile.

HILTON, William Atwood, Prof. of Zool. Emer., Pomona Coll., 1263 Dartmouth Ave., Claremont,



Calif. **NERVOUS SYSTEM AND SENSE ORGANS, MARINE ZOOLOGY AND AMPHIBIA**. b. Vannetten, N. Y., June 27, 1878. s. William H. and Mary (Atwood) H. Edn.: B.S., Cornell Univ., 1899; Ph.D., ibid., 1902. m. Emily S. Boardman, Sept. 3, 1912. c.: Dorothea Atwood; Eleanor Boardman. Exp.: Grad. Fellow, Cornell Univ., 1900-01; Asst. in Histology, ibid., 1901-03; Instr., Asst. Prof., Assoc. Prof. of Zool., Pomona Coll., Claremont, Calif., 1905-08; Instr. Histology, Cornell Univ., 1908-11; Instr. and Asst. Prof. of Anatomy, Univ. of Minn., 1911-12; Prof. of Zool., Pomona Coll., Claremont, Calif., 1912—. Hon. Pos.: Pres., Sigma Xi Club of Southern Calif., 1931-33; etc. Mem.: Fellow, Entomol. Soc. Amer.;

Fellow, Herpetological League; Amer. Soc. Zoologists; Amer. Assn. Anatomists; Sigma Xi; Phi Beta Kappa; Gamma Alpha; Chi Psi; Fellow, A.A.-A.S. Author: Biol. Outline, 1916; Nervous System and Sense Organs, 1940. Contrb. to: Amer. Jour. Anatomy; Jour. Morphology; Amer. Naturalist; etc. Special Int.: Marine Zool.; Nervous System of Invertebrates; Distribution of Primitive Arthropods.

HIMES, Joseph Sandy, Jr., Prof. of Sociol., N. C. Coll., Durham, N. C. **SOCIOLOGY**. b. Jefferson City, Mo.,



Apr. 4, 1908. s. Joseph Sandy and Estelle (Bomar) H. Edn.: A.B., Oberlin Coll., 1931; A.M., ibid., 1932; Ph.D., Ohio State Univ., 1938. m. Estelle Jones of Columbus, Ohio, Dec. 22, 1941. d. Mr. and Mrs. Lloyd Jones. Exp.: Shorter Coll., N. Little Rock, Ark., Chmn., Dept. Mod. Lang., 1932-33; Samuel Huston Coll., Austin, Tex., Chmn., Dept., Romance Lang., 1933-34; Urban League of Columbus, Ohio, Editorial and Feature Writer, 1943-46; N. C. Coll., Durham, N. C., Prof. of Sociol., 1946—. Hon.

Pos.: W. C. Handy Foundation for the Blind. Mem.: Amer. Sociol. Soc.; Amer. Acad. of Polit. and Social Sci.; Amer. Assn. of Social Workers; A.A.U.P.; Sou. Sociol. Soc.; Alpha Phi Alpha. Contrb. to: Jour. of Social Psychol.; Social Casework; Pylon. Ph.D. Dissertation: The Negro Delinquent in Columbus, Ohio, 1935. Listed in: Dir. Amer. Scholars.

HIMWICH, Harold Edwin, Chf., Med. Div., Edgewood Arsenal, Md. **PHYSIOLOGY**.

HINCK, Claus F., Jr., Prof. of Chem., N. Y. Univ., N. Y., N. Y. **BIOCHEMISTRY**.

HINCKLEY, Elmer Dumond, Hd. Prof. of Psychol. and Dir. Bureau Vocational Guidance and Mental Hygiene, Box 2007, Univ. Sta., Gainesville, Fla. **PSYCHOLOGY**.

HINEGARDNER, Wilbie Scott, Rsch. Chem., Group Leader, Pioneering Rsch. Chem., Electrochemicals Dept., E. I. du Pont de Nemours and Co., 8449 W. Rivershore Dr., Niagara Falls, N. Y.

HINELINE, Gertrude White, 425 Rich Ave., Mt. Vernon, N. Y. **ANIMAL BEHAVIOR**.

HINER, Richard Lee, Assoc. Animal Husbandman, U. S. D. A., Agri. Rsch. Center, Beltsville, Md. **MEAT RESEARCH**.

HINES, Harry Matlock, Prof. and Hd. Dept. Physiology, State Univ. of Iowa, Iowa City, Iowa. **PHYSIOLOGY**. b. February 16, 1893, Spencer,

Iowa. s. Lafayette and Clara (Logan) H. Edn.: B.A., State Univ. of Iowa, 1916; M.S., ibid., 1917; Ph.D., ibid., 1922. m. Leona G. Fisher of Spirit Lake, Iowa, March 29, 1920. d. Henry and Eliza Fisher. c.: Howard Harry; Eileen Barbara. Exp.: Instr., Physiol., State Univ. of Ia., 1919-22; Asst. Prof., Physiol., State Univ. of Ia., 1922-26; Assoc. Prof., Physiol., ibid., 1926-38; Rsch. Assoc., Cornell Univ., 1939-40; Prof., Physiol., State Univ. of Ia., 1938-44; Prof. and Hd., Physiol., ibid., 1944—. Mem.: A.A.A.S.; Amer. Physiol. Soc.; Amer. Cong. of Phys. Med.; Ia. Acad. of Sci.; Soc. Expt. Biol. and Med.; Amer. Inst. of Cardiol.; Harvey Soc.; Sigma Xi; Gamma Alpha; Alpha Omega Alpha; Lions. Contrb. to: Sci. and Med. Jour. Ph.D. Dissertation: Studies in Creatine Metabolism. War Record: 2nd Lt., San. Corps, 1918. Listed in: A.M.S.; Who's Who in Amer. Special Int.: Physiol.; Neuromuscular and Circulatory Areas; Phys. Med.; Muscular Atrophy.

HINES, Murray Arnold, Prof. Emer., Northwestern Univ., Evanston, Ill. 300 Knowles Ave., Winter Park, Fla. **CHEMISTRY**.

HINMAN, Edgar Harold, Chf. Malaria Control Div., Health and Safety Dept., Tenn. Valley Authority, Wilson Dam, Ala. **MALARIA CONTROL**.

HINMAN, Frank, Sr., Clinical Prof. of Urology, Univ. of Calif., Third and Parnassus Sts., San Francisco, Calif. **UROLOGY**.

HINSEY, Joseph Clarence, Prof. and Hd. Anatomy and Dean, Cornell Univ. Med. Coll., N. Y., N. Y. **ANATOMY**.

HINTON, William Augustus, Chf. Lab. Dept., Boston Dispensary, 25 Bennet St., Boston, Mass. **MEDICAL SCIENCE**.

HIRD, John Denby, Prof. Emer. Chem. and Exec. Secy. Med. and Dental Schls., Georgetown Univ. Med. Schl., 1717 Irving St., Washington, D. C. **CHEMISTRY**.

HIRE, Charles, Prof. of Physics, Ind. Univ., Bloomington, Ind. **PHYSICS**.

HIRSCH, Edwin Frederick, Dir., Henry Baird Favill Lab., St. Luke's Hosp. and Rsch. Assoc. and Assoc. Prof., Univ. of Chicago, 5830 Stony Island Ave., Chicago, Ill. **PATHOLOGY**.

HIRSCH, Oscar, 186 Commonwealth Ave., Boston 16, Mass. **OTOLARYNGOLOGY**.

HIRSCHFELDER, Joseph Oakland, Prof. of Chem., Univ. of Wis., Madison, Wis. **THEORETICAL CHEMISTRY**.

HIRSH, Frederick Rudolph, Jr., Visiting Assoc. Prof. of Physics, Univ. of Southern Calif., Los Angeles, Calif.; 1491 N. Holliston Ave., Pasadena, Calif.

HIRSH, Henry D., Asst. Treas., Edwal Lab., Inc., 732 Federal St., Chicago, Ill. **CHEMISTRY**.

HIRSH, Ira J., **SPEECH AND HEARING**.

HIRST, Katharine Rebecca, Prof. and Hd., Dept. of Biol., Cedar Crest Coll., Allentown, Pa. **BACTERIOLOGY**.

HISAW, Frederick Lee, Harvard Univ., 16 Divinity Ave., Cambridge 38, Mass.

HISCOCK, Ira Vaughan, Prof. of Public Health and Chmn. Grad. Studies, Yale Univ., New Haven, Conn. **PUBLIC HEALTH**.

HITCHCOCK, Albert Edwin, Assoc. Plant Physiologist, Boyce Thompson Inst. Plant Rsch., Inc., 1086 N. Broadway, Yonkers, N. Y. **PLANT PHYSIOLOGY**.

HITCHCOCK, David Ingersoll, Assoc. Prof. of Physiol., Yale Univ. Schl. of Med., New Haven, Conn. **PHYSICAL BIOCHEMISTRY**.

HITCHCOCK, Fred Andrews, Prof. of Physiol., Ohio State Univ., Columbus, Ohio. **PHYSIOLOGY**.

HITCHINGS, George Herbert, Sr. Biochemist, Wellcome Rsch. Labs., Tuckahoe, N. Y. **BIOCHEMISTRY**.

HIXSON, Arthur Warren, Prof. and Hd., Dept. of Chem. Engrng., Columbia Univ., N. Y., N. Y. **CHEMICAL ENGINEERING**.

HIXON, Ralph, c/o Iowa State Coll. of Agri. and Mechanical Arts, Ames, Iowa. **CARBOHYDRATE RESEARCH**.

HLAVATY, Vaclav, Prof. of Math., Grad. Inst. for Applied Math., Ind. Univ., Bloomington, Ind. **GEOMETRY**. b. Louny, Czechoslovakia, Jan. 27, 1894. s. Vaclav and Laura (Feltl) H. Edn.: Ph.D., Prague Univ., 1921. m. Olga Neumann, Jan., 1930. c.: Olga. Exp.: Prof., Prague Univ., 1931-48; Prof., Sorbonne, Paris, Spring Term, 1948; Prof. of Math., Ind. Univ., Bloomington, Ind., 1948—. Mem.: Acad. of Sci., Prague; Royal Soc. of Sci., Prague; Inst. of Sci., Bucharest; Soc. royale des Sci., Liege; Ind. Acad. Sci.; Sigma Xi. Author: Uvod Do Neuklidovske Geometrie, Prague, 1926; Sur les Courbes dans les Espaces Generalises, Paris, 1930; Differencialni Geometrie Krivek a Plocha a Tensorovy Pocet, Prague, 1937; Differentialgeometrie der Kurven und Flachen und Tensorrechnung,

Groningen, 1939; Differencialni Primkova Geometrie I, Prague, 1941; Differencialni Primkova Geometrie II, Prague, 1941; Differentielle Liniengeometrie, Groningen, 1945; Projektivni Geometrie I, Prague, 1944; Projektivni Geometrie II, Prague, 1945; Differential Line Geometry, Groningen, 1953. Contr. to: Abhandlungen des Mosk. Seminars; Annals of Math.; Bull. Soc. Math. of Sci.; Canadian Jour. Math.; Casopis Pestov. Math. a Fys.; Christiaan Huygens; Proc. Amer. Math. Soc.; Proc. Natl. Sci. Acad.; etc. Special Int.: Differential Geometry of Curved Spaces; Mathematical Background of Relativity and of unified relativity.

HOADLEY, Leigh, Prof. of Zool. and Master, Leverett House, Harvard Univ., Cambridge, Mass. **EMBRYOLOGY**.

HOAG, J. Barton, U. S. Coast Guard Acad., New London, Conn. **PHYSICS, MATHEMATICS**.

HOAGLAND, Hudson, Rsch. Prof. Physiol., Tufts Med. Schl. and Exec. Dir., Worcester Foundation Exptl. Biol., 222 Maple Ave., Shrewsbury, Mass. **PHYSIOLOGY**.

HOAR, Carl Sherman, Assoc. Prof. of Biol., Williams Coll., Williamstown, Mass. **BOTANY**.

HOARE, James Patrick, Asst. Prof. of Chem. and Physics, Trinity Coll., Washington 17, D. C. **PHYSICAL CHEMISTRY. CHEMICAL KINETICS AND THERMODYNAMICS**. b. Denver, Colorado, Jan. 9, 1921. s. Patrick Joseph and Mary (Breen) H. Edn.: B.S., Regis Coll., 1943; M.S., Catholic Univ. of Amer., 1948; Ph.D., ibid., 1949. Exp.: Grad. Asst., Catholic Univ. of Amer., Washington, D. C., 1946-49; Instr., Trinity Coll., Washington, D. C., 1949-51; Asst. Prof., ibid., 1951-53. Mem.: Amer. Chem. Soc.; Sigma Xi; Theta Alpha Delta. Contrb. to: Jour. of Amer. Chem. Soc. Gen. Int.: Received Bonfil Four Year Scholarship to Regis Coll., Denver, Colo., 1939; Also Mullen Fellowship to Catholic Univ., Washington, D. C. Special Int.: Have Done Rsch. Work in Mechanism of Enzyme Reactions and in Chem. Kinetics of Urea-Urease System.

HOBBS, Charles Seright, Hd., Animal Husbandry Dept., S. Dak. State Coll., Brookings, S. Dak. **AGRICULTURE**.

HOBBS, Clinton Howard, Asst. Prof. of Biol., Kent State Univ., Kent, Ohio. **PLANT PHYSIOLOGY**.

HOBBS, Joseph Raymond, Physician, Main St., Williamsburg, Mass. **INTERNAL MEDICINE**.

HOBBS, William Herbert, Prof. Emer. Geol., Univ. of Mich., Ann Arbor, Mich. **GEOLOGY**.

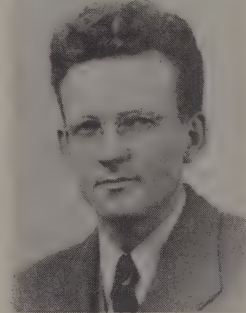
HOBMAIER, Michael, Assoc. Prof. of Comparative Pathol., Hooper Foundation Med. Rsch., Univ. of Calif., Second and Parnassus Aves., San Francisco, Calif. **COMPARATIVE PATHOLOGY**.

HOBSON, James Richard, Dir. of Child Placement, Brookline Public Schls., 5 Holden St., Brookline, Mass. **CHILD PSYCHOLOGY**.

HOCH, John Hampton, Prof. of Botany and Pharmacognosy, Med. Coll. of S. C., Charleston, S. C. **PHARMACOGNOSY**.

HOCKETT, Elmer, Assoc. Editor and Exec. Asst., Chemical Abstracts, Ohio State Univ., Columbus, Ohio. **CHEMISTRY**.

HOCKEY, John Frederick, Officer in Chg., Lab. Plant Pathol., Box 600, Kentville, N. S., Can. **PLANT PATHOLOGY**.

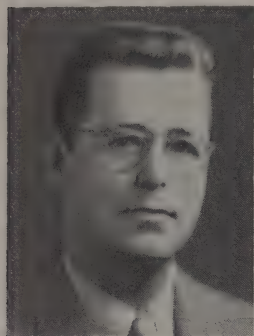


HOCKING, William Ernest, Alford Prof. Emer., Harvard Univ., Cambridge, Mass. Madison, N. H. PHILOSOPHY.

HODEK, F. E., Jr., 2700 N. Karlov Ave., Chicago 39, Ill. CERAMICS.

HODGDON, Albion Reed, Assoc. Prof. and Hd. Dept. of Botany, Univ. of N. H., Durham, N. H. SYSTEMATIC ANATOMY.

HODGDON, Linwood L., Asst. Prof., Dept. of Econ. and Sociol., Kans. State Coll., Manhattan, Kans. SOCIOLOGY AND ANTHROPOLOGY. b. Plainfield, Vt., Mar. 19, 1917. s. O. W. and Ethel May (Newell) H. Edn.: Grad. Asst., Mich. State Coll., 1948-49; Asst. Prof., Dept. of Econ. and Sociol., Kans. State Coll., Manhattan, Kans., 1949—. Mem.: Amer. Anthropological Assn.; Soc. for Applied Anthropol.; Soc. for Amer. Archaeol.; A.A.U.P.; Sigma Alpha Phi. Contrb. to: Mich. Acad. Sci.; Arts and Letters. War Record: Lt., U. S. N. R., World War II. Gen. Int.: Exec. Comm., Kans. State Coll. Chapter, A.A.U.P. Special Int.: Sociol. and Anthropol.; Rsch. in Criminology and in Social Aspects of Medical Care.



HODGE, Charles, Jr., 21 E. Willow Grove Ave., Philadelphia, Pa. ZOOLOGICAL SCIENCES.

HODGE, Edwin T., Prof. of Econ. and Indus. Geol., Ore. State Coll., 2915 N. W. Luray Terrace, Portland, Ore. GEOLOGY.

HODGES, Frederick Allen, Microanalyst, Federal Security Agency, Food and Drug Admin., Washington, D. C. PLANT PATHOLOGY AND MYCOLOGY.

HODGES, James Hallett, Assoc. Prof. of Chem., Univ. of Mich., Ann Arbor, Mich. CHEMISTRY.

HODGES, Paul Chesley, Prof. of Roentgenology, Univ. of Chicago, 9837 Longwood Dr., Chicago, Ill. RADIOLOGY.

HODGKIN, William Newton, Pres., Va. State Bd. Dental Examiners, Warrenton, Va. GENERAL DENTAL PRACTICE.

HODGKISS, Harold Edward, Prof. Emer., Entomol. Extension, Pa. State Coll., 147 W. Park Ave., State College, Pa. ENTOMOLOGY, ECONOMIC ENTOMOLOGY. b. Cambridge, Mass., Apr. 8, 1879. s. The Rev. Samuel and Margaret Elizabeth (Searles) H. Edn.: B.S., Mass. Agri. Coll. (now Univ. of Mass.), 1902; B.S., Boston Univ., 1902. m. Emma Louise Knight (dec.), Nov. 29, 1905. c.: Arthur Salisbury; William Searles. Exp.: Deputy State Nursery Inspector for Mass., 1902-04; Asst. Entomologist, N. Y. State Agril. Expt. Sta., 1904-07; Field Entomologist for Northern Ill., Ill. State Natural History Survey, 1907-08; Asst. Entomologist, N. Y. State Agril. Expt. Sta., 1908-19; Prof. of Entomol. Extension, Pa. State Coll., State College, Pa., 1919-44; Prof. Emer. Entomol. Extension, ibid., 1944—. Hon. Pos.: Vice-Pres., Amer. Assn. Econ. Entomologists, Chmn., Sect. of Extension, 1932; Chmn., Entomol. Soc. of Pa., 1929. Mem.: Fellow, A.A.A.S.; Pa. Acad. Sci. (Emer.); Entomol. Soc. Amer.; Sigma Xi; Epsilon Sigma Phi. Contrb. to: Jour. Econ. Entomol. Special Int.: Tree Fruit Insects; Field Crop Insects; Plant Mites, Eriophyidae; Arsenical Residues on Fruits and Vegetables; Parasites for Insect Suppression; Area Suppression of Field Crops, Fruit and Shade Tree Insects; Insect Control as a part of the Annual Farms Program.

HODGMAN, Charles David, Assoc. Prof. of Physics, Case Schl. Applied Sci., Cleveland, Ohio. PHYSICS.

HODGSON, Robert Willard, Prof. of Subtropical Horticulture and Asst. Dean, Univ. of Calif., Los Angeles, Calif. SUBTROPICAL HORTICULTURE.

HODSON, Floyd, Consulting Paleontologist, P. O. Box 368, Hallandale, Fla. PALEONTOLOGY.

HOEN, Albert Berthold, Pres., A. Hoen and Co., Inc., 100 Ridgewood Rd., Baltimore, Md. GEOLOGY, GEOGRAPHY.

HOEN, Reu Everett, Hd. Chem. Dept., Pacific Union Coll., Angwin, Calif. ORGANIC CHEMISTRY.

HOERSCH, Victor A., Asst. Prof. of Math., Univ. of Ill., Urbana, Ill. MATHEMATICS.

HOFER, Lawrence John Edward, Physical Chemistry, U. S. Bureau of Mines, 4800 Forbes Street, Pittsburgh, Pa. CHEMISTRY. b. June 26, 1915, Salt Lake City, Utah. s. William Mathias and Friederike Wilhemina (Loder) H. Edn.: B.A., Univ. of Utah, 1937; M.A., ibid., 1939; Ph.D., Univ. of Rochester, 1941. m. Marguerite Ione Tears of Chapin, New York, December 25, 1941. d. John Edward and Mary Ione Wheeler. c.: Richard Lawrence. Exp.: Teaching Fellow, Univ. of Utah, 1937-38; Tchng. Asst., Univ. of Rochester, 1938-40; Sherman Clarke Fellow, Univ. of Rochester, 1940-41; Rsch. Assoc., Natl. Defense Rsch. Comm., Carnegie Inst. of Tech., 1941-43; Physical Chem., U. S. Bur. of Mines, 1943—; Acting Chief, Physical Chem. Sect., Rsch. and Development Div., Office of Synthetic Liquid Fuels, Bur. of Mines, 1948-50; Chief, ibid., 1950—. Hon. Pos.: General Chmn., Pittsburgh Diffraction Conference, 1952. Mem.: Amer. Chemical Soc.; Amer. Crystallography Assn.; Amer. Phys. Soc.; Phi Beta Kappa; Sigma Xi; Phi Kappa Phi. Contrb. to: Jour. Amer. Chem. Soc.; Nature; Anal. Chem.; Jour. Chem. Phys.; Industrial and Engrng. Chem.; Sci.; Jour. Colloid and Physical Chem.; and Bur. of Mines Publications. Ph.D. Dissertation: Fluorescence of Cyanine Dyes; Photochemistry of Hydrogen Iodine Monochloride Reaction. Hobbies: Swimming; Photography. Listed in: A.M.S.; Who Knows—and What. Special Int.: Crystallography, Chemical Kinetics, Photochemistry, Magnetochemistry.

HOFF, Ebbe Curtis, Prof. of Neurological Sci., Med. Coll. of Va., Richmond, Va. EXPERIMENTAL NEUROLOGY. b. Rexford, Kans., Aug. 12, 1906. s. Dr. Hans Jacob and May (Knudson) H. Edn.: B.S., Univ. of Wash., 1928; B.A., Univ. of Oxford, England, 1930; Ph.D., ibid., 1932; M.A., ibid., 1936; M.R.C.S., England, 1939; L.R.C.P., London, 1939; B.M., B.Ch., Univ. of Oxford, England, 1941; M.D., ibid., 1953. m. Phebe Margaret Flather, June 2, 1934. c.: Phebe May; David Christian-sen. Exp.: Demonstrator in Histology, Univ. of Oxford, England, 1930-32; Sterling Rsch.



Fellow in Physiol., Yale Univ. Schl. of Med., New Haven, Conn., 1932-33; Alexander Browne Coxé Rsch. Fellow in Neurophysiol., ibid., 1933-34; Instr. in Physiol., ibid., 1934-36; Rsch. Asst. in Aviation Med. for the Natl. Rsch. Council attached to the Dept. of Physiol., ibid., 1940-43; Prof. of Physiol., Sarah Lawrence Coll., Bronxville, N. Y., 1941-43; Assoc. Prof. of Neurol. Sci., Med. Coll. of Va., Richmond, Va. (on military leave of absence, 1943-46); 1943; Med. Dir., Div. of Alcohol Studies and Rehabilitation, Dept. of Health, Commonwealth of Va., 1948—; Prof. of Neurol. Sci., Med. Coll. of Va., Richmond, Va., 1950—. Hon. Pos.: Consultant to the Surgeon General, U. S. Army, Co-Editor, Hist. of Preventive Med., Hist. of Med. Dept., U. S. Army, World War II, 1947; Mem., Com. of Consultants for the Study of the Indexes to Med. Lit., Office of the Surgeon General, U. S. Army, 1948; Mem., Panel on Shipboard and Submarine Med., Rsch. and Development Bd., Natl. Military Establishment, 1949. Mem.: Sigma Xi; Phi Beta Kappa;

Amer. Physiol. Soc.; Royal Soc. of Med., London, Fellow; British Med. Assn.; Fellow, A.M.A.; Fellow, A.A.A.S.; Assn. of Military Surgeons of the U. S.; Aero-Med. Assn. of the U. S.; Hist. of Sci. Soc.; Va. Neuropsychiatric Assn.; Med. Library Assn.; Med. Soc. Va.; Soc. for Exptl. Biol. and Med.; Alpha Omega Alpha; N. Y. Acad. Sci.; Amer. Psychiatric Assn.; Alpha Kappa Kappa. Author: A Bibliographical Sourcebook of Compressed Air, Diving and Submarine Med., 1948. Co-author: A Bibliography of Aviation Med., 1942; A Bibliography of Aviation Med. Supplement, 1944. Contrb. to: Proc. Royal Soc.; Jour. Physiol.; Trans. Amer. Micro. Soc.; Amer. Jour. Physiol.; Arch. Neurol. Psychiatry; etc. War Record: Commissioned Lt. Comdr., Med. Corps, U. S. N. R., 1943; Schl. of Aviation Med., Naval Air Station, Pensacola, Fla., Designated Aviation Med. Examiner, Asst. Med. Officer, Naval Auxiliary Air Station, Barin Field, Pensacola, Fla., 1943-44; On Staff of the Aviation Section, Rsch. Div., Bureau of Med. and Surgery, Naval Dept., Wash., D. C., 1944-46; Promoted to Commander MC, U.S.N.R., 1945; Asst. Naval Attache, U. S. Embassy, London, Hd. of Office of Med. Liaison and Rsch., Com. Nav. Eu. London, 1946; Flight Surgeon to Reserve Carrier Air Group (CVEG-65) Naval Air Reserve Trng. Unit, Anacostia, D. C., 1946. Special Int.: Cerebral Regulation of Autonomic Functions; Military Med.; Rsch. and Therapy in the Field of Alcoholism.

HOFFER, George Nissley, Mgr., Midwest Office, Amer. Potash Inst., Inc., Washington, D. C. PLANT NUTRITION.

HOFFMAN, Ira Curtis, Asst. Horticulturist, Ohio Agri. Expt. Station, 208 W. Univ. St., Wooster, Ohio. HORTICULTURE.



b. Feb. 12, 1888, Auburn, Ind. s. Martin Lewis and Cora Ellen (Grube) H. Edn.: B.S.A., Purdue Univ., 1915; M.S.A., ibid., 1916; Wash. Univ., St. Louis, Mo., 1916-17; Ph.D., Ohio State Univ., 1937. m. Evalene Elma Schwarm of Lafayette, Ind., June 30, 1920. d. Adolph and Hedwig W. c.: Robert Curtis; Wm. Schwarm. Exp.: Asst. Prof., Hort., Colo. Agri. Coll., 1917-18; Asst. Hort., Purdue Univ., Lafayette, Ind., 1920-27; Asst. Plant Pathol., U. S. D. A., B.P.I., 1919-20; Asst. Hort., Ohio A.E.S., 1927-49; Assoc. Hort., Ohio A.E.S., 1949-51; Asst. Prof., ibid., 1951—; Ext. Spec. in Veg. Grad., 1939-44. Mem.: A.A.A.S., Fellow; Amer. Soc. for Hort. Sci.; Sigma Xi; Alpha Zeta; Gamma Sigma Delta. Ph.D. Dissertation: The Relation Between Water Deficiency and Blossom-end Rot of Tomatoes. War Record: U. S. Army, F. A., Central Officers Trng. Schl., 1918. Gen. Int.: Inventor, Corn Seed Grading Machine Patented by Purdue Univ. for Pub. Good. Contrb. to: Market Growers Jour. Hobbies: Hunting; Fishing. Listed in: A.M.S.; Who's Who in Ohio; Who's Who in Central States; Internatl. Blue Book; Who Knows—and What.

HOFFMAN, Jeanette A., SPEECH AND HEARING.

HOFFMAN, John James, Hd. Depts. of Chem. and Physics, St. Mary's Coll., Terrace Heights, Winona, Minn. CHEMISTRY.

HOFFMAN, Samuel Verplanck, 258 Broadway, N. Y., N. Y. MATHEMATICS, ASTRONOMY.

HOFFMAN, William Samuel, Dir. Biochem., Cook County Hosp., 629 S. Wood St., Chicago, Ill. BIO-CHEMISTRY, MEDICINE.

HOFFMEISTER, Donald Frederick, Curator, Museum Natl. History and Asst. Prof., Dept. of Zool., Univ. of Ill., Urbana, Ill. MAMMALOLOGY.

HOFFSTADT, Rachel Emilie, Prof. of Microbiol., Univ. of Wash. Med. Schl., Seattle, Wash. BACTERIOLOGY.

HOGAN, Albert Garland, Chmn., Dept. of Agri. Chem., Univ. of Mo., Columbia, Mo. ANIMAL NUTRITION.

HOGAN, John Vincent Lawless, Pres., Radio Interventions, Inc., and Faximile, Inc., 730 Fifth Ave., N. Y., N. Y. COMMUNICATIONS.

HOGNESS, Thortin R., Prof. of Chem., Univ. of Chicago, Chicago, Ill. CHEMISTRY.

HOGUE, Mary Jane, Assoc. Anatomy, Univ. of Pa., Philadelphia, Pa.; 503 N. High St., West Chester, Pa. ANATOMY, PROTOZOOLOGY.

HOISINGTON, Louis Benjamin, Prof. of Psychol., Univ. of Okla., Norman, Okla. PSYCHOLOGY.

HOKE, Calm Morrison, Chemist, Jeweler's Technical Advice Co., 123 William St., N. Y., N. Y. PRECIOUS METALS TECHNOLOGY.

HOLADAY, Horace Asa, E. R. Squibb and Sons, New Brunswick, N. J. CHEMISTRY, MEDICINE.

HOLBERT, James R., Vice-Pres. and General Mgr., Funk Bros. Seed Co., Box 828, Bloomington, Ill. CORN BREEDING.

HOLCH, Arthur E., Chmn., Dept. of Botany, Univ. of Denver, Denver, Colo. PLANT ECOLOGY.

HOLCK, Harald Groth Oxholm, Assoc. Prof. of Pharmacol., Univ. of Nebr., Lincoln, Nebr. PHARMACOLOGY.

HOLCOMB, Dysart Edgar, Dean of Engrng., Tex. Technical Coll., Lubbock, Tex. CHEMICAL ENGINEERING. b. Wellington, Tex., May 1, 1917. s. Henry and Jennie (Dysart) H. Edn.: B.S., Tex. Technical Coll., 1937; M.S., Univ. of Mich., 1938; Ph.D., ibid., 1941. m. Margaret Appelman of Midland, Mich., Aug. 6, 1938. d. Mr. and Mrs. William Appelman. c.: Dysart; Margaret Ann; Mary Carolyn; John Steven. Exp.: 1950—, Dean of Engrng., Tex. Tech. Coll.; 1949-50, Sr. Proj. Technologist, Rsch. and Devel. Dept., Sinclair Refining Co., Harvey, Ill.; 1946-49, Assoc. Prof. of Chem. Engrng., Purdue Univ., Lafayette, Ind.; 1941-46, Chem. Engr., Univ. Oil Products Co., 310 S. Mich. Ave. Mem.: Tau Beta Pi; Sigma Xi; Phi Kappa Phi; Phi Lambda Upsilon; Omega Chi Epsilon; Amer. Inst. of Chemical Engrs.; Amer. Soc. for Engrng. Education; Rotary. Author: Twelve Scientific Publications in the Field of Chem. Engrng. Contrb. to: Ind. Engrng. Chem.; The Petroleum Engr.; Jour. of Amer. Chem. Soc. Ph.D. Dissertation: The Calculation of Natural Gasoline Absorbers and Stabilizers. Hobbies: Woodworking; Golf. Listed in: Who's Who in the Mid-West; Who's Who in Amer. Special Int.: Distillation, Mass Transfer, Thermodynamics.

HOLDRIDGE, Leslie Rensselaer, RFD 6, Norwich, Conn. FOREST ECOLOGY.

HOLDSWORTH, Robert Powell, Hd., Dept. of Forestry, Mass. State Coll., Amherst, Mass. FORESTRY.

HOLFORD, Frances E., Dept. of Med. Bacteriol., Univ. of Wis., Madison, Wis. MEDICINE.

HOLL, Dio Lewis, Prof. and Hd. Dept. of Math., Iowa State Coll., Ames, Iowa. MATHEMATICS.

HOLL, Frederick John, Assoc. Prof. of Biol., Univ. of Buffalo, N. Y. PARASITOLOGY.

HOLLADAY, Lewis Littlepage, retired, 434 Brandon Ave., Charlottesville, Va. PHYSICS.

HOLLAND, Ernest O., Pres. Emer., State Coll. of Wash., 305 Columbia St., Pullman, Wash. EDUCATION.

HOLLAND, Maurice, Industrial Rsch. Adviser, 40 W. 40th St., N. Y., N. Y. INDUSTRIAL RESEARCH ORGANIZATION AND MANAGEMENT.

HOLLANDER, Charles S., Rohm and Haas Co., 5000 Richmond St., Philadelphia, Pa. ORGANIC CHEMISTRY.

HOLLANDER, Franklin, Hd., Gastroenterology Rsch. Lab., Mt. Sinai Hosp., One East 100th St., N. Y. 29, N. Y. **PHYSIOLOGY.** b. N. Y., N. Y., Jan. 19, 1899. s. Louis and Annie (Oshinsky) H. Edn.: B.S., Columbia Univ., 1919; Ph.D., *ibid.*, 1924. m. Muriel K. Hollander, June 20, 1926. c.: John; Michael. Exp.: Med. Fellow, Natl. Rsch. Council, Yale Univ. Med. Schl., 1925-27; Asst. Prof. in Physiol., N. Y. Med. Coll., 1927-32; Mem., Rsch. Staff, Biol. Lab., Cold Spring Harbor, L. I., 1928-32; Rsch. Assoc., Columbia Univ. Dental Schl., 1932-36; Assoc. in Physiol., Hd. of Gastroenterology Rsch. Lab., Mt. Sinai Hosp., N. Y., N. Y., 1936—; Lectr. in Med., Coll. of Physicians and Surgeons, Columbia Univ., 1947-51; Asst. Clinical Prof. of Physiol., *ibid.*, 1951—. Hon. Pos.: Assoc. Editor, Gastroenterology. Mem.: Fellow, A.A.A.S.; Amer. Gastroenterological Assn.; Amer. Soc. Biol. Chemists; Amer. Physiol. Soc.; Amer. Statistical Assn.; Harvey Soc.; Assoc. Fellow, N. Y. Acad. Med.; Fellow, N. Y. Acad. Sci.; Soc. for Exptl. Biol. and Med.; Phi Beta Kappa; Phi Lambda Upsilon; Sigma Xi. Contrb. to: Amer. Jour. Physiol.; Proc. Soc. Exptl. Biol. and Med.; Gastroenterology; Trans. N. Y. Acad. Sci.; etc. Special Int.: Dental Caries; Physiol. of the Digestive Tract.

HOLLCROFT, Temple Rice, Prof. and Chmn., Dept. of Math., Wells Coll., Aurora, N. Y. **ALGEBRAIC GEOMETRY.**

HOLLINGSWORTH, Marion, Asst. Prof. of Chem., Ohio State Univ., Columbus, Ohio. **ANALYTICAL CHEMISTRY.**

HOLLINSHEAD, William Henry, Assoc. Prof. of Anatomy, Duke Univ. Schl. of Med., Durham, N. C. **ANATOMY.**

HOLLISTER, Joseph Steffens, Consultant, El Bulito, Gaviota, Calif. **PETROLEUM GEOLOGY.**

HOLLISTER, Paul Livingstone, Assoc. Prof., Biol. Tenn. Polytech. Inst., Cookeville, Tenn. **ECOLOGY: ECONOMIC ENTOMOLOGY.** b. September 20, 1898, Irish Grove, Ill. s. Moses and Mary Suzanna (Harris) H. Edn.: A.B., Cumberland Univ., 1915; B.P.E., Y.M.C.A. Coll., Chicago, 1922; M.S., Univ. of Chicago, 1929; Ph.D., Geo. Peabody Coll., 1939. m. Mildred Ellingson of Red Wing, Minn., July 30, 1923. d. Anna K. and L. Martin Ellingson. c.: Donald Paul; Margery Ann; Mary Elizabeth. Exp.: Instr., Latin and Biol., 1915-17; Asst., Biol. Sci., Y.M.C.A. Coll., 1919-22; Instr., *ibid.*, 1923-28; Hd., Dept. of Biol., Blackburn Coll., 1929-34; Fellow (Teaching), Peabody Coll., 1934-37; Hd., Biol. Dept., Cumberland Univ., 1937-43; Assoc. Prof., Biol. and Sci. Tchng., Peabody, summers, 1940-43; Emergency Instr. U. S. Army Aircrew, Physics, M.G.C., 1944; Hd., Sci. Dept. Pembroke State Coll., 1944-46; Tenn. Polytech. Inst., 1946—. Mem.: Tenn. Acad. of Sci.; Sigma Xi; Kappa Delta Pi; (Special colleges, not national fraternity.) Phi Delta Kappa; A.A.A.S.; T.E.A.; Natl. Sci. Tchrs. Assn. Contrb. to: Physiological Zool.; Jour. Tenn. Acad. of Sci. Ph.D. Dissertation: Development of the Techn. of Introductory Biol. in Amer. Colls., 1876-1936. War Record: Med. Dept., U. S. Army, 1917-19; Clin. Lab. Work; Sgt. Travel: U. S.; Can. Achievement: Geol.; Relig. Edn. ments of Gen. Int.: Rsch. on Effects of Some Sprays on Apples; Physiol. of Exercise; Responses of Certain Animals to Soil Conditions. Hobbies: Tennis;

HOLLISTER, Solomon Cady, Dean, Coll. of Engrng., Cornell Univ., Ithaca, N. Y. **CIVIL ENGINEERING.**

HOLLOWAY, M. G., Los Alamos Scientific Lab., Los Alamos, N. M. **NUCLEAR PHYSICS.**

HOLLOWELL, Eugene Amox, Sr. Agronomist, U. S. D. A., Bureau Plant Indus. and Agri. Engrng., Beltsville, Md. **AGRICULTURE.**

HOLM, George E., Hd., Rsch. Labs., Bureau Dairy Indus., U. S. D. A., 3513 R St., N. W., Washington, D. C. **BIOCHEMISTRY.**

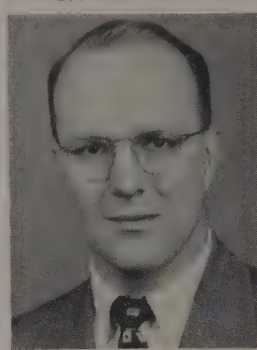
HOLMAN, Emile Frederic, Prof. of Surgery, Stanford Univ. Hosp., Clay and Webster Sts., San Francisco, Calif. **MEDICINE.**

HOLMAN, William Frank, Prof. and Supvng. Engr., Univ. of Minn., Minneapolis, Minn. **ENGINEERING.**

HOLMAN, William Ludlow, retired, 109 Park Rd., Toronto, Ont., Can. **BACTERIOLOGY.**

HOLMES, Arthur Dunham, Rsch. Prof. of Chem., Mass. State Coll., Amherst, Mass. **CHEMISTRY, NUTRITION.**

HOLMES, Darrell Asst. Prof. of Edn., and Psychology, San Diego State Coll., San Diego, Calif.



EDUCATIONAL RESEARCH. b. Angola, Ind., May 28, 1921. Edn.: B.A., Ohio State Univ., 1941; M.A., *ibid.*, 1948; Ph.D., *ibid.*, 1950. m. Eleonore, Nov. 1943. c.: Kip; Jeff; Lynn; Mary. Exp.: Fellow in Schl. Building Rsch., Bur. of Edn. Rsch., Ohio State Univ., Columbus, 1949; Evaluation Div., Bur. of En. Rsch., *ibid.*, 1949-50; Asst. Prof. of Edn. and Psychol., Muskingum Coll., New Concord, Ohio, 1950-52; Asst. Prof. of Edn. and Psychol., San Diego State 1952—. Mem.: Amer. Edn. Rsch. Assn.; Amer. Statistical Assn.; Natl. Council on Measurements Used in Edn.; Natl. Vocational Guidance Assn.; A.A.U.P.; Phi Delta Kappa. Author General Edn. at Muskingum Coll., 1952. Contrb. to: Educational Rsch. Bull. Special Int.: Tests and Measurements; Attitudes, Values, Personal Adjustment; Reading; Curriculum.

HOLMES, Dwight O. W., Pres., Morgan State Coll., Baltimore, Md. **EDUCATION.**

HOLMES, Forrest Shepperson, Chf. Seed Inspector, Agri. Expt. Sta., Univ. of Md., College Park, Md. **BOTANY.**

HOLMES, Frederick Taylor, Consulting Physicist, 247 Equitable Bldg., Denver, Colo. **PHYSICS.**

HOLMES, George Winslow, Clinical Prof. Emer., Harvard Med. Schl., Boston, Mass.; Little River Hill, Belfast, Maine. **RADIOLOGY.**

HOLMES, Harriet F., Rsch. Assoc. Emer. Pathol. and Assoc. Prof., Univ. of Chicago, Chicago, Ill.; S. Batavia Rd., Batavia, Ill. **PATHOLOGY.**

HOLMES, Harry N., Prof. Emer. of Chem., Oberlin Coll., 329 Reamer Pl., Oberlin, Ohio. **CHEMISTRY.**

HOLMES, Henry Wyman, Prof. of Edn., Harvard Univ., Cambridge, Mass. **HIGHER EDUCATION.**

HOLMES, Julia Outhouse, Rsch. Prof. Nutrition, Mass. State Coll., Amherst, Mass. **NUTRITION.**

HOLMES, Samuel Jackson, Prof. Emer. Zool., Univ. of Calif., 2821 Regent St., Berkeley, Calif. **ZOOLOGY.**

HOLMES, Wilfred Jay, Prof. and Dean, Coll. of Applied Sci., Engrng. and Math., 4009 Black Point Road, Honolulu 15, Territory Hawaii. b. Apr. 4, 1900, Stockport, N. Y. s. John Eric and Esther (Moett) H. Edn.: B.S., U. S. Naval Acad., 1922; M.S., Columbia Univ., 1929. m. Isabelle M. West of Hudson, N. Y., June 17, 1922. d. Mr. and Mrs. Thomas Joseph West. c.: John Eric Holmes, II. Exp.: Commissioned Officer, U. S. Navy, 1922-36; Asst. Prof. of Engrng. and Math., Univ. of Hawaii, 1936-41; Active Duty, U. S. Navy, 1941-46, Retired rank of Capt.; Dean, Coll. of Applied Sci., Univ. of Hawaii, 1946-47; Prof. of Engineering and Math., Univ. of Hawaii, 1947—. Hon. Pos.: Chmn., Dept. of Engrng. and Math. Mem.: Phi Kappa Phi; Epsilon Chi; Hawaiian Acad. of Sci.; A.S.C.E.; A.A.U.P.; Amer. Soc. for Engrng. Edn.; Engrng. Assn. of Hawaii. Author: Battle Stations, 1940;

Enemy Sighted, 1941; Rendezvous, 1942. Contrb. to: Saturday Evening Post; Naval Inst. War Record; Deputy Officer in Charge Joint Intelligence Center and Staff Comdr. in Chief Pacific Ocean Area, Awarded Distinguished Service Medal, Leg. on of Merit, and Navy Unit Citation. Gen. Interest: Registered Professional Engr., Hawaii. Listed in: Who's Who on the Pacific Coast, 1949; Pan Pacific Who's Who; Who's Who in Engrng.

HOLMQUIST, Albert M., Prof. of Biol., St. Olaf Coll., Northfield, Minn. **ANIMAL ECOLOGY.**

HOLROYD, Howard Byington, Dept. Mechanical Engrng., Iowa State Univ., Ames, Iowa. **MECHANICAL ENGINEERING.**

HOLROYD, Roland, Prof. of Biol. and Hd. Dept., LaSalle Coll., 20th St. and Olney Ave., Philadelphia, Pa. **BOTANY.**

HOLSCHER, H. H., Owens-Ill. Glass Co., Admin. Rsch., 1700 Westwood Ave., Toledo 1, Ohio. **CERAMICS.**

HOLSTAD, Grace E., Prof. of Biol., St. Olaf Coll., Northfield, Minn. **BIOLOGY.**

HOLSTEIN, T., Consulting Physicist, Westinghouse Rsch. Labs., E. Pittsburgh, Pa. **GASEOUS ELECTRONICS.**

HOLT, Luther Emmett, Prof. Pediatric, N. Y. Univ. Schl. of Med., 477 First Ave., N. Y., N. Y. **PEDIATRICS.**

HOLTER, Norman Jefferis, Pres., Holter Rsch. Foundation, 113 N. Main St., Helena, Mont. **UNDERWATER SOUND.**

HOLTOM, Daniel Clarence, retired, 1820 S. Gladys Ave., San Gabriel, Calif. **HISTORY.**

HOLTZ, Frederick Carl, Vice-Pres. and Chf. Engr., Sangamo Electric Co., 2150 Wiggins Ave., Springfield, Ill. **ELECTRICAL ENGINEERING.**

HOLTZINGER, Albert Harrison, Assoc. Prof. of Chem., Dir. of Chem. Labs., Pa. State Coll., State College, Pa. **CHEMISTRY.** b. Wrightsville, Pa., Aug. 2, 1901. s. Albert J. and Cordelia C. (Slep) H. Edn.: B.S., Pa. State Coll., 1927; Ph.D., ibid., 1939. m. Almira R.V.B. Smith, Nov. 4, 1922. c.: Albert Harrison; Joseph Carson; James Samuel; Edward Ralph. Exp.: Chem. Analyst, Warner Labs., Cresson, Pa., 1921-26; Instr. to Assoc. Prof. and Dir. of Chem. Labs., Pa. State Coll., State Coll., Pa., 1936—. Mem.: Amer. Chem. Soc.; Pa. Chem. Soc.; Pa. Acad. of Sci.; Chi Sigma; Phi Lambda Club. Special Int.: Inorganic Chem.



A.A.A.S.; A.A.U.P.; Alpha Upsilon; Sigma Xi; Lions

HOLZMAN, Benjamin. **METEOROLOGY.**

HOMBERGER, Alfred William, Prof. and Hd., Dept. of Chem., Univ. of Louisville, Louisville, Ky. **CHEMISTRY.**

HONAMAN, Richard Karl, Dir. of Publications, Bell Telephone Labs., Inc., 463 West St., N. Y., N. Y. **COMMUNICATION ENGINEERING.**

HONESS, Charles William, Resident Geologist, Gulf Refining Co., P. O. Box 774, Evansville, Ind. **PETROLEUM GEOLOGY.**

HOOBLER, Icie G. Macy, Dir. of Rsch. Lab., Children's Fund Mich., 660 Frederick St., Detroit, Mich. **CHEMISTRY, MEDICINE.**

HONIGSHEIM, Paul, Emeritus Prof. of Anthro. Sociol., and Foreign Studies, Mich. State Coll.



HISTORY OF SOCIAL, POLITICAL AND ECONOMIC THOUGHT OF MIDDLE AGES AND MODERN TIMES; HISTORY OF ANTHROPOLOGY THEORIES; SOCIOLOGY OF RELIGION, KNOWLEDGE AND MUSIC; RURAL COLLECTIVITIES. b. Dusseldorf, Ger., Mar. 28, 1885. s. Richard and Leonie (Pen equien) H. Edn.: Ph.D., Heidelberg, 1914. Exp.: Librn. of the Inst. of Social Rsch., Univ. of Cologne, 1919-20; Lectr. of Philosophy and Sociol., ibid., 1920-27; Assoc. Prof., ibid., 1927-33; Dir. of the People's Univ., ibid., 1920-33; Dir. of the Paris Branche of the Inst. of Social Rsch., Paris, 1933-36; Prof., Univ. of Panama, 1936-38; Assoc. Prof. of Sociol., Anthropol., and Foreign Studies, Mich. State Coll., 1938-46; Prof., ibid., 1946-50; Retired. Hon. Pos.: Vice-Pres., Germ. People's Univ. Assn.; Chmn. Anthropol. Section, Mich. Acad. of Sci. Mem.: Amer. Anthropol. Assn.; Amer. Sociol. Soc.; A.A.U.P.; Phi Kappa Phi. Author: 250 publications in French, German, English, Spanish. Contrb. to: An. Anthropol.; Amer. Jour. of Sociol.; Rural Sociol. War Record: During World War I, Interpreter in Prison Camps in Germany. Travel: Europe; Balkans; Venezuela; Colombia; Panama; Peru; Bolivia. Hobbies: Travel. Listed in: Who Knows—and What; A.M.S.

HOOBLER, Sibley W., Assoc. Prof. of Internal Med. Univ. of Mich. and Dir., Cardiovascular Unit, Univ.



Hosp., Ann Arbor, Mich. **INTERNAL MEDICINE.** b. N. Y., N. Y., Apr. 30, 1911. s. B. Raymond and Madge (Sibley) H. Edn.: A.B., Princeton Univ., 1933; M.D., Johns Hopkins Univ., 1938; Sc.D., ibid., 1937. m. Katherine Taylor, Mar. 16, 1940. c.: Raymond T.; Patricia Ann. Exp.: Intern and Asst. Resident, Univ. of Mich. Hosp., 1938-40; Rsch. Fellow, Harvard Med. Schl. and Asst. Resident, Peter Bent Brigham Hosp., Boston, Mass., 1940-42; Capt., Med. Corps, U. S. Army, 1942-45; Asst. Prof. Internal Med., Univ. of Mich., Med. Schl., 1945-51; Assoc. Prof., ibid., 1952—; Dir., Cardiovascular Unit, Univ. Hosp., 1946—. Mem.: Amer. Phys. Soc.; Soc. Expt. Biol. and Med.; Amer. Heart Assn.; Cent. Soc. Clin. Rsch.; Amer. Federation Clinical Rsch.; Amer. Soc. Clin. Invest.; Amer. Soc. Study Arteriosclerosis; Sigma Xi; Phi Beta Kappa; Phi Beta Pi. Contrb. to: Amer. Jour. Med. Sci.; Annals of Internal Med.; Jour. Clin. Invest.; Circulation; Med. Clin. N. Amer.; Amer. Heart Jour.; Gastroenterology. Special Int.: Investigations of the Circulation; Autonomic Blocking Agents; High Blood Pressure.

HOOD, Grace Gordon, Dir., Schl. of Home Econ., Univ. of Manitoba, Winnipeg, Man., Can. **HOME ECONOMICS, EDUCATION.**

HOOD, Harrison Porter, Rsch. Chemist, Corning Glass Works, 83 E. Fourth St., Corning, N. Y. **CHEMISTRY.**

HOOD, J. D., Prof. of Biol., Cornell Univ., Ithaca, N. Y. **INSECT TAXONOMY.**

HOOD, Marion Winifred, Microbiol., Pathol. Dept., Charity Hosp., New Orleans, La. **PARASITOLOGY AND BACTERIOLOGY.** b. Saginaw, Mich., July 21, 1896. s. William Laidlaw and Hester Ann

(Edmunds) H. Edn.: B.A., Carroll Coll., 1918; M.A., Univ. of Wis., 1928; Ph.D., Univ. of Ill., 1936. Hon. Deg.: D.Sc., Carroll Coll., 1948. Exp.: Tch., Sci., H. S., Oconto and Oconomowoc, Wis., 1918-27; Asst. Dept. of Pathol., Northwestern Univ. Med. Schl., Chicago, Ill., 1928-30; Assoc., Dept. of Med., Univ. of Ill., Coll. of Med., Chicago, Ill., 1930-42; Asst. Prof., Dept. of Public Health, L.S.U., Schl. of Med., New Orleans, La., 1942-46; Dir. of Parasitol., Fla. State Bd. of Health, 1946-47; Microbiol., Dept. of Pathol., Charity Hosp., New Orleans, La., 1947—; Assoc. Prof., Dept. of Microbiol., L.S.U., Schl. of Med., New Orleans, La., 1949—, Mem.: Sigma Xi; Soc. of Amer. Bacteriol.; Amer. Soc. of Parasitol.; Amer. Soc. of Trop. Med. and Hygiene; Amer. Fed. for Clinical Resch.; Amer. Soc. of Clin. Pathol.; A.A.A.S.; Tri Beta; Alpha Epsilon Iota. Contrb. to: Amer. Jour. of Clin. Pathol.; New Orleans Med. and Surg. Jour.; Med. Women's Jour.; Amer. Jour. of Trop. Med. and Hyg.; Southern Med. Jour.; Jour. of Bone and Joint Surg.; Jour. of Lab. and Clin. Med.; Amer. Jour. of Hygiene, etc. Special Int.: Trop. Med., especially Amebiasis and Hookworm Infection. Have visited and done some field work in Mex., Guatemala, Costa Rico, Panama, Venezuela and Dutch Guinea.

HOOKER, Davenport, Prof. of Anatomy and Hd. Dept., Schl. of Med., Univ. of Pittsburgh, Pittsburgh, Pa. EMBRYOLOGY.

HOOKER, Marian O., retired, Santa Barbara, Calif.

HOOKER, Sanford Burton, Prof. of Immunology and Mem. Evans Memorial, Boston Univ. Schl. of Med., 80 E. Concord St., Boston, Mass. IMMUNOLOGY.

HOOKER, William Anson, Office Expt. Stations, U. S. D. A., Washington, D. C. AGRICULTURE.

HOOLINGSHEAD, A. B. Prof. of Sociol., Yale Univ., New Haven, Conn. SOCIAL PSYCHOLOGICAL RESEARCH.

HOOPER, William James, Prof. of Physics, Principia Coll., Elmhurst, Ill. PHYSICS.

HOOTON, Earnest Albert, Peabody Museum, Harvard Univ., Cambridge, Mass.

HOOVER, Herbert, Jr., Pres., United Geophysical Co., Inc., Pasadena, Calif. ENGINEERING.

HOOVER, Herbert Clark, Waldorf Astoria Towers, N. Y., N. Y.

HOOVER, Paul Leslie, Prof. and Hd., Dept. of Elec. Engrng., Case Schl. of Applied Sciences, Cleveland, Ohio. ELECTRICAL ENGINEERING.

HOPKINS, B. Smith, Prof. of Inorganic Chem. Engr., Univ. of Ill., 402 Florida Ave., Urbana, Ill. INORGANIC CHEMISTRY.

HOPKINS, Dwight Lucian, Assoc. Prof. and Chmn., Div. Biol. Sciences, Univ. of Ill., Undergrad. Div., Navy Pier, Chicago, Ill. CELLULAR PHYSIOLOGY.

HOPKINS, E. S., Central Exptl. Farm, Ottawa, Ont., Can. AGRICULTURAL RESEARCH.

HOPKINS, Edwin Fraser, Plant Physiologist, Citrus Exptl. Sta., Lake Alfred, Fla. PLANT PHYSIOLOGY.

HOPKINS, Ervin William, Rsch. Chemist and Section Hd., Chem. Rsch. Lab., Armour and Co., U. S. Yards, Chicago, Ill. BIOCHEMISTRY.

HOPKINS, Grant S., Prof. Emer. Veterinary Anatomy, Cornell Univ. and N. Y. State Veterinary Coll., 801 E. Seneca St., Ithaca, N. Y. ANATOMY.

HOPKINS, Howard, Proprietor and General Mgr., Margaret Wall's Candies, and Hopkins Industries, Lizton, Ind. PHARMACEUTICAL CHEMISTRY.

HOPKINS, Louis Allen, Assoc. Prof. of Math. and Dir. Summer Session, Univ. of Mich., Ann Arbor, Mich. CELESTIAL MECHANICS.

HOPKINS, Milton, Sci. Editor, Schl. Dept., Henry Holt and Co., Inc., 257 Fourth Ave., N. Y., N. Y. SYSTEMATIC BOTANY, PHYTOGEOGRAPHY.

HOPKINS, Prynce, Retired, 1900 Garden Street, Santa Barbara, Calif. PSYCHOLOGY. b. March 5, 1885, Oakland, Calif. s. Chas. Harris and Mary I. (Booth) H. Edn.: Horton Schl., Calif.; Thacher Schl., Calif.; Hill Schl., Pa.; Yale; Columbia; Univ. of London; Ph.D., Yale, 1906; M.A., Columbia, 1910; Ph.D., Univ. of London, 1927. m. Eileen Thomas of London, Eng. (dec.), Jan. 20, 1920. d. Victoria (Bissell) and George James Thomas. c.: Eileen Mary. m. (2) Fay Cartledge of London, Eng., Dec. 20, 1933; d. Marie Dorette (Smithers) and Wm. Rice Cartledge. c.: Jennifer Fay; David Charles Prince. Exp.: Founder and Owner, Boy Land Exper. Schl., Santa Barbara, 1912-18; Founder and Owner, Chateau de Bures Boys Schl., par Orgeval (S. et O.), France, 1925-35; Hon. Lectr. in Psychol., Univ. Coll., Univ. of London, Eng., 1928-40; Lectr. in Psychol., Claremont Grad. Schl., Claremont, Calif., 1941-46; Ed. and Pub. Freedom, Quart. Mag., 1941-45. Fellow, British Ps. Soc.; Fellow, Amer. Ps. Assn.; Mem., Soc. Ps. Study of Soc. Issues; Affiliate, San Francisco Psychoanalytic Soc.; Assoc. Mem., London Inst. of Psychoanalysis; Sociol. Inst. of London; Fellow, Royal Geog. Soc.; etc. Mem.: Santa Barbara Club; Montecito Country Club; New York Yale Club; Paris Union Interallie. Author: Philos. of Helpfulness, 1919; Father or Sons, A Study in Soc. Psychol., 1927; Psychol. of Soc. Movements, 1938; Aids to Successful Study, 1941; From Gods to Dictators, Psychol. of Religions and Their Totalitarian Substitutes, 1944; World Culture, 1945; A Westerner Looks East, 1951. Contrb. to: Character and Personality; Brit. Jour. Med. Psychol.; Relig.; Occupational Ps.; The Standard; Humanist; Jour. Crim. Psychopathol.; Jour. Soc. Psy.; etc. Ph.D. Dissertation: Father or Sons; A Study in Soc. Psychol. Travel: Europe; S. Amer.; N. Amer.; Asia; Philippines; Bali; Java; etc. Hobbies: Travel; Philos.; Tennis. Listed in: Who's Who in Calif.; A.M.S.

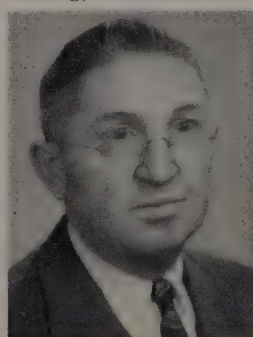
HOPKINS, S. H., Dept. of Biol., A. and M. Coll., College Station, Tex. FISHERIES BIOLOGY.

HOPPER, Samuel Hersey, Assoc. Prof. Public Health, Ind. Univ. Schl. of Med., 1040 W. Michigan St., Indianapolis, Ind. PUBLIC HEALTH.

HOPPERT, Carl Arthur, Prof. of Biochem., Mich. State Coll., East Lansing, Mich. BIOCHEMISTRY, NUTRITION.

HORAK, William, 223 Raymond Rd., West Hartford 7, Conn. CERAMICS.

HORN, Clarence A., Prof. of Biol., Albright Coll., Reading, Pa. PHYSIOLOGY. b. June 16, 1891.



McKeansburg, Pa. s. George B. and Hattie (Albright) H. Edn.: B.S., Pa. State Coll., 1917; C.P.H., N. Y. Univ. and Bellevue Hosp. Med. Schl., 1924; M.S., Coll. Univ., 1926. Hon. Deg.: D.Sc., Albright, 1936. m. Alma Barent of Reading, Pa., 1917. d. Mr. and Mrs. S. R. Barent. c.: Janet H. Exp.: Prin., Lilesville, N. C., Graded Schl., 1912-13; Prof., Biol., Tusculum Coll., Greeneville, Tenn., 1917-18; Instr., Sci., H. S., Ashland, Pa., 1919-29; Prof. of Biol., W. Va. Wesleyan Coll., Buckhannon, W. Va., 1920-23; Prof., Biol., Albright Coll., Reading, Pa., 1924—; Instr. in Physiol., Dept. of Physiol., Columbia Univ., Summers. Hon. Pos.: Past Trustee of Coun. of Social Agencies, Reading, Pa.; Past Chmn., Health Div., Coun. of Social Agencies, Reading, Pa. Mem.: Amer. Pub. Health Assn.; A.A.A.S.; Amer. T. B. Assn.; Amer. Assn. for the Study of Internal Secretions; Amer. Museum of Nat. Hist.; L. I. Biol. Assn.; Past Pres., Pa. Acad. of Sci.; Pa. Pub. Health Assn.; Pi Gamma Mu; Kappa Upsilon Phi;

Torch Club; Past Pres., Menzel Nat. Hist. Soc., Reading, Pa. Author: Elements of Health; Life Span in Splenectomized Rats and Blood Changes in Splenectomized Rats. War Record: Sgt. in Pathol. and Bacteriol. Labs.; Gen. Hosps. 14 and 36, 1918-19. Travel: U. S. Achievements: Rsch. in Endocrines in Invertebrate Animals; The Spleen in Relation to Longevity. Recreations and Hobbies: Music; Fishing; Rifle Practice; Travel. Listed in: A.M.S.; Whos' Who in Pa.; Who's Who in the East; Who Knows—and What.

HORN, David Wilbur, Consulting Chemist, Private Lab., 616 Montgomery Ave., Bryn Mawr, Pa. CHEMISTRY.

HORN, Ernest, Prof. of Edn. and Dir., Univ. Elem. Schl., State Univ. of Iowa, Iowa City, Iowa. ELEMENTARY EDUCATION.

HORN, Gertrude M., Asst. Prof. of Pharm., Schl. of Pharm., State Coll. of Wash., Pullman, Wash. PHARMACY.

HORNBECK, Artis George, Physicist, Johns Hopkins Applied Physics Lab., 8621 Georgia Ave., Silver Spring, Md. PHYSICS.

HORNE, William Dodge, Consulting Chemist, Beech Creek, Pa. CHEMISTRY.

HORNEY, Amos G., Chf., Chem. Group, Office of Sci. Rsch., Air Rsch. and Development Command, U.S.A.F., 400 D Colleen Rd., Baltimore 29, Md. CHEMISTRY. b. Sheridan, Ind., Mar. 18, 1907. s. Cove and Lillie E. (Myers) H. Edn.: A.B., Earlham Coll., 1930; M.S., Ohio State Univ., 1932; M.A., ibid., 1933; Ph.D., ibid., 1937. m. Florence Jacob Neely. Exp.: General Chemical Store Room Asst., Ohio State Univ., Columbus, Ohio, 1930-32; Personal Asst. to Dr. W. E. Henderson, ibid., 1932-35; Consulting Chem., Dept. of Edn., ibid., 1933-35; Part-Time Research Asst. to Dr. E.



Mack, ibid., 1934-35; Grad. Tchng. Asst. in Chem., ibid., 1935-37; Part-time Instr. in Gen. and Organic Chem., Fenn Coll., Cleveland, Ohio, 1939-42; Rsch. Chem., The Ohio Chem. and Mfg. Co., Cleveland, Ohio, 1937-40; Act. Chf. Chem., ibid., 1940; Chf. Chem., ibid., 1941-44; Rsch. Assoc., Rsch. Found., Ohio St. Univ., Columbus, Ohio, 1944-46; Hd. Dept. of Chem., and Dean of Liberal Arts. Assoc. Colls. of Upper N. Y., Plattsburg, N. Y., 1946-48; Admin. Scientist, Deputy Chf. of a Scientific Unit, Central Intelligence Agency, U. S. Govt., Washington, D. C., 1948-49; Scientific Liaison Officer, ibid., 1949-50; Consultant, Rsch. and Development Command, U.S.A.F. and Acting Chf., Chem. Group, Flight Rsch. Lab., Wright Air Development Center, U.S.A.F., 1950-51; Chf., Chem. Div., Office of Scientific Rsch. Hqs., Air Rsch. and Development Command, ibid., 1951—. Mem.: Cosmos Club of Wash.; Prof. Chem. Engrg.; Natl. Soc. of Prof. Engrs.; Amer. Inst. of Prof. Engrs.; Electrochem. Soc.; Sigma Xi; Amer. Chem. Soc.; Ohio Soc. of Prof. Engrs.; Torch Club of Wash. Author: Co-author of the Initial 3 or 4 Editions of Cooperative Tests for Gen. Chem. Contrb. to: Jour. of Pharmacol. and Exptl. Therapeutics; Schl. Sci. and Math.; Jour. of Chem. Edn. Special Int.: Seven Patents and Others Pending.

HORNING, Roy A., Armstrong Cork Co., Lancaster, Pa. CERAMICS.

HORNING, Samuel Cyril, 2300 W. 17th St., Wilmington, Del. CHEMISTRY.

HORR, Worthie Harold, Assoc. Prof. of Botany, Univ. of Kans., Lawrence, Kans. BOTANY.

HORSCH, William Grenville, Rsch. Assoc., Rsch. and Development Labs., Socony-Vacuum Oil Co., Inc., Paulsboro, N. J. CHEMISTRY.

HORSFALL, Frank Lappin, Jr., Rockefeller Inst. for Med. Rsch., 66th St. and York Ave., N. Y. 21, N. Y.

HORSFALL, J. G., Conn. Agril. Expt. Sta., New Haven, Conn. PLANT PATHOLOGY.

HORST, Paul Aaron, Dept. of Psychol., Univ. of Wash., Seattle, Wash. PSYCHOLOGY.

HORTON, Charles Abell, Rsch. Chemist, Carbide and Carbon Chem. Co., 144 S. Purdue Ave., Oak Ridge, Tenn. ANALYTICAL CHEMISTRY. b. Buffalo, N. Y., Mar. 31, 1918. s. Harvey S. and Mildred (Abell) H. Edn.: A.B., Cornell Univ., 1941; M.S., Univ. of Mich., 1946; Ph.D., ibid., 1950. m. Elsa Carmen Hart, June 28, 1947. c.: Nancy Helen. Exp.: Rsch. Chemist, Mead Johnson and Co., 1941-42; Rsch. Chemist, Trojan Powder Co., 1942; Rsch. Chemist, Bell Aircraft Corp., 1942-44; Rsch. Chemist, Atomic Energy Project, Univ. of Rochester, 1944-45; Tchng. and Rsch. Fellow, Univ. of Mich., 1945-49; Rsch. Chemist, K-25 Plant, Carbide and Carbon Chem. Co.; Oak Ridge, Tenn., 1949—. Mem.: Sigma Xi; Amer. Chem. Soc.; A.A.A.S.; Alpha Chi Sigma; Retort and Beaker. Contrb. to: Analytical Chem.; Jour. Amer. Chem. Soc. Special Int.: Inorganic, Organic and Analytical Chem. of Fluorine and Its Compounds; Development of Classical Type and Instrumental Methods of Analysis.

HORTON, Joseph Warren, Assoc. Prof. Elec. Communications, Mass. Inst. of Tech., Cambridge, Mass. ELECTRICAL COMMUNICATIONS.

HORWOOD, Murray Philip, Prof. of Sanitary Sci., Mass. Inst. of Tech., Cambridge, Mass. PUBLIC HEALTH.

HOSKINS, John Hobart, Prof. and Hd., Dept. of Botany, Univ. of Cincinnati, Cincinnati, Ohio. PALEOBOTANY.

HOSKINS, Roy Graham, Dir. of Rsch., Memorial Foundation Neuro-Endocrine Rsch., Harvard Med. Schl., Boston, Mass. ENDOCRINE RESEARCH.

HOSKINS, William Muriece, Prof. of Entomol. and Entomologist, Univ. of Calif., Berkeley, Calif. IN-SECT TOXICOLOGY.

HOSLER, William Winston, Vice-Pres. in Chg. Production and Labs., Strong Cobb and Co., Inc., 2654 Lisbon Rd., Cleveland, Ohio. PHARMACY.

HOSMER, Ralph Sheldon, Prof. of Forestry, Emer., Cornell Univ., Ithaca, N. Y. Home: 209 Wait Ave., Ithaca, N. Y. HISTORY OF FORESTRY. s. Rev. George Herbert Hosmer and Julia West (Sheldon) H. Ancestors: from England in 1635. Edn.: B. of Agricultural Science, Harvard Univ., 1894; Master of Forestry, Yale Univ., 1902. m. Jessie Nash Irwin of Newton, Mass., 1913. d. Mr. and Mrs. Charles David Irwin. c.: David Irwin; Jane Sheldon (Mrs. Robert H. Llewellyn); Emily (Mrs. Marc Dainels). Exp.: Asst. Div. of Soils, U. S. Dept. of Agri., 1896-98; Field Asst., Div. of Forestry, U. S. Dept. of Agri., 1898-1903; Supt. of Forestry, Hawaii, 1904-14; Chmn., Conservation Comm., Hawaii, 1908-14; V.-Chmn., Bd. of Regents, Coll. of Hawaii, 1907-14; Prof. of Forestry, and Hd. of Dept. of Forestry, Cornell Univ., 1914-42. Hon. Pos.: Hon. Mem. Soc. of Forestry in Suomi (Finland); Pres., Soc. of Amer. Foresters, 1923; Fellow, Amer. Assn. Adv. of Sci.; Soc. Amer. Foresters; Awarded The Sir William Schlich Memorial (Forestry) Medal, Dec., 1950; Hon. Mem., Cornell Plantations and Hortorium Comms. Mem.: Phi Kappa Phi (Pres., Cornell Univ. Chapter, 1942-43); Alpha Zeta. Author: Impressions of European Forestry, 1922; Geneal. of the Descendants of William Irwin of N. Y., 1700-87 (with Martha T. Irwin Fielder), 1938; The Cornell Plantations, a History, 1947; Historical Summary of the Soc. of Amer. Foresters; also Chapt. on "Edn. in Professional Forestry" in Semi-Centennial Vol., Fifty Yrs. of Forestry in the U. S. A., both published by the Soc. of Amer. Foresters, Wash., D. C., 1950; Chapt., "The Role of Yale Foresters in Edn. in Professional Forestry" in The First Half-Century of the Yale Schl. of Forestry, New Haven, Conn.,

1950; Forestry at Cornell, Ithaca, N. Y., 1950. Contrb. to: Jour. of Forestry; Amer. Forests. Hobby: Genealogy. Listed in: Who's Who in Amer. Special Int.: Development of Forestry in the U. S. Amer., 1876-1950; "the Conservation Movement"; Forestry in Hawaii; in New York State.

HOSOI, Kiyoshi, Physician and Surgeon, 490 S. Beretania St., Honolulu, Hawaii. **SURGERY AND PATHOLOGY.** b. Honolulu, Hawaii, Dec. 7, 1897. s. Isamu and Toyo (Sawa) H. Edn.: B.S., Univ. of Hawaii, 1921; M.D., Cornell Univ., 1924; D.N.B., Natl. Bd. of Med. Examiners, 1933; M.S., Tulane Univ., 1933; Ph.D., *ibid.*, 1934; F.A.C.S., Amer. Coll. of Surgeons, 1934. Exp.: Resident Pathol., Hos. Div. of Med. Coll. of Va., Richmond, Va., 1924-25; Gen. Rotating Internship, Flushing Hosp., Flushing, Greater N. Y. C., 1925-26; Internship, Willard Parker Hosp., N. Y. C., 1926; Asst., Dept. of Biochem., Exptl. Surgery and Med., Mayo Clinic, Rochester, Minn., 1926-27; Resident Instr. in Pathol. and Bacteriol., N. Y. Post-Grad. Med. Schl. and Hosp., Columbia Univ., N. Y. C., 1927-28; Asst. in Div. of Med., Mayo Clinic, Rochester, Minn., 1928-29; Sr. Eugene Littauer Fellow in Pathol. and Instr. in Pathol., Albany Med. Coll., Albany, N. Y., 1929-30; Asst. Prof. of Pathol. and Bacteriol., *ibid.*, 1930-31; Acting Dir. of Bender Hygienic Lab., Albany, N. Y., 1931; Instr. in Surgery, Tulane Univ., Schl. of Med., New Orleans, La., 1931-34; Instr. in Gynecol., Tulane Univ., Schl. of Med., New Orleans, La., 1935; Dir. of Labs., St. Francis Hosp., Honolulu, Hawaii, 1936-40; Dir. of Lab., Kuakini Hosp., Honolulu, Hawaii, 1936-48; Pres., Med. and Surgical Staff, St. Francis Hosp., Honolulu, Hawaii, 1939; Private Practice in Med. and Surgery, Honolulu, Hawaii, 1936—. Mem.: Amer. Assn. of Pathol. and Bacteriol.; Amer. Genetic Assn.; Assn. of Resident and Ex-Resident Physicians of the Mayo Clinic; Amer. Acad. of Polit. and Soc. Sci.; Internatl. Assn. of Med. Museums; Hawaii Territorial Med. Assn.; Hawaiian Acad. of Sci.; Natl. Audubon Soc.; Amer. Coll. of Surgeons; Fellow, A.A.A.S.; Fellow, Amer. Geographical Soc. of N. Y.; Fellow, Amer. Med. Assn.; Soc. for Exptl. Biol. and Med. Contrb. to: Amer. Jour. of Pathol.; Amer. Jour. of Physiol.; Amer. Jour. of Obstetrics and Gynecol.; Amer. Jour. of Surgery; Annals of Surgery; Arch. of Internal Med.; Archives of Neurol. and Psychiatry; Archives of Pathol.; Arch. of Surgery; Cronica Medico-Quirurgica de la Habana; Human Biol., Internatl. Surgical Digest; Surgery, Gynecol. and Obstetrics; The Miss. Dr.; Trans., Amer. Assn. of Pathol. and Bacteriol.; Trans. of Amer. Climatol. and Clin. Assn.; Trans. of Hawaii Territorial Med. Assn. Gen. Int.: Music and Oriental Art. Special Int.: Surgery and Pathol.

HOSTETTER, John Clyde, Pres., Miss. Glass Co., Main and Angelica Sts., St. Louis, Mo. **GLASS TECHNOLOGY.**

HOTCHKISS, Robert S. **STERILITY.**

HOTCHKISS, William Otis, Prof. Emer., Rensselaer Poly. Inst., Rensselaer, N. Y.; Fort Meyers Beach Hotel, Fort Meyers Beach, Fla. **MINING GEOLOGY.**

HOTELLING, Harold, Univ. of N. C., Chapel Hill, N. C. **STATISTICS.**

HOTTES, Charles Frederick, Prof. Emer. Plant Physiol. and Hd. Dept. of Botany, Univ. of Ill., 406 W. Iowa St., Urbana, Ill. **PLANT PHYSIOLOGY.**

HOTTES, Frederick Charles, 708 N. Seventh St., Grand Junction, Colo. **ENTOMOLOGY, ZOOLOGY.**

HOUGEN, O. A., Prof. of Chem. Engrng., Univ. of Wis., Madison, Wis. **CHEMICAL ENGINEERING.**

HOUGH, Walter Seneff, Entomologist, Va. Agri. Expt. Sta., 523 Fairmont Ave., Winchester, Va. **ENTOMOLOGY.**

HOUGHTON, Frederic Courtland, Asst. Prof. of Biol., Univ. of Del., Newark, Del. **BOTANY.**

HOUGHTON, Henry Garrett, Prof. and Hd., Dept. of Meteorology, Mass. Inst. of Tech., Cambridge, Mass. **METEOROLOGY.**

HOUK, Ivan E., Consulting Engr., 2585 Cherry St., Denver 7, Colo. **HYDROLOGY AND DESIGN OF DAMS.**



b. Battle Creek, Iowa, Feb. 18, 1888. s. William Clyde and Ella Matilda (Mutchler) H. Edn.: B.E., State Univ. of Iowa, 1911. m. Verda Mary Warner, July 21, 1913. c.: Ivan E.; William Warner; Myrtle Ella. Exp.: Asst. Engr., Morgan Engrng. Co., Memphis, Tenn., 1911-13; Asst. Engr., Engr., and D.st. Hydrographer, Miami Conservancy Dist., 1913-21; Engr., Flood Researches, Morgan Engrng. Co., Dayton, Ohio, 1921; City Engr., City of Dayton, Dayton, Ohio, 1921-23; Rsch. Engr., Sr. Engr., in Chg. of Technical Investigations for Design of Dams, Denver, Colo., 1923-45; Consulting Engr., Denver, Colo., 1945—. Hon. Pos.: Pres., Dayton Section, Amer. Soc. C. E., 1923; Pres., Colo. Section, Amer. Soc. C. E., 1930; Trustee, Rocky Mountain Hydraulic Lab., 1945—. Mem.: Amer. Soc. C. E. (life); Amer. Geophysical Union; Amer. Concrete Inst.; Fellow, A.A.A.S.; Amer. Meteor. Soc.; Colo. Soc. Engrng.; Colo.-Wyo. Acad. of Sci.; Western Snow Conference; Rocky Mt. Hydraulic Lab.; Tau Beta Pi; Sigma Xi; Mason. Contrb. to: Engrng. News-Record; The Engr.; Western Construction News. Gen. Int.: Methods of Determining Flood Flows in Open Channels; Methods of Analyzing Surface and Ground water Runoff; Development of Trial Load Method of Analyzing Arch Dams. Special Int.: Hydrol., Irrigation, and Design of Dams.

HOUSE, Floyd Nelson, Prof. of Sociology, Univ. of Va., Charlottesville, Va. **SOCIOLOGY.**

HOUSE, Howard P., **SPEECH AND HEARING.**

HOUSER, Gilbert Logan, Prof. of Zool., State Univ. of Iowa, Iowa City, Iowa. **FUNCTIONAL ZOOLOGY.**

HOUSTON, William Vermillion, The Rice Inst., Houston, Tex.

HOVLAND, Carl Iver, Prof. and Chmn., Dept. of Psychol., Yale Univ., 333 Cedar St., New Haven, Conn. **PSYCHOLOGY.**

HOVORKA, Frank, Prof. of Chem. and Dir. Chem. Labs., Western Reserve Univ., Cleveland, Ohio. **PHYSICAL CHEMISTRY.**

HOWARD, Arthur Day, Rsch. Asst., Retired, 6427 Eglise Ave., Rivera, Calif. **INVERTEBRATE ZOOLOGY.**



b. Glencoe, Ill., Sept. 30, 1874. s. Charles Henry and Mary Katherine (Foster) H. Edn.: B.S., Amherst Coll., 1898; M.S., Northwestern Univ., 1901; Ph.D., Harvard Univ., 1906. m. Senerl Morehouse, 1908. c.: Arthur Henry; John Morehouse. Exp.: Prof. of B'ol. and Geol., Westminster Coll., 1906-08; Asst. Prof., Zool., Univ. of Wash., Seattle, Wash., 1908-11; Asst. Bur. of Fisheries, Fairport, Iowa, 1912-22; Asst. Prof. of Biol., S. Calif., 1922-25; Natural-

ist, Southwest Museum, Los Angeles, Calif., 1930; Biol. Invest., City of Los Angeles, 1931-32; Asst. Hancock Foundation, Southern Calif., 1945-52; Rsch. Asst., retired, 1952—. Hon. Pos.: Pres., Concological Soc. Mem.: A.A.A.S.; Sigma Xi; Western Soc. of Naturalists; Phi Kappa Phi; Southern Calif. Acad. of Sci.; Chi Phi. Contrb. to: Jour. of Morphol.; Jour. of Parasitol.; Amer. Naturalists; Bull.

of the Bur. of Fisheries. Special Int.: Minute Struction of the Rods and Cones of the Vertebrate Eye.

HOWARD, Burton James, retired, 1212 Decatur St., N. W., Washington, D. C. **BOTANY AND CHEMISTRY.**

HOWARD, Charles Spaulding, District Chemist, U. S. Geol. Survey, P. O. Box 443, Albuquerque, N. Mex. **CHEMISTRY.**

HOWARD, Clyde McNeel, Prof., North Tex. Agri. Coll., 505 S. Center St., Arlington, Tex. **MINING ENGINEERING.**

HOWARD, David Goodale, Prof. of Elec. Engrng., U. S. Naval Acad., Annapolis, Md. **ELECTRICAL ENGINEERING.**

HOWARD, Grace Elizabeth, Assoc. Prof. of Botany and Curator Herbarium, Wellesley Coll., Wellesley, Mass. **LICHENS.**

HOWARD, Hector Holdbrook, Dir. for the Internatl. Health Bd., 1711 Robinson St., Jackson, Miss. b. Oct. 30, 1873, Carthage, Miss. s. Hector and Sue Ann (Slaughter) H. m. Erma Jordan, Feb. 26, 1897. c.: Hester Agnes; Sue Elizabeth; Helen Hilda; Hector Holdbrook, III. Exp.: Practiced Med. at Carthage, Miss., Columbia, Miss. and Hattiesburg, Miss., 1900-12; Appointed Field Dir., Rockefeller Foundation, Sanitary Comm., 1912; Directed Experimental Campaign for Relief and Control of Ankylostomiasis in British Guiana in co-operation with Colonial Govt., (first activity of Rockefeller Foundation on foreign soil), 1913-14; Appointed Dir., Internatl. Health Bd. in West Indies, 1914; Sent to Ceylon, British East Indies, to Assist British medical authorities to re-organize their Sanitary Dept., and to inaugurate campaign for relief and control of Ankylostomiasis, this mission including visits to Japan, Coastal China, Hong Kong, the Federated Malay States, British India, Austria, Samoan Islands, Hawaii, and the Philippines, looking to co-operation of Foundation in these countries, 1916; while retaining supervision of West Indian region and Central Amer. for the Foundation he was appointed Assoc. Dir., Internatl. Health Div. of the Rockefeller Foundation, 1927; Continued in these activities until his retirement in Dec., 1934; Returned to practice of Med., Jan. 1943, for the duration of the war. Mem.: Natl. Malaria Com.; Amer. Soc. of Parasitologists; British Med. Assn.; Anti-Tuberculosis Assn.; Alpha Epsilon Delta. Author: Eradication of Ankylostomiasis, 1915; Control of Uncinariasis by the Intensive Method, 1919; Prenatal Hookworm Infection, 1917; Malaria Control in Rural Areas by Anti-Mosquito Measures, 1920.

HOWARD, Hildegard, Curator Avian Paleontology, Los Angeles County Museum, Exposition Park, Los Angeles, Calif. **AVIAN PALEONTOLOGY.**

HOWAT, Walter L., 85 Hopping Ave., Staten Island 7, N. Y. **CERAMICS.**

HOWE, Anna Mayme, Prof. and Hd. Dept. of Math., Cazenovia Junior Coll., Cazenovia, N. Y. **MATHEMATICS.** b. Jordan, N. Y., Oct., 1883. d. Lewis Brigham and Eleanor Caldwell (Reed) H. Edn.: B.A., Wells Coll., 1908; M.A., Cornell Univ., 1911; Ph.D., ibid., 1917. Exp.: Staff, Fairmont Sem., Wash., D. C., 1911-15, 1917-18; Staff, Dana Hall, Wellesley, Mass., 1918-19; Asst. Prof., Newcomb Coll. of Tulane Univ., New Orleans, La., 1919-30; Hd. Dept. Math., Cazenovia Central Schl., Cazenovia, N. Y., 1931-48; Prof. and Hd., Math. Dept., Cazenovia Junior Coll., Cazenovia, N. Y., 1948—. Hon. Pos.: Chmn. of Place and Time Com., Upper N. Y. State Section of Math. Assn. of Amer.; Former

Pres., Mad. Co. Math. Assn.; Former Treas., Shakespeare Cl.; Former Treas., A.A.U.W. Mem.: Phoenix Lit'y. Soc.; Sigma Xi; Math. Assn. Amer.; Founder Assn. Math. Tchrs. of Mad. Co. Assn. Math. Tchrs. of N. Y.; Natl. Council of Tchrs. of Math.; N.E.A.; Amer. Assn. Jr. Coll.; Zeta Tau Alpha; Phi Theta Kappa; Daughters of Amer.; Rev. Shakespeare Club; League Women Voters; N. Y. State Citizen's Council. Contrb. to: Jr. Coll. Jour.; Amer. Math. Monthly. Gen. Int.: Have been selected to represent Coll. Faculty in Rsch. Inquiries; Appointed to collaborate in Rsch. in Tehng. Methods with Amer. Assn. of Jr. Colleges. Special Int.: Field of Pure Math.; Ednl. Rsch. in Tehng. of Math.; Rsch. in Trng. of Coll. Tchrs.; Rsch. in Ednl. Statistics; Work in Study of Grading Systems for Jr. Coll.

HOWE, George Henry, Assoc. Prof. of Pomology, N. Y. State Agri. Expt. Sta., Geneva, N. Y. **POMOLOGY.**

HOWE, Harley Earl, Prof. of Physics, Cornell Univ., Ithaca, N. Y. **PHYSICS.**

HOWE, Harold, Dean of Grad. Schl. and Prof. of Agricultural Economics, Kans. St. Coll., Manhattan,



Kans. **AGRICULTURAL ECONOMICS.** b. Feb. 24, 1901, Chapman, Kans. s. Michael Maurice and Margaret Ann (Kiley) H. Edn.: B.S. in Agri., Kans. State Coll., 1922; M.S., Univ. of Md., 1923; Ph.D., Univ. of Wis., 1937; LL.D., St. Benedict's Coll., Atchison, Kans., 1950. m. Ruth M. Riordan of Solomon, Kans., June 23, 1930. d. Mr. and Mrs. J. T. Riordan. c.: Philip; Barbara. Exp.: Asst., Soils, Univ. of Md., 1922-23; Asst., Agri. Econ., Univ. of Wis., 1924-25; Successively Instructor, 1925-27; Asst. Prof., 1927-30; Assoc. Prof., 1930-34; Prof., Agri. Econ., Kans. State Coll., 1934—; Agri. Economist. Kans. Agri. Expt. Sta., 1927—; Faculty Adviser of Fraternities, Kans. State Coll., 1930-45; Dean of Grad. Schl., ibid., 1945—; Chmn., Faculty Coun. on Student Affairs, ibid., 1945-49; Consultant Natl. Resources Planning Bd., 1938-43; Kans. Representative, North Central Regional Land Tenure Com., 1939-46 (Chmn., 1945); Mem. Bd. of Dir., Kans. Soc. for Crippled Children, 1945—; Chmn., Coun. on Grad. Work, Assn. of Land-Grant Colleges and Universities, 1950-51; City Comm., Manhattan, Kans., 1951—. Mem.: Amer. Farm Econ. Assn.; Phi Kappa Phi; Alpha Zeta; Gamma Sigma Delta; Pi Kappa Delta; Phi Kappa; Rotary; K. of C. Author: Bulletins and Papers on Pub. Finance and Land Economics Subjects. Ph.D. Dissertation: Assessment and Collection of Farm Real Estate Taxes in Kans. Listed in: Who's Who in Amer.; Rus; A.M.S.; Amer. Catholic Who's Who. Special Int.: Pub. Finance; Land Econ.

HOWE, Henry V., Dean, Coll. of Arts and Sci. and Dir., Schl. of Geol., La. State Univ., Baton Rouge, La. **MICROPALEONTOLOGY.**

HOWE, James Lewis, Prof. Emer. Chem. and Historian, Wash. and Lee Univ., Lexington, Va. **CHEMISTRY.**

HOWE, Mildred Dorisse, Urbana Jr. Coll., Urbana, Ohio. **BIOLOGY.**

HOWE, Paul Edward, Nutrition Consultant, Bur. of Animal Indus., U. S. Dept. of Agri., 3601 Connecticut Ave., N. W., Washington 8, D. C. **NUTRITION.** b. Chicago, Ill., July 29, 1885. s. Edward G. and Mary (Barnard) H. Edn.: B.S., Univ. of Ill., 1906; A.M., ibid., 1907; Ph.D., ibid., 1910. m. Harriet Rinaker, June 18, 1913. c.: Clarissa; Elizabeth. Exp.: Instr., Physiol. Chem., Univ. of Ill., Urbana, Ill., 1910-12; Asst. Prof., Biol. Chem., Columbia Univ., N. Y. C., 1912-17; Assoc. Rockefeller Inst., Princeton, N. J., 1917-24; In Chg.,

Nutr. Invest., Animal Husbandry Div., U. S. Dept. of Agri., Washington, D. C., 1924-36; Chf., Animal Nutrition Div. and Asst. Chf., B.A.I., 1936-48; Nutrition Adv., *ibid.*, 1948—. Mem.: Amer. Chem. Soc.; Amer. Soc. of Biol. Chem.; A.A.A.S.; Amer. Soc. of Animal Production; Poultry Sci.; Wash. Chem. Soc.; Wash. Acad. of Sci.; Wash. Acad. of Med.; Amer. Inst. of Nutrition; Soc. of Exptl. Biol. and Med.; Amer. Public Health Assn.; Harvey Soc.; Sigma Xi; Phi Lambda Upsilon. Author: Nutrition and Clin. Dietetics, with H. E. Carter and H. H. Mason, 1917-25; Asst. Editor, Chem. Abstracts, 1912-48; Spec. Editor for Biol. Chem., Websters Internatl. Dictionary; Report on Nutrition Practices, Policies and Procedures of the State of Calif., 1951. Contbr. to: Jour. Amer. Chem. Soc.; Jour. of Biol. Chem.; Jour. Amer. Physiol. Soc.; Agri. Yearbooks; Bull., U. S. Dept. of Agri. War Record; Med. Dept., U. S. Army, 1917-19; 1940-48. Special Int.: Nutrition in Gen. and Its Application in Mass Feeding, such as the Soldier or in Institutions; Proteins of Blood, Colostrum and Muscle; Nutrition of Farm Animals; Nutrition Accounting.

HOWE, Thomas Dudley, 320 Roslyn Ave., Erie, Pa. CYTOLOGY.

HOWELL, George Dewey, Prof. and Hd., Dept. of Chem., Maryville Coll., Maryville, Tenn. CHEMISTRY.

HOWELL, John Lloyd Brelsford, Chmn. and Prof., Dept. of Chem., Wabash Coll., Crawfordsville, Ind. ORGANIC CHEMISTRY.

HOWELL, John Thomas, Asst. Curator, Dept. of Botany, Calif. Acad. Sci., Golden Gate Park, San Francisco, Calif. SYSTEMATIC BOTANY.

HOWELLS, Thomas Henry, Prof. and Chmn., Dept. of Psychol., Univ. of Colo., 885 Ninth St., Boulder, Colo. PSYCHOLOGY.

HOWELLS, William White, Prof. of Anthropol. and Prof. of Integrated Liberal Studies, Univ. of Wis., Madison 6, Wis. PHYSICAL ANTHROPOLOGY. b. N. Y. C., Nov. 27, 1908. s. John Mead and Abby MacDougall (White) H. Edn.: S.B., Harvard Coll., 1930; A.M., Harvard Univ., 1931; Ph.D., *ibid.*, 1934. m. Muriel Gurdon Seabury, June 15, 1929. c.: Muriel Gurdon and William Dean. Exp.: Lectr., Hunter Coll., N. Y., 1937-39; Rsch. Assoc., Amer. Museum of Natural Hist., N. Y., 1932-43; Asst. Prof. of Anthropol., Univ. of Wis., Madison, Wis., 1939-46; Assoc. Prof., *ibid.*, 1946-48; Prof., *ibid.*, 1948—; Prof. of Integrated Lib. Studies, *ibid.*, 1948—; Chmn., Dept. of Sociol. and Anthropol., *ibid.*, 1953—. Hon. Pos.: Sec.-Treas., Amer. Assn. of Phys. Anthropol., 1939-43; Exec. Bd., Amer. Anthropol. Assn., 1947-48; Pres., *ibid.*, 1951; Editor, Amer. Jour. of Phys. Anthropol., 1949—; Co-editor, Amer. Lecture Series in Phys. Anthropol.; Adv. Bd., Lab. of Anthropol., Santa Fe. Mem.: Amer. Anthropol. Assn.; Amer. Assn. of Phys. Anthropol.; Amer. Ethnol. Soc.; Amer. Soc. of Human Genetics; Soc. for Amer. Archaeol.; A.A.A.S.; Study of Evolution; Century Assn. Author: Mankind So Far, 1944; The Heathens, 1948. Contbr. to: Amer. Jour. of Phys. Anthropol.; Amer. Anthropol.; Human Biol.; Papers, Peabody Museum; Anthropol. Papers, Amer. Museum of Natural Hist.; Antiquity; Sci. Monthly. War Record: U.S.N.R., 1943-46. Special Int.: Factors of Human Physique.

HOWES, Douglas Edward, Prof. of Elec. Engrng., Worcester Poly. Inst., Worcester, Mass. ELECTRICAL ENGINEERING.

HOWITT, Beatrice Fay, Bacteriologist in Chg. Virus Rsch., U. S. P. H. S., Box 436, Rt. 3, Montgomery, Ala. VIROLOGY.

HOWLETT, Berton Arthur, Prof. of Physics, Rose Poly. Inst., Terre Haute, Ind. PHYSICS.

HOWLETT, Freeman Smith, Prof. of Horticulture, Ohio State Univ. and Assoc. Horticulturist, Ohio Agri. Expt. Sta., Wooster, Ohio. HORTICULTURE.

HOXTON, Llewellyn Griffith, Prof. and Chmn., Dept. of Physics, Rouss Physical Lab., Univ. of Va., Charlottesville, Va. PHYSICS.

HOY, William Edwin, Prof. and Hd., Dept. of Biol., Univ. of S. C., Columbia, S. C. GENERAL BIOLOGY.

HOYEM, Albert Gustav, Physicist Fire Control Section, U. S. Naval Ordinance Test Sta., Inyokern, Calif. PHYSICS.

HOYLE, Hughes Bayne, Jr., Prof. of Math. and Physics, Hd. of Dept., Queens Coll., 1907 Vail Ave., Apt. 3, Charlotte 4. N. C. MATHEMATICS. b. Jonesboro, N. C., July 11, 1909. s. Hughes B. and Margaret (Thompson) H. Edn.: A.B., Univ. of N. C., 1929; A.M., Univ. of N. C., 1935. m. Frances Bobbitt of Charlotte, N. C., June 4, 1932. d. Mr. and Mrs. J. H. Bobbitt. c.: Hughes B., III. Exp.: Tchr. of Math. and Physics, H. S., Chapel Hill, N. C., 1929-30; Tchr. of Math. and Physics, Central H. S., Charlotte, N. C., 1930-36; Tchr. of Math. and Zool., H. S., Newport



News, Va., 1936-43; Assoc. Prof. of Physics, Coll. of William and Mary, 1943-44; Assoc. Prof. of Math. and Physics, Limestone Coll., 1944-45; Prof. of Math. and Physics, Hd. of Dept. Queens Coll., Charlotte, N. C., 1945—, Hon. Pos.: Chmn., Local Chapter, A.A.U.P., 1946-47. Mem.: A.A.U.P.; N. C. Acad. of Sci., and Sec. Math. Div., 1950-51; Amer. Assn. for the Adv. of Sci.; The Math. Assn. of Amer.; Amer. Assn. of Physics Tchr. Gen. Int.: Awarded Faculty Fellowship, 1951-52 by the Fund for the Advancement of Edn., established by the Ford Found. Listed in: Vol. II of Who's Who in the South and Southwest; Eighth Ed., A.M.S.

HOYT, Anson P. S., Prof. of Bacteriol. and Asst. Dean, Schl. of Med., Univ. of Southern Calif., Los Angeles, Calif. BACTERIOLOGY.

HOYT, Elizabeth Ellis, Prof. of Econ., Iowa State Coll., Ames, Iowa. ECONOMICS: MOST INTERESTED IN SYNTHESIS OF SOCIAL SCIENCES. b. Augusta, Maine, Jan. 27, 1893. d. William A. and Fannie H. (Ellis) H. Edn.: A. B., Boston Univ., 1913; M.A., Radcliffe Coll., 1924; Ph.D., *ibid.*, 1925. Exp.: Rsch. Asst., Natl. Industrial Conf. Bd., N. Y., N. Y., 1917-21; Instr., Econ. and Sociol., Wellesley Coll., 1921-24; Assoc. Prof., Iowa State Coll., 1925-28; Prof., *ibid.*, 1928—. Mem.: Amer. Econ. Assn.; A.A.U.P. Author: Primitive Trade, 1926; Consumption of Wealth, 1928; Consumption in Our Society, 1938; The Income of Society, 1950. Co-author: Amer. Income and Its Use, 1953. Contbr. to: Jour. Political Econ.; Scientific Monthly; Jour. Negro Edn. Special Int.: Cultural Change with special Reference to Central Amer. and East Africa.

HOYT, Samuel L., Metallurgical Consultant, 32 Blenheim Rd., Columbus 14, Ohio. PHYSICAL METALLURGY. b. Minneapolis, Minn., May 29, 1888. s. Alfonzo O. and Huldah L. (Hunt) H. Edn.: E.M., Univ. of Minn., 1909; Ph.D., Columbia Univ., 1914. m. Edyth Armstrong, Nov. 1946. Exp.: Asst. and Assoc. Prof. of Metallography, Univ. of Minn., 1913-19; Rsch. Metallurgist, General Elec. Co., Nela Park and Schenectady, 1919-30; Rsch. Metallurgist and Dir., Metallurgical Rsch., A. O. Smith Corp., Milwaukee, Wis., 1931-39; Technical Advisor, Battelle Memorial Inst., 1939-53. Mem.: Inst.



of Metals; Amer. Inst. Mining and Metallurgical

Engrs.; Amer. Soc. for Metals; Amer. Welding Soc.; Comm. on Ship Steel, N. R. C.; Picatinny Arsenal Sci. Advisory Council; Amer. Ordnance Assn.; A.A.A.S.; Delta Tau Delta; Sigma Xi. Author: Principles of Metallography, 1920; Metals and Common Alloys, 1921; Metal Data, 1952. Contrb. to: Trans. of member societies and Amer. Soc. Mech. Engrng.; Metal Progress; Materials and Methods; Iron Age; Metals Handbook, etc. Special Int.: General Industrial Rsch. in the Metal Field, Welding Metallurgy; Phys. Metallurgy; Hard Carbides; Stainless and Heat-Resisting Alloys, Metal Applications and Metal Technology.

HRON, Ralph Preston, Hd., Physics Dept., Marshall Coll., Huntington, W. Va. PHYSICS.

HSIAO, Sidney Chihti, Assoc. Prof. of Zool., Univ. of Hawaii, Honolulu, Hawaii. **HYDROBIOLOGY**. b. Wuchang, China, Oct. 24, 1905. s. Langsin and Hsih (Dunn) H. Edn.: B.A., Univ. of Shanghai, 1928; M.S., Yenching Univ., 1933; Ph.D., Harvard Univ., 1938. m. Erica Karawina, June 21, 1937. Exp.: Asst. in Biol., Univ. of Shanghai, 1928-29; Instr. in Biol., Central China Univ., 1929-31; Rockefeller Foundation Fellow, working at Yenching Univ., 1931-33; Lectr. in Biol., Central China Univ., 1933-35; National Tsing Hua Univ. Fellow at Harvard Univ., 1935-38; Concurrently: Staff Mem., Woods Hole Oceanographic Institution, Biol. Lab. Harvard Univ. and China Foundation Fellow, 1938-41; Asst. Prof. of Biol., Central China Univ., 1941-42; Prof. of Biol., *ibid.*, 1942-46; Seessel Fellow, Yale Univ., 1946-49; Asst. Prof. of Biol., N. Y. Univ., 1948-49; Assoc. Prof. of Zool., Univ. of Hawaii, Honolulu, Hawaii, 1949—. Mem.: A.A.A.S.; Amer. Soc. Zool.; Amer. Soc. Limnology and Oceanography; A.A.U.P.; Hawaiian Acad. Sci.; Sigma Xi; Phi Kappa Phi; Tri Beta. Contrb. to: Biol. Bull.; Sci.; Copeia; Proc. U. S. Natl. Museum; Proc. Hawaiian Acad. Sci.; etc. Special Int.: Aquatic Biol. and Physiol. of Development.

HUBBARD, Bela, Geologist, Standard Oil Co. of N. J., 30 Rockefeller Plaza, N. Y., N. Y. **PETROLEUM GEOLOGY**.

HUBBARD, Beverly R., Technical Coordinator, Whitney Blake Co., 172 Putnam Ave., Hamden, Conn. **ELECTRIC AND COMMERCIAL ENGINEERING**.

HUBBARD, Donald, Assoc. Technologist Ceramics, Natl. Bureau of Standards, 6626 First St., N. W., Washington, D. C. **CHEMISTRY**.

HUBBARD, George David, 312 St. Dunstons Rd., Baltimore, Md. **PHYSICS**.

HUBBARD, Rober Sanford, Prof. of Pharmacol., Univ. of Buffalo Med. Schl., Buffalo, N. Y. **BIOLOGICAL CHEMISTRY**.

HUBBARD, Ruth Marilla, Psychologist, Family Service Soc. Metropolitan Detroit, 51 W. Warren Ave., Detroit, Mich. **CLINICAL PSYCHOLOGY**.

HUBBELL, Rebecca Barnett, Biochemist, Conn. Agri. Expt. Sta., 123 Huntington St.; New Haven, Conn. **BIOCHEMISTRY**.

HUBBELL, Theodore Huntington, Prof. of Zool. and Curator Insects, Museum Zool., Univ. of Mich., Ann Arbor, Mich. **ENTOMOLOGY**.

HUBBLE, Edwin Powell, Astronomer, Mt. Wilson Observatory, Pasadena, Calif. **ASTRONOMY**.

HUBBS, Carl Leavitt, Scripps Institution of Oceanography, La Jolla, Calif.

HUBER, Harvey Evert, Dean and Prof. of Biol., Ohio Northern Univ., Ada, Ohio. **BIOLOGY**.

HUBER, L. L., Prof. of Agron., Pa. State Coll., State College, Pa. **PLANT BREEDING, ECOLOGY**.

HUBERT, Warren G., Assoc. Prof. of Math. and Chmn. Dept., City Coll. of N. Y., N. Y., N. Y. **MATHEMATICS**.

HUBERTY, Martin R., Prof. of Irrigation and Irrigation Engr., Univ. of Calif., 826 Glenmont Ave., Los Angeles, Calif. **AGRICULTURE, ENGINEERING**.

HUCKETT, Hugh Cecil, Assoc. Prof., Dept. of Entomol., Coll. of Agri., Cornell Univ., Ithaca, N. Y. **ENTOMOLOGY**.

HUDDLESON, I. Forest, Rsch. Prof., Mich. State Coll., East Lansing, Mich. **BACTERIOLOGY, IMMUNOLOGY**.

HUDELSON, Robert R., Assoc. Dean, Coll. of Agri., Univ. of Ill., Urbana, Ill. **AGRICULTURAL ECONOMY**.

HUDGINS, Clarence Virginius, Rsch. Fellow and Dir. of Rsch. Exptl. Phonetics, Clarke Schl. for Deaf, Northampton, Mass. **PSYCHOLOGY**.

HUDSON, Alfred Edward A'Courte, Rsch. Consultant, Dir. of Labs., Apt. 1-4 Edgewood Apts., Goldsboro, N. C. **HEMATOLOGY AND PARASITOLOGY AS APPLIED TO TROPICAL MEDICINE**.



b. Liverpool, England, Nov. 13, 1905. s. Comdr. G. R. and Nancy Etta (DeMutt) H. Edn.: D.Sc., Royal Coll. of Sci., 1929; A.B. and M. P. H., Transylvania Univ., M.S.C., N. C. State Coll., 1949; Ph.D., *ibid.*, 1951; Certificate in Med. Mycology, Duke Univ. Schl. of Med., 1947; Certificate in Tropical Med., Army Med. Schl., 1942; London Schl. of Tropical Med., 1946. m. Mary M. Westmoreland, 1934. c.: Nancetta Joyce. Exp.: Dir. of Labs., Lee Memorial Hosp., Fort Myers, Fla., 1934-36; Dir. of Labs., Hickory Memorial Hosp., N. C., 1936-37; Supt., Masonic Hosp., El Paso, Tex., 1937-39; Lab. Officer, U. S. Army Med. Dept., 1940-47; Chf. of Parasitol. 1st Med. Lab., 1942 Med. Inspector, La Garde Gen. Hosp., New Orleans, La., 1943; Chf. of Parasitol., Army Rsch. Lab., San Juan, P. R., 1943-44; Chf., Div. of Clinical Microscopy, Ream Gen. Hosp., Palm Beach, Fla., 1944-45; Dir., Tropical Diseases Museum, U. S. Army at Fort Sam Houston, Brooke Army Med Center, Tex., 1945-46; Acting Curator, Army Med. Museum, Washington, D. C., 1946-47; Rsch. Consultant, Dept. of Animal Indus., N. C. State Coll., 1951-52. Hon. Pos.: Chmn., El Paso Hosp. Council, 1938-39. Mem.: Life Mem. and Fellow, A.A.A.S.; Life Fellow, Amer. Inst. of Chemists; Amer. Public Health Assn.; Amer. Acad. Forensic Sciences; Amer. Assn. Clinical Chemists; Amer. Soc. Tropical Med. and Hygiene; Fellow, Royal Soc. Tropical Med. and Hygiene, London; Fellow, Internatl. Soc. of Hematol.; Fellow, Royal Soc. Entomol.; F. L. S.; Fellow, Royal Microscopical Soc., London; Hon. Mem., Cuban Public Health Soc.; Corresponding Mem., Cuban Soc. of Biol. and Tropical Med. of Carlos J. Finlay; European Soc. Hematol.; Swiss Soc. Biol.; Assoc. Mem., Amer. Soc. Clinical Pathologists; Sigma Chi; Phi Kappa Phi; Sigma Xi; Phi Epsilon Phi; Kappa Tau; Lions Internatl. Author: Classbook of Sci. for Nurses, 1932; Chem. Notes for Nurses, 1935. Contrb. to: Malayan Med. Jour.; Trans. Royal Soc. Tropical Med. and Hygiene; Jour. Clinical Med.; Amer. Public Health Jour. War Record; 1st Lt. to Lt. Col., Sanitary Corps and Med. Service Corps, U. S. Army. Gen. Int.: Awarded the Founders Medal, 1948, Assn. of Military Surgeons, U. S. A. for "Contributions to Military Med." etc.; Awarded Decoration, Natl. Order of Merit of Cuba, "Carlos J. Finlay" Grade of Commander Havana Cuba Natl. Acad. Sci., 1951; Awarded Italian Order of Saint Huberto; Grad. of Grand Officer, 1953. Special Int.: Tropical Med. and Parasitol.; Hematol. Studies in Tropical Med.; Serological Studies as applied to Forensic Sciences; Protein Studies in Burns; Blood Studies in Criminal Investigation; Relation Vitamin C in Hemorrhage Burns, etc.

HUDSON, G. Donald, Prof. and Chmn., Dept. of Geography, Northwestern Univ., Evanston, Ill. GEOGRAPHY.

HUDSON, Imogene Moore, Rt. 2, Ridgewood, N. J. ZOOLOGY.

HUDSON, Paul Kelley, Asst. Prof. of E.E., Univ. of Ill., Urbana, Ill. and Special Trng. Expert, U. S.



Visitng Prof., Southern Methodist Univ., Summer, 1942; Univ. of Ill., Summers, 1946, 1947; Special Trng. Expert, U.S.A.F., Chanute Field, Ill., 1952—; Hon. Pos.: Dir. of the Natl. Elec. Conf., 1948—; Chmn. of Faculty Evaluation Comm. Mem.: Amer. Soc. for Engrng. Edn.; Eta Kappa Nu; Assn. of Commerce. Contrb. to: Communications. Travel: U. S.; Canada. Hobbies: Ceramic Art; Radio Operator. Listed in: A.M.S.; Who's Who in Chicago and Ill.; Who's Who in the Midwest. Special Int.: Electromedical Research Civilian Expert, U. S. Air Force—Navigation and Bombing.

HUDSON, Ralph Gorton, Prof. of Elec. Engrng., Mass. Inst. Tech., Cambridge, Mass. ELECTRICAL ENGINEERING.

HUDSPETH, Jack Cheever, Publications Div., Steck Co., P. O. Box 16, Austin, Tex. SCIENCE EDUCATION.

HUELSEN, Walter A., Prof. of Vegetable Crops, Dept. of Horticulture, Univ. of Ill., Urbana, Ill. VEGETABLE CROPS.

HUEPENBECKER, Richard William, Registered Pharmacist, Mfg. Dept., C. R. Bundt Co., 314 Michigan St., Toledo, Ohio. PHARMACY.

HUETTNER, Francis Alfred, Prof. and Chmn., Dept. of Biol., Queens Coll., Flushing, N. Y. CYTOLOGY.

HUFF, Clay G., Naval Med. Rsch. Inst., Natl. Naval Med. Center, Bethesda, Md. PARASITOL-OGY.

HUFF, George Charles, Prof. and Hd., Dept. of Biol., Drake Univ., Des Moines, Iowa. GENERAL BIOLOGY AND PARASITOLOGY.

HUFF, Lorenz Dittmar, Prof. and Hd., Physics Dept., Clemson Agri. Coll., P. O. Box 1423, Clemson, S. C. PHYSICS.

HUFF, Ned L., Assoc. Prof. Emer., Univ. of Minn., 1219 Seventh St., S. E., Minneapolis, Minn. PLANT MORPHOLOGY.

HUFFER, Charles Morse, Assoc. Prof. of Astron., Washburn Observatory, Univ. of Wis., Madison, Wis. ASTRONOMY.

HUFFER, Ralph Craig, Prof. of Math. and Astron., Beloit Coll., Beloit, Wis. DOUBLE STAR ASTRONOMY.

HUFFMAN, John Randolph, Sr. Engr., Phillips Petroleum Co. Atomis Energy Division. Home: 291 West 17th St., Idaho Falls, Idaho. NUCLEAR ENGINEERING. s. Ernest P. and Eva (Baldinger) H. b. February 17, 1905, Norfolk, Va. Ancestry: Randolph, Everard, England; Huffman, German Chemists and Fencers, 300 years; came

to Virginia, 1763. Edn.: B.S., Yale Sheffield Sci. Schl., summa cum laude, 1926. Ph.D. Chem. Engr., Yale Grad. Schl., 1926-29; Univ. Copenhagen Rsch. Fellow, 1929-30; Ph.D., 1930. m.: Berenice N. Smith, of Seattle, Wash., Nov. 18, 1951. Exp.: Ranger-Guide Service, etc., Yellowstone Park, 1922-27; Lab. Asst., Chem., Yale, 1926-27; Jr. Asst. High Pressure Rsch., Mellon Inst., Yale, 1927-28; Rsch. Chem., Standard Oil Co., 1931-32; Rsch. Fellow in Gas Reactions, Amer. Scand. Found., Copenhagen, 1929-30; Rsch. Fellow, Gas Reactions, Hon. Fellowship, Yale, 1932-33; Rsch. Fellow, Gas Reactions, Sterling Fellowship, Yale, 1933-34; Rsch. Asst., Separation Isotopes, E. K. Adams Fellow, Columbia, 1934-37; Prof. H. C. Urey, ibid., 1934-37; Asst. Prof. of Chem. Engrng., N. Y. Univ., 1937-42; Field Engrng., S.A.M. Lab., Columbia Univ.; Design Engr., Clinton Natl. Lab., Knoxville, Tenn.; Project Engr., Argonne Natl. Lab., Chicago, Ill.; Sr. Engr. Phillips Petroleum Co., Idaho Falls, Idaho; Licensed Prof. Engrng. (N. Y.). Hon. Pos.: Ex-Pres., Amateur Fencers League of Amer.; Ex-Chmn., Pan-Am. Fencing Comm.; Ex-Chmn., Fencing Comm., of Natl. Collegiate Athletic Assn. Member: Amer. Scand. Found.; Amer. Chem. Soc.; Amer. Inst. Chem. Engrng.; A.A.A.S.; Sigma Nu; Alpha Chi Sigma; Sigma Xi; Phi Lambda Upsilon; Blue Lodge Chap., Coun. Knights Templar, Shrine; De Molay Legion Honor. Ph.D. Dissertation: Decomposition of Methanol Over Catalysis Composed of Oxides of Zinc and Chromium. Publications in: Jour. Amer. Chem. Soc.; Ind. and Engrng. Chem.; Zeit. für Phys. Chem.; Phys. Rev.; Mech. Engrng. Special Int.: Catalysis and Kinetics of Reactions, isotope separations, nuclear rsch. and engrng.

HUFFINGTON, Jesse Marion, Crops Consultant, Continental Can Co., 3800 E. Biddle St., Baltimore



13. Md. CANNING CROPS PRODUCTION. b. Allen, Wicomco Co., Md., Nov. 10, 1896. s. Jonathan and Rosa Catherine (Parker) H. Edn.: B.S., Univ. of Md., 1922. m. Maurine Virginia Davis, May 20, 1933. c.: Dale Davis; Mary Lee; Helen Virginia. Exp.: Fellow, Natl. Rsch. Council, Soil Borne Diseases of Sweet Potatoes, 1923—; County Agent, Anne Arundel Co., Md., 1923-27; Vegetable Gardening Extension Specialist, Pa. State Coll., 1927-45; Crops Consultant, Continental Can Co., Baltimore, Md., 1948—. Hon. Pos.: Advisor to Pa. Vegetable Growers Assn. Mem.: A.A.A.S.; Amer. Soc. Horticultural Sci.; Amer. Soc. Econ. Entomology; Amer. Soc. Agronomy; Vegetable Growers Assn. of Md.; Epsilon Sigma Phi; Mason; Rotary. Contrb. to: Pa. Vegetable Growers News; Amer. Soc. Horticultural Sci. Proc.; Canning Trade; Food Packer; Southern Processor; The Canner; Market Growers Jour. War Record; Infantry, U. S. Army, 1918-19. Gen. Int.: Presentation of Vegetable Crop Production and Marketing Information with Visual Aids and Current Information on Practices to Growers and Processors. Special Int.: Production and Handling of Crops for Processing.

HUGGINS, Charles Brenton, Univ. of Chicago, 950 E. 59th St., Chicago 37, Ill.

HUGGINS, Maurice Loyal, Rsch. Chemist, Eastman Kodak Co., 259 Maplewood Dr., Rochester, N. Y. CHEMISTRY.

HUGHES, Elmer Howard, Prof. of Animal Husbandry, Univ. of Calif., Davis, Calif. ANIMAL HUSBANDRY.

HUGHES, Everett C., Dept. of Sociol., Univ. of Chicago, Chicago, Ill. SOCIOLOGY.

HUGHES, Horatio, Prof. of Chem. and Physies, Coll. of Charleston, Charleston, S. C. PHYSICAL CHEMISTRY.

HUGHES, James Monroe, Dean, Schl. of Edn., Northwestern Univ., Evanston, Ill. EDUCATION.

HUGHES, Ray Osgood, retired, 5517 Beverly Pl., Pittsburgh, Pa. SOCIAL SCIENCE, EDUCATION.

HUJER, Karel, Asst. Prof. of Astron. and Physics, Univ. of Chattanooga, Chattanooga, Tenn. ASTRONOMY.

HULBARY, Robert L., Asst. Prof. of Botany, State Univ. of Iowa, Iowa City, Iowa. BOTANY.

HULBERT, Henry Schoolcraft, 100 Webb Ave., Detroit, Mich. ASTRONOMY, PHYSICS.

HULBURT, Edward O., Supt., Physical Optics Div., Naval Rsch. Lab., Washington, D. C. PHYSICS.

HULIN, Carlton D., Assoc. Prof. of Geol., Univ. of Calif., Berkeley, Calif. MINING GEOLOGY.

HULL, Albert Wallace, General Electric Co., Schenectady 5, N. Y.

HULL, Clark Leonard, Prof. of Psychol., Inst. Human Relations, Yale Univ., 333 Cedar St., New Haven, Conn. PSYCHOLOGY.

HULL, Frank Montgomery, Prof. of Biol., Univ. of Miss., P. O. Box 413, University, Miss. TAXONOMY OF DIPTERA; REGENERATION; ZOOLOGY. b. Coahoma, Miss., Nov. 3, 1901. s. Dabney Herndon and Annie (Montgomery) H. Edn.: B.S., Miss. State Coll., 1922; M.S., Ohio State Univ., 1924; Ph.D., Harvard Univ., 1937. m. Marguerite Chappell, Jr., 4, 1926. c. Martha Cecil; Frank Montgomery, Jr.; Clovis Malcolm Sillers. Exp.: Instr., Wash. State Coll., 1925-26; Asst. Prof. and Acting Station Entomologist, N. Mex. State Coll., 1926-27; Entomologist, Tex. A. and M. Coll., 1927-30; Prof. of Biol. and Chmn. Dept., Univ. of Miss., 1930-51; Prof. of Biol., *ibid.*, 1951—. Mem.: A.A.A.S.; Sigma Xi; Amer. Microscopical Soc.; Amer. Soc. of Zoologists; Rotary.

HULL, Gordon Ferrie, Prof. Emer., Dartmouth Coll., 5 Parkway, Hanover, N. H. PHYSICS.

HULL, Gordon Ferrie, Jr., Prof. of Physics, Dartmouth Coll., Hanover, N. H. PHYSICS.

HULL, Lewis Madison, Pres., Aircraft Radio Corp., Boonton, N. J. ELECTRONICS.

HULL, Ralph, Head, Dept. of Mathematics, Purdue Univ., Lafayette, Ind. MATHEMATICS. b. May 12, 1903. England. s. Fred and Ada Mary (King) H. Edn.: B.A., 1929, M.A., 1930, Univ. of British Columbia; Ph.D., Univ. of Chicago, 1932. m. Hazel Pauline Rush of Bedford, Iowa, 1934. d. Fred and Nellie Ecklin Rush. c.: Emily Susan. Exp.: Teacher, Brit. Coll., 1922-27; Natl. Rsch. Fellow, N. M. Mo. S. T. C., 1932-33; Instr., Univ. of Chicago, 1933-35; Univ. of Mich., 1936-37; Univ. of Ill., Asst. Prof., 1937-38; Univ. of B. C., Prof., 1938-43; Univ. of Neb., Prof. and Hd., 1943-47; Operations Analyst, U.S.A.F., 1944-45; Boeing Aircraft Co., Analyst, 1947-48; Purdue Univ., Prof. and Hd., Dept. of Math., 1948—. Mem.: Sigma Xi; M.A.A.; A.M.S.; Ind. Acad. of Sci.; Kappa Sigma; Rotary; Lafayette Country Club; Fellow, A.A.A.S. Author: Articles on Algebra and Theory of Numbers. Ph.D. Dissertation: The Number of Solutions of Congruences Involving Only k -th Powers. War Record: (See Above). Travel: Europe; Pacific, During World War II. Hobby: Golf. Listed in: Who's Who in Amer. Special Int.: Algebra—Theory of Numbers.

HULTGREN, Ralph Raymond, Prof. of Metall., Hearst Mining Bldg., Univ. of Calif., Berkeley 4, Calif. METALLURGY. b. Spokane, Wash., September 7, 1905. s. Charles August and Anna Augusta (Benson) H. Edn.: B.S., Univ. of Calif., 1928; M.S., Univ. of Utah, 1929; Ph.D., Calif. Institute of Technology, 1933. m. Teresa Wood of Oakland, Calif., June 11, 1933. d. H. Ross and Lucile K. Wood. c.: Neilen Wood; Glen Owen; Eric Carl. Exp.: Natl. Rsch. Fellow in Chem., Mass. Inst. of Tech., 1933-35; Instr., Harvard, 1935-38; Asst. Prof., *ibid.*, 1938-41; Asst. Prof., Univ. of Calif., 1941-43; Assoc. Prof., *ibid.*, 1943-48; Prof., *ibid.*, 1948—. Mem.: Amer. Inst. of Mining and Metall. Engrs.; Amer. Soc. for Metals; Sigma Xi; Phi Beta Kappa; Tau Beta Pi; Sigma Gamma Epsilon. Author Fundamentals of Physical Metallurgy. Contrb. to: Jour. Amer.

Chem. Soc.; Phys. Rev.; Transactions Amer. Inst. of Mining and Metall. Engrs. Ph.D. Dissertation: Nature of Chem. Bonds. Hobby: Chess. Listed in: A.M.S.; Who's Who on the Pacific Coast.

HUME, H. Harold, Univ. of Fla. Coll. of Agri., Gainesville, Fla. BOTANY, AGRICULTURE.

HUMM, Doncaster G., Dir., Humm Personnel Consultants, P. O. Box 1433, Del Valle Station, Los Angeles 15, Calif. PERSONNEL APPRAISALS.



b. Punxsutawney, Pa., May 21, 1887. s. George C. and Emma (Doncaster) H. Edn.: B.A., Bucknell Univ., 1909; M.A., Univ. of Southern Calif., 1926; Ph.D., *ibid.*, 1932. Hon. Deg.: Sc.D., Bucknell Univ., 1945. m. Kathryn Avery, 1929. Exp.: Teacher, Los Angeles City Schls., Calif., 1913-39 Consultant in Personnel Procedures, 1939—. Hon. Pos.: President, Southern Calif. Acad. of Criminology, 1946. Mem.: A.A.A.S.; Amer. Math. Soc.; Math. Assn. Amer.; Psychometrics Soc.; Natl. Inst. Indus. Psychol. Contrb. to: Personnel Jour.; Amer. Jour. Psychiatrics; Jour. of Psychol.; Jour. Applied Psychol.; Jour. Soc. Psychol. Special Int.: Temperament; Personnel Practices; Statistics.

HUMM, Harold Judson, Asst. Dir., Duke Univ., Marine Lab., Beaufort, N. C. MARINE BACTERIOLOGY.

HUMMEL, Arnim Dean, Assoc. Prof. of Phys., Ball S. T. C., Muncie, Ind. PHYSICS. b. July 29, 1902, London Mills, Ill. s. Newton Walker and Eva W. (Welch) H. Edn.: B.S., Knox Coll., 1923; M.S., Univ. of Ill., 1924; Ph.D., *ibid.*, 1928. m. Gladys Elizabeth Johnson of Urbana, Ill., 1927. c.: Eleanor Elaine; Catherine Jean; Margaret Eileen. Exp.: Knox Scholar at Univ. of Ill., 1923-24; Asst., Phys., Univ. of Ill., 1924-27; Fellow in Physics, *ibid.*, 1927-28; Instr. in Math., *ibid.*, 1928-29; Prof. of Physics, and Chairman Science Division, (1935-47), Eastern Ky. St. Tchrs. Coll., 1929-43; Lt., A-V (S), U. S. N. R., 1943-45; Assoc. Prof. of Physics, Ball S. T. C., 1947—. Mem.: Phi Beta Kappa; Sigma Xi; Amer. Phys. Soc.; Amer. Assn. of Phys. Tchrs.; Gamma Alpha. Contrb. to: Amer. Jour. of Physics; Bull. Amer. Phys. Soc. Ph.D. Dissertation: Ionization Efficiency of Electrons in Alkali Vapors. Travel: U. S. Listed in: A.M.S. Special Int.: Experimental Electricity, Electronics.

HUMMEL, John Adolph, Asst. Prof. of Agri. Chem. and Asst. Chemist, Univ. of Minn. Agri. Expt. Sta., St. Paul, Minn. CHEMISTRY.

HUMMEL, Katharine Pattee, Rsch. Assoc., Roscoe B. Jackson Memorial Lab., Bar Harbor, Maine, CANCER RESEARCH.

HUMPHREY, Carroll E., Sr. Staff Psychologist, Applied Physics Lab., Johns Hopkins Univ., 8621 Georgia Ave., Silver Spring, Md. PSYCHOLOGICAL RESEARCH.



b. Lake Charles, La., Jan. 1, 1914. s. Horace G. and Estelle (Carroll) H. Edn.: B.A., Univ. of Tex., 1936; Ph.D., *ibid.*, 1951. m. Gilda Scarborough, Dec. 21, 1940. Exp.: H. S. Prin., 1937-41; Royal Electrical-Mechanical Engr., British Royal Army, 1942-43; Radar Maintenance Officer, Airborne, U. S. Air Forces, 1943-46; Factory Engrng. Representative Hoffman Radio Corp., 1946-49; Psychologist, Naval Rsch. Lab., 1951; Sr. Staff Mem. of Psychol.,

Johns Hopkins Univ., 1951—. Mem.: Sigma Xi; A.A.A.S.; Eastern Psychol. Assn.; Amer. Psychol. Assn.; Operations Rsch. Soc. of Amer. Contrb. to: Johns Hopkins APL Notes; Jour. Amer. Psychol.; Jour. Oral Med.; etc. Special Int.: Psychol. Rsch.; Math. (Tensor Analysis); Tracking Studies; Psychol. Theory.

HUMPHREY, Clarence John, Private Practice, 150 S. Gardner St., Los Angeles, Calif. PLANT PATHOLOGY, MYCOLOGY, ENTOMOLOGY.

HUMPHREY, Herbert Kay, Chmn. Bd., Winnetka Trust and Savings Bank, 791 Elm St., Winnetka, Ill. ELECTRICAL ENGINEERING.

HUMPHREY, Llewellyn Mealey, Robert L. Dortch Seed Farms, Scott, Ark. AGRICULTURE.

HUMPHREY, Robert Regester, Range Conservationist, Soil Conservation Service, P. O. Annex, Wenatchee, Wash. RANGE MANAGEMENT.

HUMPHREY, Rufus Richard, Prof. of Anatomy, Univ. of Buffalo Schl. of Med., Buffalo, N. Y. HISTOLOGY, EMBRYOLOGY.

HUMPHREY, Sylvester S., Dept. of Botany, Ohio State Univ., Columbus, Ohio. BOTANY.

HUMPHREY, Tryphena, Asst. Prof. of Anatomy, Univ. of Pittsburgh, Pittsburgh, Pa. NEUROANATOMY.

HUMPHREYS, Curtis J., Natl. Bureau of Standards, Corona, Calif. SPECTROSCOPY.

HUMPHREYS, Richard F., Asst. Prof. of Physics, Sloane Lab., Yale Univ., New Haven, Conn. PHYSICS.

HUNGATE, Joseph Wynne, Prof. of Biol. and Hd., Dept. Applied Sci. and Art, Eastern Wash. Coll. of Edn., Cheney, Wash. ZOOLOGY.

HUNGATE, Robert Edward, Assoc. Prof., Wash. State Coll., Pullman, Wash. MICROBIOLOGY.

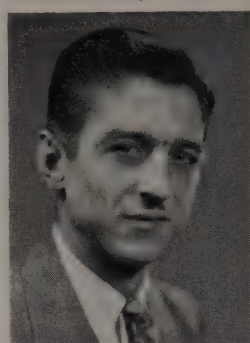
HUNGERFORD, Charles William, Hd., Dept. of Plant Pathol. and Dean Grad. Schl., Univ. of Idaho, Moscow, Idaho. PLANT PATHOLOGY.

HUNGERFORD, Herbert Barker, Hd., Dept. of Entomol., 323 Snow Hall, Univ. of Kans., Lawrence, Kans. ENTOMOLOGY.

HUNSAKER, Jerome Clarke, Prof. in Chg., Aeronautical Engrng. Dept., Mass. Inst. of Tech., 77 Mass. Ave., Cambridge 39, Mass. AERONAUTICAL ENGINEERING. b. August 26, 1886, Creston, Iowa. s. Walter J. and Alma Clarke (Hunsaker) H. Edn.: B.S., U. S. Naval Acad., 1908; S.M., M. I. T., 1912; Sc.D., ibid., 1916. Hon. Sc.D., Williams Coll., 1943; Eng.D., Northeastern Univ., 1946. m. Alice Porter Avery of Hartford, Conn., June 26, 1911. Exp.: (See Vol. XIII). Mem.: Joint Army-Navy Tech. Comm., 1917-18; Inter-Allied Naval Armistice Comm., 1918; Natl. Advisory Comm. for Aero., 1923; Asst. Naval Attache, London, Paris, Berlin, Rome, 1923-26; Asst. Vice-Pres., Bell Tel. Labs., 1926-28; Vice-Pres., Goodyear Zeppelin Corp., 1928-33; Hd., Dept. of Aero Engrng., 1933—. Hon. Pos.: Chmn., Natl. Adv. Comm. for Aero. (N.A.C.A.), 1939—; Fellow, Amer. Phys. Soc.; Amer. Acad. of Arts and Sci.; Hon. Fellow, Inst. of Aero. Sci.; Royal Aero. Soc. of Great Britain; Inst. of Mech. Engrs. of G. B.; Mem., Soc. of Naval Architects; Soc. of Automotive Engrs.; Hon. Mem., Amer. Soc. of Mech. Engrs.; Amer. Phil. Soc.; Natl. Acad. of Sci. Contrb. to: Jour. of Professional Soc. Sc.D. Dissertation: Dynamical Stability of Airplanes. War Record: Naval Officer, 1904-26; Awarded Navy Cross, U. S.; Attained Rank of Comdr., U. S. N.; Now Capt., U. S. N. R. Listed in: Who's Who in Amer.; Who's Who in Mass.; A.M.S. Special Int.: Aircraft Rsch. and Design.

HUNSCHER, Helen Alvina, Prof. and Hd., Home Econ. Dept., Western Reserve Univ., Cleveland, Ohio. NUTRITION.

HUNSBERGER, I. Moyer, Assoc. Prof. of Chem., Antioch Coll., Yellow Springs, Ohio. ORGANIC



CHEMISTRY. b. Quakertown, Pa., Aug. 3, 1921. s. A. F. and Eliza (Moyer) H. Edn.: B.S., Lehigh Univ., 1943; M.S., ibid., 1946; Ph.D., ibid., 1948. m. Elizabeth Ochnich, 1944. c.: Donald M.; Elizabeth Anne; Gretchen. Exp.: A.E.C. Postdoctoral Fellow, Univ. of Ill., 1948-49; Asst. Prof. of Chem., Antioch Coll., Yellow Springs, Ohio, 1949-52; Assoc. Prof. of Chem., ibid., 1952—; Co-Dir., Classified Rsch. Project in Photographic Chem., Air Forces, 1951—; Rsch. Project in

Organic Chem. Sponsored by Rsch. Corp., 1950—. Hon. Pos.: Treas., Dayton Section, Amer. Chem. Soc., 1953. Mem.: Amer. Chem. Soc.; A.A.A.S.; Ohio Acad. Sci.; Phi Beta Kappa; Sigma Xi; Pi Mu Epsilon; Phi Lambda Upsilon; Phi Eta Sigma. Contrb. to: Jour. Amer. Chem. Soc.; Sci. War Record: Navigator, 8th Air Force. Special Int.: Synthetic Organic Chem.; Application of Infrared Spectra to Structural Organic Chem.; On Staff of Abstractors for Chem. Abstracts.

HUNT, Franklin Livingston, Mem. of Staff, Bell Telephone Labs., 81 Woodland Ave., Summit, N. J. PHYSICS.

HUNT, George Albert, Dir. of Control, Penicillin Div., Bristol Labs., Inc., 313 Forest Hill Dr., Syracuse, N. Y. BACTERIOLOGY.

HUNT, Guy Hildebrand, Asst. Prof. Emer., Univ. of Calif., 237 Tavistock Ave., Los Angeles, Calif. MATHEMATICS.

HUNT, Harrison Randall, Emer. Hd. of Dept. of Zool., Mich. St. Coll., E. Lansing, Mich. ANIMAL AND HUMAN GENETICS. b. Conneaut, Ohio, Mar. 7, 1889. s. Henry Harrison and Agnes Estelle (Howard) H. Edn.: B.S., Allegheny Coll., 1912; A.M., Harvard Univ., 1913; Ph.D., ibid., 1916. m. Jane Myrtle Fisher, Aug. 12, 1916. c.: Howard Francis; Althea Inez; Herve Henry; Edward Lawrence and Margaret Agnes. Exp.: Instr. in Zool., W. Va. Univ., Morgantown, W. Va., 1916-18; Asst. Prof. of Zool., ibid., 1918-19; Hd. of Dept. of Biol., Univ. of Miss., Oxford, Miss., 1919-23; Hd. Dept. of Zool. and Zoologist in Expt. Sta., Mich. State Coll., E. Lansing, Mich., 1923-53. Mem.: A.A.A.S.; Amer. Soc. of Zool.; Amer. Soc. of Naturalists; Genetics Soc. of Amer.; Amer. Soc. of Human Genetics; Soc. for Study of Evolution; Mich. Acad. of Sci., Arts and Letters; Internatl. Assn. for Dental Rsch.; Sigma Alpha Epsilon; Phi Beta Kappa; Sigma Xi; Phi Kappa Phi; Phi Sigma; Delta Sigma Rho; Kiwanis Internatl. Author: Lab. Manual of the Anatomy of the Rat, 1924; Some Biol. Aspects of War, 1930. Contrb. to: Jour. of Heredity; Anatomical Record; Genetics; Jour. of Dental Rsch. War Record: Officers Trng. Camp, Plattsburg, N. Y., 1918. Special Int.: Genetics in Mice; Dental Caries in Rats. Mammalian and Human Genetics. Math. Genetics.

HUNT, John Herman, Dir., New Devices Section, General Motors Corp., 1444 Edison Ave., Detroit, Mich.

HUNT, Joseph McVicker, Dir., Inst., Welfare Rsch., Community Service Soc., 105 E. 22nd St., N. Y., N. Y. PSYCHOLOGY.

HUNT, Thelma, Prof. of Psychol. and Exec. Officer, Dept. of Psychol., George Washington Univ., Washington, D. C. PSYCHOLOGY.

HUNT, Walter Fred, Prof. of Petrology and Chmn., Dept. of Mineralogy, Univ. of Mich., Ann Arbor, Mich. PETROLOGY, PETROGRAPHY.

HUNT, William Alvin, Prof. of Psychol., Northwestern Univ., Evanston, Ill. PSYCHOLOGY.

HUNT, Willis Roberts, Assoc. Prof. of Biol., Lafayette Coll., Easton, Pa. **BACTERIOLOGY.**

HUNTER, Francis Robert, Asst. Prof. of Zool., Univ. of Okla., Norman, Okla. **CELLULAR PHYSIOLOGY.**

HUNTER, George Bowditch, Jr., 3530 Tilden St., N. W., Washington, D. C., **ENDOCRINOLOGY.**

HUNTER, Geo. Wm., Hd., Prof., Chem., State A. and M. Coll., Orangeburg, S. C. AGRICULTURAL CHEMISTRY—BIOCHEMISTRY. b. Jenkintown, Pa., Sept. 29, 1911. s. Joseph Walker and Esther (Holland) H. Edn.: A.B., Lincoln Univ., 1931; A.M., Columbia Univ., 1933; Ph.D., Pa. St. Coll., 1946. m. Anna Elizabeth DeCosta, July 12, 1932. d. Benjamin and Gertrude DeCosta, Charleston, S. C. c.: Georgiana; George W. Hunter, Jr. Exp.: Instr. of Chem., Lincoln Univ., 1930-31; Prof. Chem., Tex. Coll., 1933-34; Prof. Chem., Prairie View State Coll., 1934-35; Prof. Chem., St. Phillips Jr. Coll., 1935-36; Med. Soc. Worker Dept., Welfare N. Y. C., 1937-39; Assoc. Physiologist City Coll., N. Y., 1939-41; Prof. and Chmn., Chem. Dept., Hampton Inst., 1942-48; Prof. and Hd., Chem. Dept., Md. St. Coll., Princess Anne, Md., 1948-51; Prof. Chem., State A. and M. Coll., Orangeburg, S. C., 1951—. Learned Soc.: Sigma Xi; Gamma Sigma Delta; Phi Lambda Upsilon; Beta Kappa Chi; Amer. Assn. Univ. Profs.; A.A.A.S.; Natl. Tchng. Assn.; Eastern Regional Dir., Natl. Inst. of Sci., 1951—; Amer. Chem. Soc.; Amer. Oil Chem. Soc.; Amer. Statistical Assn.; Natl. Inst. of Sci.; Va. Assn. of Edn.; Alpha Phi Alpha; Amer. Tchrs. Assn.; Md. Assn. of Tchrs.; East. Vice-Pres., Beta Kappa Chi, 1948-50; Assoc. Editor, Chem. Formulary, Vol. IX. Social Club: Masons. Contrb. to: Journal of Amer. Oil Chem. Soc.; Jour. Chem. Edn. Ph.D. Dissertation: Preparation, Purification and Refractive Indices of the Methyl, propyl and isopropyl esters of the fatty acids. Gen. Ednl. Bd. Fellow. Listed in: A.M.S. Special Int.: Fat Analysis, Foods.

HUNTER, Howard Louis, Prof. of Chem., Clemson Coll., Clemson, S. C. **CHEMISTRY.**

HUNTER, James Horace, Assoc. Soil Technologist, Div. Fruit and Vegetable Crops, U. S. D. A., Beltsville, Md. **SOIL FERTILITY.**

HUNTER, John McNeile, Hd., Physics Dept. and Dir. Grad. Schl., Va. State Coll., Petersburg, Va. **PHYSICS.**

HUNTER, Lillian Mary, Sci. Tchr., Ontario Ladies' Coll., Whitby Ont., Can. **MYCOLOGY, PATHOLOGY.**

HUNTER, Matthew Albert, Dean of Faculty and Hd., Dept. of Metallurgical Engrng., Rensselaer Poly. Inst., 8 Whitman Ct., Troy, N. Y. **METALLURGY.**

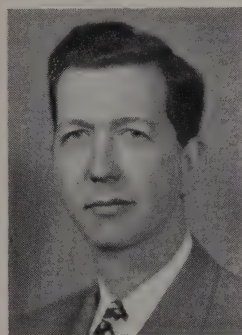
HUNTER, Melvin J., Dir. of Rsch., Dow Corning Corp., Midland, Mich. **ORGANO-SILICON CHEMISTRY.** b. Hamilton Co., Ohio, Aug. 11, 1909.



s. C. Sargent and Margaret C. (Hoock) H. Edn.: B.S., Antioch Coll., 1933; Ph.D., McGill Univ., 1939. m. Naomi M. Bowen, Nov. 11, 1939. c.: Willard B.; Ruth Ann. Exp.: Plastics Rsch., Cellulose Div., Dow Chem. Co., Midland, Mich., 1933-36; Group Leader, ibid., 1939-42; Group Leader Rsch., Dow Corning Corp., ibid., 1942-47; Dir. of Rsch., ibid., 1947—. Hon. P. os.: Chmn., Midland Sect. of Amer. Chem. Soc., 1952.

Mem.: Kiwanis; Amer. Chem. Soc. Contrb. to: Jour. Amer. Chem. Soc.; Indus. Engrng. Chem.; Can. Chem. and Process Indus.; Trans. Electrochem. Soc.; Berichte. Special Int.: Cellulose and Lignin Chem.; Structural Organic Chem.; Polymer Chem.; complete Academic and Indus. Knowledge of the Field of Organo-Silicon Chem.

HUNTER, Oscar Benwood, Jr., Dir., Oscar B. Hunter Memorial Lab., 915 19th St., Northwest, Washington 6, D. C. PATHOLOGY. b. Washington, D. C., Oct. 27, 1915.



s. Oscar B. Hunter, Sr., and Sidney (Pearson) H. Edn.: B.S., Catholic Univ., 1936; M.D., Georgetown Univ. of Med., 1940. m. Anne Battaile, Dec. 27, 1941. c.: Anne Hay; Sidney; Margaret; Patricia; William. Exp.: Intern. Gallinger Municipal Hosp., 1940-41; Fellow, Mayo Clinic, 1941-42; First Asst., ibid., 1942; Major, U.S.A., Asst. Chief Lab. Service, Borden Gen. Hospital, Chickasha, Okla., 1943; Chief, Lab. Service, 55th General Hospital, 1944-45; Assoc. Pathologist, Armed Forces Inst. of Pathol., 1946; Diplomate Amer. Bd. of Path., in Clinical Path. and Pathologic Anatomy, 1946; Assoc. Pathologist, Doctors Hospital, 1947-51; Dir., Dept. of Path., Doctors Hospital, Sibley Memorial Hosp., Montgomery Co. Hospital, Dir., Oscar B. Hunter Memorial Lab., Dir., Blood Grouping Lab., Washington, D. C. Inst. in Hematol., Georgetown Univ., Schl. of Med., Washington, D. C., 1946—; Dir., Dept. of Pathology, Loudoun County Hospital, Va. Hon. Pos.: Sec. Amer. Therapeutic Soc., Trustee, Doctors Hospital Rsch. Foundation; Treas., Internatl. Med. Club. Mem.: Phi Chi Med.; Med. Soc. of the District of Columbia; A.M.A.; Southern Med. Assn.; Amer. Therapeutic Soc.; Southeastern Surgical Congress; Coll. of Amer. Pathologists; Amer. Soc. of Clinical Pathologists; Amer. Assn. of Pathol. and Bacteriol.; Hippocrates-Galen Soc.; Georgetown Alumni Assn.; Catholic Univ. Alumni Assn.; Mayo Alumni Assn.; Wash. Soc. of Path.; Scientific Council of D. C. Soc. for Crippled Children, Inc.; Knights of Columbus; John Carroll Soc.; National Safety Council; Wash. Bd. of Trade; Doc. Hospital Rsch. Foundation; International Assn. Med. Museums; Physician-Veterans, W. W. II; Amer. Assn. of Blood Banks; A.A.A.S. Contrb. to: Arch. Path.; Tr. Amer. Ther. Soc.; Surg. Gyn. Obst.; South. Med. Jour.; Amer. Jour. Clin. Path.; Med. Annals of West; Med. Annals of D. C.; Postgraduate Med.; Case Bull. Internatl. A. M. Mus. War Record; Major, M.C., U.S.A., Asst. Chief Lab. Service, Borden Gen. Hosp., Chickasha, Okla., 1943; Chief, Lab. Service, 55th Gen. Hospital, 1944-45; Assoc. Pathologist, Armed Forces Inst. of Path., 1946. Gen. Int.: Original Reporter of the Use of Splenectomy in Leukemia and the use of Cortisone in the treatment of Erythroblastosis. Spec. Int.: Oncol.: Original Reports on Gastro-Intestinal Tumors of Soldiers in W. W. II, Melanocarcinomas. Hematol.: Use of Exchange Transfusion in RH Incompatibilities, Treatment of Leukemia.

HUNTER, Robertson Gilbert, Vice-Pres. and Actuary, Equitable Life Ins. Co. of Iowa, Des Moines, Iowa. **ACTUARIAL SCIENCE.**

HUNTER, Walter Samuel, Brown Univ., Providence 12, R. I.

HUNTINGTON, Charles Clifford, Prof. Emer. Geography, Coll. of Commerce and Admin., Ohio State Univ., 2500 Henthorn Rd., Columbus, Ohio. **GEOGRAPHY, ECONOMICS.**

HUNTLEY, Louis Grow, Partner, Huntley and Huntley, Consulting Geologist, Pittsburgh, Pa. **PETROLEUM GEOLOGY.**

HUNTRESS, Ernest Hamlin, Prof. of Organic Chem., Mass. Inst. of Tech., Cambridge, Mass. **ORGANIC CHEMISTRY.**

HUNTSMAN, Archibald G., Dept. of Zool., Univ. of Toronto, Toronto, Ont., Can. **BIOLOGY.**

HUPERT, Julius J., Lectr. in Electronics, Physics Dept. De Paul Univ., Dir. of Rsch., A.R.F., Products Inc., Chicago, Ill. **ELECTRONICS.** b. Tarnopol, Poland, May 6, 1910. s. Emil and Maria

(Pohorecka) H. Edn.: M. S., Polytechnic Inst., 1933; Ph.D., Northwestern Univ., 1951. m. Sally M. Cox, Mar. 6, 1947. Exp.: State Establishment Hd., Transmission Div., Rsch., Dev., Warsaw, Poland, 1932-39; Temp. Sr. Scientific Officer, Admiralty Signal Establishment, England, 1940-47; Lectr., Radio Trans., Polish Univ. Coll., London, Eng., 1944-47; Lectr. in Electr., De Paul Univ., Chicago, Ill., 1947—; Dir. of Rsch., A. R. F. Products Inc., River Forest, Ill., 1947—. Sr. Mem.: Inst. of Radio Engr.; Assoc. Mem. British Inst. of Electrical Engr.; Mem. Amer. Inst. of Physics; Amer. Assoc. of Physics Tchr.; Sigma Xi. Author: Radio Communication Transmitter. Contrb. to: Jour. of the Inst. of Electrical Engr.; Proceedings of National Electronics Conference; Electronics. Special Int.: Radio Transmission, Communication Circuits and Techniques, Electronic Instrumentation.

HURD, Archer Willis, Dir., Bureau Ednl. Rsch. and Service, Med. Coll. of Va., Richmond, Va. EDUCATION.

HURD, Charles Buell, Prof. and Chmn., Chem. Dept., Union Coll., Schenectady, N. Y. PHYSICAL AND COLLOID CHEMISTRY.

HURD, Charles DeWitt, Prof. of Chem., Northwestern Univ., Evanston, Ill. CHEMISTRY.

HURD, Paul D., Dept. of Entomol., Univ. of Calif., Berkeley, Calif. ENTOMOLOGY.

HURD, Richard Miller, Forest Ecologist, Boise Basin Branch Sta., Idaho City, Idaho. FORESTRY.

HURLBUT, Cornelius Searle, Jr., Assoc. Prof. of Mineralogy, Harvard Univ., Geol. Museum, Cambridge, Mass. MINERALOGY, CRYSTALLOGRAPHY.

HURLIN, Ralph Gibney, Dir., Dept. Activities, and Acting General Dir., Russell Sage Foundation, 130 E. 22nd St., N. Y., N. Y. SOCIAL AND ECONOMIC SCIENCE.

HURSH, Ralph K., Univ. of Ill., Urbana, Ill. CERAMICS.

HURST, Clarence T., Prof. of Zool. and Archaeol., Dean, Grad. Schl., Western State Coll. of Colo., Gunnison, Colo. ZOOLOGY, ARCHAEOLOGY.

HURT, Huber William, Natl. Dir. of Rsch., Boy Scouts of Amer., 17th Floor, 2 Park Ave., N. Y., N. Y. PSYCHOLOGY, SOCIOLOGY.

HURWITZ, Wallie Abraham, Prof. of Math., Cornell Univ., Ithaca, N. Y. MATHEMATICS.

HUSBAND, Richard Wellington, Dept. of Psychol., Iowa State Coll., Ames, Iowa. INDUSTRIAL PSYCHOLOGY.

HUSSEY, Russell Claudius, Prof. of Geol., Univ. of Mich., 595 Riverview Dr., Ann Arbor, Mich. HISTORICAL GEOLOGY.

HUSTED, Ladley, Assoc. Prof. of Biol., Miller Schl. Biol., Univ. of Va., Charlottesville, Va. CYTOLOGY.

HUSTON, Henry A., retired, Kew Hall, 83-09 Talbot Pl., Kew Gardens, N. Y. AGRICULTURAL CHEMISTRY.

HUSTON, Ralph Chase, Dean of Grad. Studies and Prof. of Organic Chem., Mich. State Coll., East Lansing, Mich. ORGANIC CHEMISTRY.

HUTCHESON, Robert Bellenden, Chf. Paleontologist and Dir. Geol. Lab., Superior Oil Co., P. O. Box 1031, Bakersfield, Calif. PETROLEUM GEOLOGY.

HUTCHESON, Thomas B., Dean of Agri., Va. Poly. Inst., Blacksburg, Va. AGRONOMY.

HUTCHINS, Lee M., Hd. Pathologist in Chg. Div. Forest Pathol., Bureau Plant Indus., Soils and Agri. Engrng., Agri. Rsch. Admin., U. S. D. A., Beltsville, Md. PATHOLOGY.

HUTCHINSON, Andrew H., Hd., Dept. of Biol. and Botany, Univ. of British Columbia, Vancouver, B. C., Can. CYTOLOGY, GENETICS.

HUTCHINSON, Charles Angevine, Prof. and Hd., Dept. of Engrng. Math., Univ. of Colo., Boulder, Colo. ENGINEERING, MATHEMATICS.

HUTCHINSON, Charles Lightfoot, Communications Engr., E. I. du Pont de Nemours and Co., Nemours Bldg., Wilmington, Del. ENGINEERING.

HUTCHINSON, Cranford Robert, Assoc. in Anatomy, Jefferson Med. Coll., Baugh Inst. Anatomy, Philadelphia, Pa. EXPERIMENTAL ZOOLOGY.

HUTCHINSON, Edward Prince, Assoc. Prof. of Sociol., Wharton Schl., Univ. of Pa., Philadelphia, Pa. POPULATION.

HUTCHINSON, George Evelyn, Yale Univ., New Haven 11, Conn.

HUTCHINSON, Robert Orland, Hd., Dept. of Math., Tenn. Poly. Inst., 609 Cedar St., Cookeville, Tenn. MATHEMATICS.

HUTCHINSON, Wesley Gillis, Assoc. Prof. of Botany, Univ. of Pa., Philadelphia, Pa. MICROBIOLOGY.

HUTCHISON, Claude Burton, Vice-Pres., Univ. of Calif., Berkeley, Calif. AGRONOMY, GENETICS.

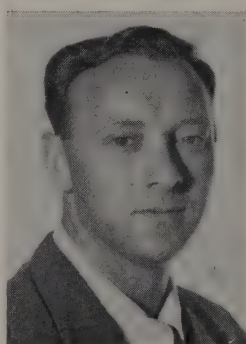
HUTCHISSON, Elmer, Dean of Faculty, Case Schl. of Applied Sci., Cleveland, Ohio. PHYSICS.

HUTSON, Percival Winterburn, Prof. of Edn., Univ. of Pittsburgh, Pittsburgh, Pa. SECONDARY EDUCATION.

HUTSON, Ray, Prof. and Hd., Dept. of Entomol., Mich. State Coll., East Lansing, Mich. ENTOMOLOGY.

HUTT, Frederick Bruce, Prof. of Animal Genetics, Cornell Univ., Ithaca, N. Y. ANIMAL GENETICS.

HUTTRER, Charles P., Exec. Secy., Div. of Rsch. Grants, Natl. Inst. of Health, Federal Security Agency, Bethesda 14,



Md. s. Manfred H. and Anna (Strassberg) H. Edn.: M.S., Univ. Innsbruck, 1932; Ph.D., Univ. Vienna, 1932. m. Lucy (Felix), July 2, 1939. c.: Annick. Exp.: Arconati-Visconti Fellow, Sorbonne, Paris, 1938-40; Rsch. Chemist, Pyridium Corp., Yonkers, N. Y., 1940-43; Rsch. Chemist, Ciba Pharm. Prod., Summit, N. J., 1943-46; Senior Rsch. Chemist, Warner Inst. Therap. Rsch., N. Y., N. Y., 1946-49; Rsch. Assoc., Natl. Rsch. Council, Chem. Biol. ordination Center, Washington, D. C., 1949-51; Exec. Secy., Physiol. and Sens. Dis. Study Sections, Div. Rsch. Grants, Natl. Inst. of Health, Bethesda, Md., 1951—. Mem.: Amer. Chem. Soc.; N. Y. Acad. of Sci.; A.A.A.S.; Amer. Soc. of European Chemists and Pharmacists. Contrb. to: Sci.; Jour. Amer. Chem. Soc.; Chem. Rev.; Experientia; Enzymologia; Jour. Chem. Org.; Jour. Chem. Biol. Special Int.: Histamine Antagonists; Histidine and Histamine Metabolism; Chem. Structure in Relation to Biol. Activity; Synthesis of Medicinal Products; Admin. Experience in Handling of Chem. Biol. Data, and of Rsch. Grants.

HVEEM, F. N., Calif. Dept. of Hwys., Sacramento, Calif. ASPHALT PAVEMENTS.

HYDE, Dorsey W., Jr., The Green Gate, Gilmanton, N. H. SOCIAL AND ECONOMIC SCIENCES.

HYDE, Elizabeth Charlotte, Wells Coll., Aurora, N. Y. CHEMISTRY.

HUYCK, Clement Lee, Prof. Indus. Pharm., St. Louis Coll. of Pharm. and Allied Sciences, St. Louis 10, Mo. **PHARMACY AND CHEMISTRY**. b. Richfield Spgs., N. Y., Feb. 13, 1904. s. Clement Theodore and Mary (Williams) H. Edn.: Ph.G., Albany Coll. Pharm., 1925; Ph.C., Phil. Coll. of Pharm. and Sci., 1926; B.S., Univ. of Buffalo, 1932; M.S., Univ. of Fla., 1935; Ph.D., *ibid.*, 1937. m. Dorothy Reed, Richfield Springs, N. Y., 1937. d. J. D. Reed. c.: Mary Joe; Stella Aline; Clarissa Lee. Exp.: Instr. in Pharm., Wash. St. Coll., 1937-38; Rsch. Chem. in Charge of Development of New Products, Wm. S. Merrill Co., Cincinnati, Ohio, 1935-45; Sr. Pharmacist, Sterling Winthrop Rsch. Inst., 1945-46; Prof. and Head of Div. of Pharm., Columbia Univ., 1946-47; Hd. of Dept. of Pharm., Howard Coll. of Birmingham, Ala., 1947-52; Prof. Ind. Pharm., St. Louis Coll. of Pharm. and Allied Sciences, St. Louis, Mo., 1952—. Mem.: Lions Club; Life Mem. Amer. Pharm. Assn.; Sigma Xi; Phi Kappa Phi; Rho Chi; Fellow, Amer. Assn. for Adv. of Sci.; Amer. Chem. Soc.; Kappa Psi. Contrb. to: Amer. Perfume and Essential Oil Record, Amer. Prof. Pharmacist; Scientific Abstractor for Southeastern Drug Jour.; Amer. Jour. Pharm. Edn.; Jour. of Amer. Pharm. Assn.; Amer. Jour. of Pharmacy. Ph.D. Dissertation: A Study of Reper. Hobby: Music. Listed in: A.M.S.; Biographical Encyclopedia of the World; Leaders in Edn. Special Int.: Pharmaceutical Chem., Drug Extraction.



HYDE, James Franklin, Chf. Rsch. Organosilicon Compositions, Corning Glass Works, Corning, N. Y. **ORGANIC CHEMISTRY**.

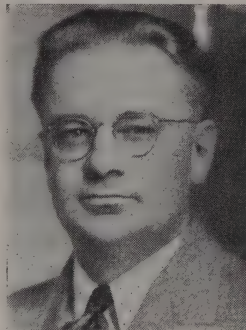
HYDE, Karl Clayton, Chmn., Dept. of Biol., Skidmore Coll., Saratoga Springs, N. Y. **BIOLOGY, BOTANY, BACTERIOLOGY**.

HYDE, Richard E., Exec. Secy., Tehrs. Retirement Bd., 3702 Staunton Ave., Charleston, W. Va. **EDUCATION**.

HYDE, William Humphrey, Jr., Librn. and Prof. of Library Sci., Ill. Inst. of Tech., Chicago, Ill. **ENGINEERING AND SCIENTIFIC LIBRARIES**. b. Nov. 12, 1903, Cleveland, Ohio. s. Dr. Wm. H. and Lucy D. (Mathews) H. Edn.: B.A., Oberlin Coll., 1925; B.S., Columbia Univ., 1929; M.S., *ibid.*, 1938. Exp.: Univ. Club, N. Y., Asst. Librn., 1929-36; Coll. of City of N. Y., Libr. Asst., 1938-39; Cornell Univ., Engr. Libr., 1939-45; Ill. Inst. of Tech. Librn., 1945—. Mem.: Chmn., Eng. Schl. Libr., Amer. C. and Ref. Libr., 1946; Amer. Soc. for Engr. Edn.; Amer. Lib. Assn.; A.S.E.E.; Spec. Libr. Contrb. to:

Ednl. Jours. Listed in: Who Knows—and What; Who's Who in Chicago; Who's Who in the Midwest; Who's Who in Libr. Service.

HYMAN, Hugh H., Prof. of Sci., Northeast La. State Coll., Monroe, La. **SPECTROSCOPY AND PHYSICS**. b. Young Amer., Ind., Feb. 6, 1896. s. J. Lester and Annette (Pangburn) H. Edn.: A.B., Ind. State Tehrs. Coll., 1924; Ph.D., Univ. of Calif., 1929; M.A., *ibid.*, 1928. m. Pauline Park of McKamie, Ark., July 5, 1936. d. Mr. and Mrs. L. T. Park. c.: Hugh H., Jr.; Janet P. Exp.: Ind. Pub. Schl., 1922-25; Union Coll., 1929-30; Franklin Coll., Ind., 1930-31; Henderson State Tehrs. Coll., Ark., 1932-50; Chmn., Gen. Edn. of Math., Fla. State Univ., Tallahassee, Fla., 1950-52; Prof. of Sci., Northeast La. State Coll., Monroe, La., 1952—; Dean of War Training Services at Henderson State Tehrs. Coll., 1942-45. Mem.: Sigma Xi; Gamma Alpha. Contrb. to: The Physical Rev.; Nature. Ph.D. Dissertation: Resonance Bands of the Hydrogen Molecule. War Record: World War I. Travel: England; Europe. Listed in: A.M.S. Special Int.: Math.



HYMAN, Libbie, Amer. Museum of Nat. Hist., New York, N. Y. **ZOOLOGY**.

HYMAN, Nicholas, Prof. of Chem., W. Va. Wesleyan Coll., Buckhannon, W. Va. **CHEMISTRY**.

HYNDMAN, Olan Robert, Chief Neurosurgical Service, Veteran's Hosp., Iowa City, Iowa. **NEUROLOGICAL SURGERY**. b. Houston, Tex., Aug. 22, 1899. s. John and Annie (Rollo) H. Edn.: B.S., Rice Inst., 1921; M.D., Johns Hopkins Med. Schl., 1926. m. Wanda Potter, Dec. 1929. c.: Audrey Elaine; Olan Robert. Exp.: Assoc. Prof., State Univ. of Iowa, Iowa City, Iowa, 1937-43; Assoc. Prof., Colo. Schl. of Med., Denver, Colo., 1943-48; Private Practice, Davenport, Iowa, 1948-52; Chief Neurosurg., Vets. Hospital, State Univ. of Iowa, Iowa City, Iowa, 1952—. Mem.: A.M.A.; Amer. Neurol. Assn.; Amer. Acad. of Neurol. Surg.; Harvey Cushing Soc.; Sigma Xi; F.A.C.S.; Mason. Author: Origin and Life and the Evolution of Living Things, 1952. Special Int.: Neurological Surgery.

HYNEK, Josef Allen, Assoc. Prof. and Dir., McMillin Observatory, Ohio State Univ., Columbus, Ohio. **ASTRONOMY**.

HYSLOP, James A., retired, Chief of Insect Pest Survey, 1320 Stateside Dr., Silver Spring, Md. **ENTOMOLOGY**.

IBSEN, Heman Lauritz, Prof. of Genetics, Kans. State Coll., Manhattan, Kans. **GENETICS.**

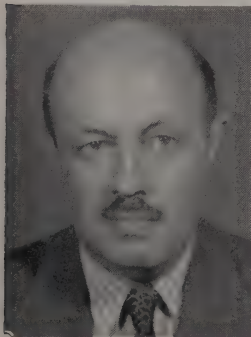
IDDINGS, Arthur, Geologist and Farmer, Rio Venado Farm, Darlington, Md. **GEOLOGY, FARMING.**

IDDINGS, Carl, Pres., Iddings Paint Co., Inc., 48-18 33rd St., Long Island City, N. Y. **CHEMISTRY.**

IDDINGS Edward John, Dean of Agri. Emeritus, Box 153, San Jacinto, Calif. **AGRICULTURAL ADMINISTRATION AND ANIMAL HUSBANDRY.** b. Mar. 22, 1879, Peru, Ind. s. John Byron and Mary (Huber) I. Edn.: B.S., Colo. A. and M. Coll., 1907; M.S., *ibid.*, 1922. Hon. Deg.: LL.D., Univ. of Idaho, 1950. m. Maud Rowell, June 24, 1908. c.: Edward John, Jr. (dec.), and Katherine May, (dec.). Exp.: Special Agent, Bureau of Plant Indust., U. S. Dept. Agri., 1906; Asst. to Dean of Agri., Colo. A. and M. Coll., 1907-09; Instr. of Animal Husbandry, *ibid.*, 1909-10; Prin., Schl. of Agri. and Asst. in Animal Husbandry, Univ. of Idaho, 1910-11; Prof., *ibid.*, 1911-18; Asst. Dean, *ibid.*, 1913-15; Dean, *ibid.*, 1915-18; Dean of Agri., and Dir. Agri. Expt. Station, 1918-46; Acting Dir. Ext. 1923-24; Dir. of Ext., 1924-46; Dean Emeritus, *ibid.*, 1946—. Mem.: Amer. Soc. of Animal Prod.; A.A.A.S., Fellow; Sigma Xi; Delta Tau Delta. Contrb. to: Numerous official reports and scientific publications, and large number of popular articles on various aspects of agricultural problems, and especially livestock production and marketing. Special Int.: Animal Husbandry and special inquiry into various aspects of world agriculture through medium of round-the-world study tour.

IDE, Frederick Palmer, Assoc. Prof. of Zool., Univ. of Toronto, Toronto 5, Ont., Can. **ZOOLOGY AND ENTOMOLOGY.** b. Ottawa, Can., Sept. 4, 1904. s. William and Helen Winnifred (Masson) I. Edn.: B.A., Univ. of Toronto, 1928; M.A., *ibid.*, 1930; Ph.D., *ibid.*, 1934. Exp.: Lectr., Univ. of Toronto, 1935-39; Asst. Entomologist, Div. of Entomology, Federal Dept. of Agri., 1938-39; Asst. Prof., Univ. of Toronto, 1939-43, 1945-50; Assoc. Prof., *ibid.*, 1950—. Hon. Pos.: Mem., Entomological Rsch. Panel, Defense Rsch. Bd. of Can.; Mem., Advisory Com. on Fisheries and Wildlife of the Rsch. Commn. of Ont. Mem.: Fellow, A.A.A.S.; Fellow, Entomological Soc. of Amer.; Arctic Inst. of Amer.; Soc. for the Study of Evolution. Contrb. to: Canadian Jour. of Zool.; Canadian Entomologist; Univ. of Toronto Studies. War Record: Civilian Meteorologist, Air Service Branch, Dept. of Transportation, 1943-45. Special Int.: Taxonomy and Ecology of Aquatic Insects; Studies of Environmental Factors; Population Dynamics.

IDE, John McDonald, Chf. Scientist, U. S. N. Underwater Sound Lab., Ft. Trumbull, New London, Conn. **COMMUNICATION ENGINEERING.** b. Mount Vernon, N. Y., Aug. 17, 1907. s. Herbert Chandler and Harriet (McDonald) I. Edn.: A.B., Pomona Coll., 1927; M.S., Harvard Univ., 1929; D.S., *ibid.*, 1931. m. Margaret Martin, July 11, 1929. c.: Margaret; Katherine; Cynthia. Exp.: Asst. in Phys., Harvard Univ., Cambridge, Mass., 1929-31; Instr. in Phys. and Communication Engrng., *ibid.*, 1931-36; Staff Geophysicist, Shell Oil Co., Houston, Tex., 1936-41; Physicist, Sect. Hd.,



Naval Rsch. Lab., Washington, D. C., 1941-45; Tech. Dir., U. S. N. Underwater Sound Lab., Ft. Trumbull, New London, Conn., 1945-47; Chf. Scientist, *ibid.*, 1947—. Hon. Pos.: Trustee, Mitchell Coll., New London, Conn. Sr. Mem. I.R.E. Fellow, Acoustical Soc.; Fellow, Amer. Geophys. Union. Mem.: U. S. Naval Inst.; Phi Beta Kappa; Tau Beta Pi. Contrb. to: I.E.E. Proc.; Rev. of Sci. Instruments; Jour. of Geol.; Proc. Natl. Acad. of Sci.; Naval Inst. Proc. Special Int.: Magnetostriction

Devices; Measurement of Elastic Constants as a Function of Temperature and Pressure; Design of Gravimeters and Torsion Balances for Geophys. Exploration; Propagation of Sound in Water; Underwater Communication and Sonar Electronics.

IDYLL, Clarence Purvis, Rsch. Assoc., Marine Lab., Univ. of Miami, Coral Gables, Fla. **FISHERY BIOLOGY.** b. Edmon-



town, Alta., Can., Feb. 10, 1916. s. A. C. and Pansy (Purvis) I. Edn.: B.A., Univ. of B. C., 1938; M.A., *ibid.*, 1940; Ph.D., Univ. of Wash., 1951. m. Marion Daniels, June 28, 1941. c.: Marilyn; Janice; Jacqueline. Exp.: Tchng. Fellow, Univ. of B. C., 1939-40; Asst. Biologist, Fisheries Rsch. Bd. of Can., 1937-40; Biologist, Internatl. Pacific Salmon Fisheries Commn., 1941-48; Rsch. Assoc., Marine Lab., Univ. of Miami, 1948—; Asst. Prof. Marine Biol., *ibid.*, 1948-53; Assoc. Prof. Marine Biol., *ibid.*, 1953—; Exec. Secy., Gulf and Caribbean Fisheries Inst., *ibid.*, 1949—. Mem.: Sigma Xi; Phi Sigma; A.A.A.S.; Amer. Soc. Ichthyol. and Herpet.; Amer. Fisheries Soc.; Inst. of Food Tech.; Pacific Fishery Biologists; Fla. Acad. Sci.; Beta Beta Beta. Contrb. to: Trans. Amer. Fish Soc.; Trans. Amer. Wildlife Conf.; Trans. Gulf and Caribbean Fisheries Inst.; Pubs. Univ. of Miami. Special Int.: Fishery Biol.

IFFERT, Robert Earl, U. S. Office of Edn., Chf. Ednl. Officer, Washington, D. C. **EDUCATION.**

IFFLAND, Don C., Asst. Prof. of Chem., W. Va. Univ., Morgantown, W. Va. **ORGANIC CHEMISTRY.** b. Blissfield, Mich., Nov. 26, 1921. s. Fred C. and Letha M. (Lipp) I. Edn.: B.S., Adrian Coll., 1943; M.S., Purdue Univ., 1946; Ph.D., *ibid.*, 1947. m. Mary Jane Sparks in Apr., 1944. c.: Diana Lois. Exp.: Asst. Prof. of Chem., W. Va. Univ., Morgantown, W. Va., 1947—. Hon. Pos.: Chmn., Northern W. Va. Section of Amer. Chem. Soc., 1951-52; Secy., W. Va. Chapter of the Soc. of the Sigma Xi, 1950—. Mem.: Sigma Xi; Phi Lambda Upsilon; Amer. Chem. Soc. Contrb. to: Jour. of the Amer. Chem. Soc. Special Int.: Organic Chem. of Nitrogen.

ILICK, John Theron, Prof. of Zool., Lyman Hall, Syracuse Univ., Syracuse



10, N. Y. **ZOOLOGY.** b. Cherry Valley, Pa., Dec. 3, 1888. s. Rev. Hiram J. and Helen (Kunsman) I. Edn.: A.B., Taylor Univ., 1910; A.B., Syracuse Univ., 1912; M.A., *ibid.*, 1913; Ph.D., Princeton Univ., 1928. m. Bernice Rowland of Olean, N. Y., Aug. 24, 1916. d. Mr. and Mrs. Chas. W. Rowland. c.: John Rowland; Paul Edward; Elisabeth Claire. Exp.: Rust Coll., Holly Springs, Miss., 1910-11; W. Va. Univ., Inst. in Zool., 1913-16; Prof. of Biol., Univ. of Nanking, Nanking, China, 1920-36; Western Reserve Med. Schl., 1927-29; Prof. of Zool. and Cytogenetics, Syracuse Univ., 1938—. Mem.: Fellow, A.A.A.S.; Amer. Inst. Biol. Sci.; Amer. Soc. of Zool.; Peking Soc. Natl. Hist.; Amer. Genetics Assn.; Sigma Xi; Phi Tau Phi; Theta Chi Beta; Theta Beta Phi. Author: A Lab. Manual for Coll. Biol., 1925; The World We Live In—Man and Animals, 1944; Lab. Expt. for Coll. Zool., 1938; Significance of Chromosome Behavior During Diakinesis in Oenothera; Chromosomal Configurations of Oenothera Species and Crosses and their Probable Significance. Contrb. to: Colliers Encyc. Ph.D. Dissertation: A Cytological Study of Meiosis in the

Pollen Mother Cells of Some Oenotheras. Travel: China; Japan; Philippines; Malaya; Sumatra; Ceylon; Italy; Switzerland; France; England; Canada; U. S. Hobbies: Reading; Gardening. Listed in: Who Knows—and What; A.M.S. Special Int.: Cytology and Cytogenetics.

IHDE, Aaron J., Assoc. Prof. of Chem. and Integrated Liberal Studies, Univ. of Wis., Madison, Wis. **CHEMISTRY**. b. December 31, 1909, Neenah, Wis. s. John L. and Ella (Haase) I. Edn.: B.S., Univ. of Wis., 1931; M.S., *ibid.*, 1939; Ph.D., *ibid.*, 1941. m. Olive Tipler of Neenah, Wis., June 14, 1933. d. Frank L. and Alma (Pope) Tipler. c.: Gretchen; John. Exp.: Research Chemist, Blue Valley Creamery Co., 1931-38; Grad. Asst. in Chem., Univ. of Wis., 1939-41; Instr. in Chem., Butler Univ., 1941-42; Instr. in Chem., Univ. of Wis., 1942-45; Asst. Prof. of Chem., *ibid.*, 1945-48; Assoc. Prof. of Chem. and Integrated Liberal Studies, *ibid.*, 1948—; Carnegie Fellow in Gen. Edn., Harvard Univ., 1951-52. Mem.: Amer. Chem. Soc.; A.A.A.S.; Hist. of Sci. Soc.; Wis. Historical Soc.; Wis. Acad. of Sci., Sec., 1950—; Sigma Xi; Phi Lambda Upsilon. Contbr. to: Jour. Nutrition; Jour. Amer. Chem. Soc.; Trans. Wis. Acad.; Jour. Chem. Edn.; Scientific Monthly. Ph.D. Dissertation: Studies on Some of the Minor Components of the Rye Germ. Listed in: A.M.S. Special Int.: Hist. of Chem.; Sci. Edn.; Food Chem.

ILIFF, Alberta, Instr. in Physical Growth, Child Rsch. Council, Univ. of Colo. Schl. of Med., 4200 E. Ninth Ave., Denver, Colo. **BIOCHEMISTRY**.

ILOFF, Philip Murray, Prof. of Mathematics, Head, Dept. of Mathematics, State Coll., Chico, Calif. **MATHEMATICS**. b. December 8, 1886, Honesdale, Pa. s. Henry and Johanna (Switzer) I. Edn.: A.B., Univ. of Mich., 1917; A.M., *ibid.*, 1920; Grad. Work, Univ. of Calif. and Univ. of Chicago. m. Ethel M. Rumberger of Warrior's Mark, Pa., Sept. 19, 1919. d. Mr. and Mrs. G. E. Rumberger. c.: Philip Murray, Jr.; Edwin Laurence. Exp.: Prin., H. S., Lake Como, Pa.; Prin., H. S., Prompton, Pa.; Prin., H. S., Warrior's Mark, Pa.; Tehng. Asst., Math., Univ. of Mich.; Asst. Prof. of Phys., Pa. State Coll.; Prof. of Math and Dept. Hd., Chico State Coll., Chico, Calif. Mem.: Amer. Math. Soc.; Natl. Coun. of Tehrs. of Math.; A.A.A.S.; Phi Beta Kappa; Kappa Delta Pi. Author: Booklet Sci. Guide for Elem. Schls., Man's Tools, 1935; Transportation, 1938. War Record: U. S. Army, 1918. Hobbies: Out of Doors; Hunting; Fishing.

ILTIS, Hugo, Prof. of Biol., Mary Washington Coll., Univ. of Va., Fredericksburg, Va. **ZOOLOGICAL SCIENCES**.

IMLAY, Ralph Willard, Geologist, U. S. Geol. Survey, Washington, D. C. **PALEONTOLOGY**.

INCH, Alice Evans, retired, 2440 Marilouise Way, San Diego, Calif. **BOTANY**.

INGALLS, Albert Graham, Assoc. Editor, Scientific American, 24 W. 40th St., N. Y., N. Y. **ASTRONOMY**.

INGALLS, Dorothy E., Prof. of Chem., Albion Coll., Albion, Mich. **CHEMISTRY**. b. Denver, Colo., 1900. d. Wilber Dwight and Emma (Agard) E. Edn.: A.B., Univ. of Denver, 1922; A.M., Univ. of Ill., 1924; Ph.D., Univ. of Mich., 1940. Mem.: Iota Sigma Pi; Sigma Xi; Pi Beta Phi. Ph.D. Dissertation: Basic Chromic Nitrate Solutions. Hobbies: Weaving; Travel. Listed in: A.M.S.

INGALLS, N. William, 3526 Edison Rd., Cleveland Heights, Ohio. **ANTHROPOLOGY, MEDICAL SCIENCES**.

INGBERG, Simon Hanson, Prin. Materials Engr. and Chf. Fire Resistance Section, Natl. Bureau of Standards, Washington, D. C. **FIRE RESISTANCE RESEARCH**.

INGE, Frederick D., Prof. of Botany and Chmn., Dept. of Biol., Hampton Inst., Hampton, Va. **PLANT PHYSIOLOGY**.

INGERSON, Earl, Carnegie Inst., Washington, D. C. **GEOLOGY**.

INGERSOLL, Leonard Rose, Prof. of Physics, Univ. of Wis., Madison, Wis. **PHYSICS**.

INGLE, Dwight J., Rsch. Physiologist, Rsch. Labs., Upjohn Co., Kalamazoo, Mich. **ENDOCRINOLOGY**.

INGRAHAM, Mark Hoyt, Dean, Coll. of Letters and Sciences and Prof. of Math., Univ. of Wis., Madison, Wis. **MATRIX THEORY**.

INSKO, Wyatt Marion, Jr., Prof. in Chg. Poultry Husbandry, Univ. of Ky., Lexington, Ky. **RESEARCH IN POULTRY**.

INSLEY, Herbert, Asst. Chf., Div. Nonmetallic Mineral Products, Natl. Bureau of Standards, Washington, D. C. **MINERALOGY AND PETROLOGY**.

IPATIEFF, V. N., 190 E. Pearson St., Chicago 11, Ill. **ORGANIC CHEMISTRY**.

IRBY, Nolen M., Pres., Ark. State Tchrs. Coll., Conway, Ark. **COLLEGE ADMINISTRATION**.

IRELAND, Clarence Edward, Physicist, Rsch. Lab., A. E. Staley Mfg. Co., Decatur, Ill.

IRELAND, Joseph C., Prof. of Agron., Okla. A. and M. Coll., Stillwater, Okla. **PLANT PHYSIOLOGY**.

IRELAND, Mark Lorin, retired, Col., U. S. Army, 1511 16th St., N. W., Washington, D. C. **TRANSPORTATION ENGINEERING**.

IRISH, Oliver John, Asst. Dir. of Pathol., Dept. Md. and Surgery, Veterans Admin. Central Office, 711 Van Buren St., N. W., Washington, D. C. **BIOCHEMISTRY**.

IRLAND, George Allison, Prof. of Elec. Engrng., Bucknell Univ., 5 Market St., Lewisburg, Pa. **ELECTRICAL ENGINEERING**.

IRONS, J. V., Dir. of Labs., Tex. State Health Dept., 4007 Lullwood, Austin, Tex. **PUBLIC HEALTH LABORATORY METHODS; EPIDEMIOLOGY; TROPICAL MEDICINE; VIROLOGY**. b. Sullivan Co., Ind., May 17, 1903. s. F. F. and Susan (McBride) I. Edn.: B.A., Ind. State Tchrs. Coll., 1927; Sc.D., Johns Hopkins Univ., 1933. m. Lillian E. Schulz, 1934. c.: Edna Mae; Lillian Elise. Exp.: H. S. Sci. Tch., Jasonville, Ind., 1927-29; Instr. in Sci., Ind. State Tchrs. Coll., summer, 1930; Tech. Asst. in Filterable Viruses and Immunology, 1930-31; Tehng. Asst., Filterable Viruses, 1931-

32; Fellow in Animal Pathol., Dept. of Animal Pathol., Rockefeller Inst. for Med. Rsch., Princeton, N. J., 1932-33; Chf. Bacteriologist, 1933-35; Asst. Dir. of Lab., 1935-40; Assoc. Dir. of Lab., 1940-46; Dir. of Lab., Tex. State Health Dept., 1946—. Mem.: A.P.H.A.; A.S.T.M.; Soc. Amer. Bacteriologists; Soc. Exptl. Biol. and Med.; A.S.P.B.; Tex. Acad. of Sci.; Gamma Alpha; Sigma Xi; Phi Sigma. Contbr. to: Amer. Jour. Pub. Health; Amer. Jour. Tropical Med.; Amer. Jour. Bacteriol.; Tropical Med. News; Pub. Health Rep.; Jour. A.V.M.A.; Proc. Soc. Exptl. Biol. and Med.; Jour. A.M.A.; Amer. Jour. Hyg. Gen. Int.; Mem., Natl. Institutes of Health Rsch. Advisory Com. on Sectional Rsch. in Microbiol. Special Int.: Studies in Smallpox; Relapsing Fever; Q Fever; Ornithosis.

IRVIN, Elinor Moore, Volunteer Rsch. Assoc. Physiol. Chem., Johns Hopkins Med. Schl. Baltimore, Md. **PHYSIOLOGICAL CHEMISTRY**.

IRVIN, Roy, Production Mgr., Red Star Yeast and Products Co., Milwaukee, Wis. **CHEMISTRY, FERMENTATION**.

IRWIN, George R., Supt. of Mechanics Div., Naval Rsch. Lab., 6005 39th Pl., Hyattsville, Md. **MECHANICS OF FLOW AND FRACTURE**.



IRWIN, Malcolm Robert, Prof. of Genetics, Univ. of Wis., Madison 6, Wis. **PHYSIOLOGICAL GENETICS.** b. Artesian, S. Dak., Mar. 2, 1897. s. Joseph S. and Mary T. (McCullum) I. Edn.: B.S., Iowa State Coll., 1920; M.S., *ibid.*, 1925; Ph.D., *ibid.*, 1928. m. Margaret House, July 5, 1929. c.: Joe Robert; Harriet Anne. Exp.: Instr. in Genetics, Iowa State Coll., Ames, Iowa, 1927-28; Fellow, Natl. Rsch. Coun., Bussey Inst., Harvard Univ., 1928-29; and at Rockefeller Inst. for Med. Rsch., 1929-30; Asst. Prof., Assoc. Prof. and Prof. of Genetics, Univ. of Wis., Madison, Wis., 1930—. Mem.: A.A.A.S.; Amer. Assn. of Immunology; Amer. Soc. of Zoology; Genetics Soc. of Amer.; Amer. Soc. of Naturalists; Soc. for Experimental Biol. and Med.; Soc. Study of Evolution; Soc. for Study of Growth and Development; Amer. Genetic Assn.; Natl. Acad. of Sci.; Phi Kappa Phi; Sigma Xi. Contrb. to: Genetics; Amer. Naturalist; Quarterly Rev. of Biol.; Jour. of Infectious Diseases; Jour. A. Vet. Med. Assn.; Amer. Jour. of Vet. Rsch.; Biol. Rev. War Record; U. S. Army, 1918. Special Int.: Disease Resistance in Animals; Immunogenetic Studies of Species and Species Hybrids.

ISAACS, Raphael, Sr. Attending Physician in Hematol., Michael Reese Hosp., 104 S. Michigan Ave., Chicago 3, Ill. **HEMATOLOGY.** b. Cincinnati, Ohio, Aug. 29, 1891. s. Abraham and Rachel (Friedman) I. Edn.: A.B., Univ. of Cincinnati, 1911; A.M., *ibid.*, 1912; M.D., *ibid.*, 1918. m. Agnes Wolfstein, Oct 11, 1923. c.: Roger David. Exp.: Asst. in Biol., Univ. of Cincinnati, 1910; Asst. in Zool., *ibid.*, 1911-14; Asst. in Physiol., *ibid.*, 1917-18; Res. Staff, Cincinnati General Hosp., 1918-22; Instr. in Med., Univ. of Cincinnati Coll. of Med., 1920-22; Vol. Asst. in Med., Peter Bent Brigham Hosp., Boston, Mass., 1922-23; Instr. in Med., Harvard Med. Schl., 1923-27; Asst. Phys., Huntington Memorial Hosp., Harvard Univ., 1923-27; Consultant in Hematol., Beth Israel Hosp., Boston, Mass., 1926-27; Asst. Phys., Boston Dispensary, 1926-27; Asst. Prof. of Med., Univ. of Mich., 1927-29; Assoc. Prof. of Med., *ibid.*, 1929-41; Asst. Dir., Simpson Memorial Inst. for Med. Rsch., Univ. of Mich., 1927-41; Attending Phys. in Hematol., Michael Reese Hosp., Chicago, Ill., 1940-52; Sr. Attending in Hematol., *ibid.*, 1952—. Mem.: Phi Beta Kappa; Sigma Xi; Alpha Omega Alpha; A.M.A.; Assn. Amer. Phys.; Amer. Soc. Clinical Investigation; Central Soc. Clinical Rsch.; Amer. Coll. Physicians; Soc. Exptl. Biol. and Med.; Amer. Soc. Exptl. Pathol.; Soc. Francois d'Hematology; Internatl. Soc. Hematol.; Inst. of Med., Chicago; Soc. Internal Med., Chicago; A.A.A.S. Author: Manual Clinical and Lab. Technic, 1926; Diseases of Blood, 1937; Diagnosis and Treatment of Diseases of Blood, 1937. Contrb. to: Jour. A.M.A.; Annals Internal Med.; Jour. Lab. and Clinical Med.; Sci.; Amer. Jour. Med. Sci.; Ill. Jour. Med.; Amer. Jour. Physiol.; Arch. Internal Med. War Record; Private, 1917-19; First Lt., 1919-21. Gen. Int.: Section Editor, Biol. Abstracts; Editorial Bd., Harore Haivri Med. Jour. Consulting Editor, Leukemia Abstracts. Special Int.: Hematol.

ISBELL, Col. Robert Nevill, Dir. of Nuclear Applications, Air Rsch. and Development Command,



U. S. A. F., Box 1395, Baltimore 3, Md. **ORGANIC RATES OF REACTION AND CATALYSIS.** b. Nashville, Tenn., Nov. 8, 1900. s. Robert F. and Ruby (Nevill) I. Edn.: A.B., William Jewell Coll., 1923; Ph.D., Univ. of Wis., 1931. m. Katherine Burns. c.: Mary Katherine Burns. Exp.: Asst. Chem., Freeport Sulphur Co., Freeport, Tex., 1923-24; Lab. Instr., Yale Univ., New Haven, Conn., 1924-25; Instr., Conn. Coll. of Pharmacy, 1925-26; Instr.

Chem., Wake Forest Coll., Wake Forest, N. C., 1926-28; Asst. Prof. Chem., *ibid.*, 1928-30; Hon. Fellow, Univ. of Wis., Madison, Wis., 1930-31; Assoc. Prof. Chem., Wake Forest Coll., Wake Forest, N. C., 1931-

41; Dir. of Nuclear Applications, Air Rsch. and Development Command, U.S.A.F., Baltimore, Md., 1951—. Mem.: Omicron Delta Kappa; Alpha Chi Sigma; Gamma Alpha; Gamma Sigma Epsilon; Sigma Xi; Phi Lambda Upsilon; Mason, War Record: U.S.A.F., 1918 and 1941—. Gen. Int.: Received Bronze Star Medal; Air Medal; Army Commendation Medal; Air Force Commendation Medal, Oak Leaf Cluster; EAME Medal with 3 battle Participation Clasps; Croix de Guerre avec Palme. Hobbies: Photography; Aviation; Golf; Swimming; Football; Volley Ball. Special Int.: Organic and Physical Chem.

ISELIN, Columbus O'Donnell, Woods Hole Oceanographic Institution, Woods Hole, Mass.

ISENBARGER, Jerome, In Chg. Dept. of Integrated Sci., Loyola Univ. Schl. of Commerce, 833 N. Tower Ct., Chicago, Ill. **PLANT PHYSIOLOGY.**

ISENHOUR, John H., 215 Confederate Ave., Salisbury, N. C. **CERAMICS.**

ISRAEL, S. Leon. **STERILITY.**

IVES, Judson Dunbar, Prof. Emeritus of Biol., Carson-Newman Coll., Pinebluff, N. C. **CAVE ANIMALS AND THEIR ECOLOGY.** b. Alfred, Maine, Feb. 19, 1884.



s. Rev. Sumner Abraham and Alice (Dunbar) I. Edn.: A.B., Wake Forest Coll., 1905; M.A., *ibid.*, 1906. Exp.: Instr. in Biol., Wake Forest Coll., N. C., 1906-14; Prof. of Sci., Ouachita Coll., 1915-16; Prof. of Biol., Mt. Allison Univ., Nova Scotia, Can., 1917-18; Prof. of Biol. and Geol., Coll. of Charleston, S. C., 1918-20; Prof. of Biol., Stetson Univ., 1920-21; Prof. of Biol., William Jewell Coll., 1921-22; Prof. of

Biol., Carson-Newman Coll., Jefferson City, Tenn., 1923-52; Prof. Emeritus, *ibid.*, 1952—. Hon. Pos.: Mem. Tenn. Acad. of Sci. Exec. Commn., 1937-40. Mem.: Sigma Xi; N. C. Acad. of Sci.; Tenn. Acad. of Sci.; N. Y. Acad. of Sci.; Amer. Genetics Assn.; Amer. Eugenics Soc.; Ecol. Soc. of Amer.; Amer. Forestry Assn.; N. C. Forest Assn.; Assn. Southern Biologists; Nature Conservancy; Société Linéenne de Lyon. Author: Lab. Outline for Introductory Biol., 1947. Contrb. to: Jour. Tenn. Acad. of Sci.; Jour. of the Elisha Mitchell Sci. Soc. Gen. Int.: Reports on the Cave Hibernation of Mosquitoes. Special Int.: Animal Ecology of Caves.

ISRAELSEN, Orson Winso, Research Prof. of Irrigation and Drainage, College Hill, Box 57, Logan,



Utah. **IRRIGATION AND DRAINAGE.** b. Hyrum, Utah, Dec. 25, 1887. s. Andrew and Boletta (Wilson) I. Edn.: B.S., Utah State Agri. Coll., 1912; M.S., Univ. of Calif., 1914; Ph.D., *ibid.*, 1925. m. Jennie May Allen of Hyrum, Utah, Feb. 24, 1909. d. Franklin and Boletta A. c.: Lettie Ione; Ester Golda; Orson Allen; Melvin Allen. Exp.: 1916-17, Asst. Prof.; 1917-19, Assoc. Prof. and 1919—, Prof. of Irrigation and Drainage at Utah State Agri. Coll.; Hd., Dept. of Irriga-

tion and Drainage, 1916-32; Designed Hydraulic Lab. for Schl. of Engrng., 1922; Rsch. concerning water-application efficiencies in Utah, 1938-46; Rsch. concerning control of erosion on irrigated lands, 1939-42; Rsch. on canal seepage losses and lining of canals, 1940-51; Rsch. on design of drainage systems, 1946-51. Hon. Pos.: Utah State Agri. Coll. Faculty Assn.; Second Annual Rsch. Lectr.,

1943; Fellow and Pres., Utah Acad. of Sciences, Arts, and Letters, 1936; Hon. Mem. of the Internatl. Mark Twain Soc., 1950. Mem.: Fellow, A.A.A.S.; Fellow, A.S.A.E.; Amer. Soc. of Civil Engrs.; Amer. Geophys. Union; Utah Acad. of Sci., Arts, and Letters; Amer. Soc. for Engrng. Edn.; Phi Kappa Phi; Sigma Xi; C. of C. Author: Irrigation Principles and Practices, 1932, 2nd ed., 1950. Contrb. to: Agri. Engrng.; Engrng. News Record; Soil Sci.; Western Constrn. News; Reclamation Era; Jour. of Agri. Res.; Civil Engrng. Ph.D. Dissertation: The Application of Hydrodynamics to Irrigation and Drainage Problems. Travel: U. S.; Canada; Mexico; Brazil. Hobbies: Chess; Horses; Hunting. Listed in: Who Knows—and What; Who's Who in the West.

IVES, Herbert Eugene, 32 Laurel Pl., Upper Montclair, N. J.

IVY, Andrew Conway, Vice-Pres., Distinguished Prof. of Physiol. and Hd., Dept. of Clinical Sci., Univ. of Ill., Chicago 12, Ill. **MEDICINE.** b. Farmington, Mo., Feb. 25, 1893. s. Henry McPherson and Cynthia (Smith) I. Edn.: A.B., State Normal Schl., 1913; B.Pd., ibid., 1913; B.S., Univ. of Chicago, 1916; M.S., ibid., 1917; Ph.D., ibid., 1918; M.D., Rush Med. Coll., 1922. Hon. Deg.: D.Sc., Univ. of Nebr., 1947; D.Sc., Grinnell Coll., 1947; D.Sc., Boston Univ., 1948; LL.D., Loyola Univ., Chicago, Ill., 1950. m. Emma Anna Koh-

man, Dec. 24, 1919. c.: John Henry; William Harvey; Andrew Conway; Horace Kohman and Robert Emerson. Exp.: Instr. in Physiol., Univ. of Chicago, Chicago, Ill., 1917-19; Assoc. Prof. of Physiol., Loyola Univ., Schl. of Med., Chicago, Ill., 1919-23; Assoc. Prof. of Physiol., Univ. of Chicago, Chicago, Ill., 1923-25; Nathan Smith Davis Prof. of Physiol. and Pharmacol., Hd. Div. of Physiol. and Pharmacol., Northwestern Univ., Med. Schl., Chicago, Ill., 1925-46; Vice-Pres., Distinguished Prof. of Physiol. and Hd., Dept. of Clinical Sci., Univ. of Ill., Chicago, Ill., 1946—. Mem.: A.M.A.; Fellow, Amer. Coll. of Physicians; Amer. Inst. of Baking, Scientific Adv. Comm.; Amer. Cancer Soc.; Amer. Inst. of Nutrition; A.A.A.S.; Assn. for the Study of Internal Secretions; Chicago Med. Soc.; Des Moines Acad. of Med.; Gorgas Med. Soc.; Hematol. Rsch. Foundation; Ill. State Med. Soc.; Ill. Acad. of Sci.; Natl. Acad. of Med., Buenos Aires, Argentina; Natl. Soc. for Med. Rsch.; Alpha Kappa Kappa; Alpha Omega Alpha; Sigma Xi. Author: Peptic Ulcer (with M. I. Grossman and W. H. Bachrach), 1950. Contrb. to: Between 1200 and 1300 published articles.

IVY, John Smith, Petroleum Engr., 1124 Niels Esperson Bldg., Houston, Tex. **PETROLEUM GEOLOGY.**

IVY, Robert Henry, Prof. of Plastic Surgery, Univ. of Pa., Philadelphia, Pa. **SURGERY.**

JAAP, Robert George, Prof. of Poultry Husbandry, Ohio State Univ., Columbus, Ohio. **GENETICS**, POULTRY.

JABLONSKI, Frank Edward, Physicist, Naval Ordnance Lab., Washington, D. C. **PHYSICS**.

JACK, Eugene L., Prof. of Dairy Industry; Chmn. Div., Univ. of Calif., Davis, Calif. **DAIRY SCIENCE**. b. June 14, 1899, Stoneboro, Pa. s. Homer and Myrtle M. (Perrine) J. Edn.: B.S., Pa. State Coll., 1933; M.S., *ibid.*, 1934; Ph.D., *ibid.*, 1936. m. Sue Thomas, June, 1930. Exp.: Rsch. Chem., Borden Co., Syracuse, N. Y., 1936-37; Asst. Prof., Assoc. Prof., Prof., Univ. of Calif., 1937—; Chmn., Div. of Dairy Industry, *ibid.*, 1946—. Mem.: Amer. Dairy Sci. Assn.; Amer. Chem. Soc.; Amer. Oil Chem. Soc.; Inst. Food Technol.; Sigma Xi. Contrb. to: Jour. of Dairy Sci.; Jour. Amer. Oil Chem. Soc.; Jour. Nutrition; Jour. Biol. Chem.; Jour. Milk and Food Technol. Special Int.: Chem. and Nutritional values of milk fat, chem. and phys. properties of dry milk; Food acceptance studies on dairy products.

JACK, John George, Asst. Prof. Emer. Dendrology, Harvard Univ., Cambridge, Mass.; 335 Coney St., East Walpole, Mass. **BOTANY**, **ENTOMOLOGY**.

JACK, William Alexander, Chf., Acoustical Engrng. and Electronics Section, Rsch. Center, Johns-Manville Corp., Manville, N. J. **ACOUSTICAL ENGINEERING**. b. Nov. 10, 1905, Washington, D. C. s. William and Edith (Hubbard) J. Edn.: B. S., Univ. of Pa., 1926. m. Annette Spencer, July 6, 1936. c.: Catherine. Exp.: Chem., J. Bishop Co., Malvern, Pa., 1926-27; Rsch. Engr., C. F. Burgess Lab., Madison, Wis., 1927-29; Rsch. Engr., Burgess Battery Co., Madison, Wis., 1929-32; Chf. Engr., Acoustic Div., *ibid.*, 1932-33; Sales Engr., *ibid.*, 1933-35; Rsch. Engr., Johns Manville Corp., Manville, N. J., 1935-41; Chf. Acoustical Engrng. Section, *ibid.*, 1941—. Mem.: A.S.T.M.; Acoustical Soc. of Amer. (Fellow); Tau Beta Pi; Sigma Xi. Contrb. to: Jour. of Acoustical Soc.; Trans. A.I.E.E.; Trans. A.S.M.E. Special Int.: Development of sound absorbing materials and constructions for sound and vibration control in bldg. trains, ships, airplanes and broadcasting studios; Automobile mufflers, intake silencers, air cleaners.

JACKMAN, Raymond Joseph, Hd. Dept. of Proctol., Mayo Foundation, Mayo Clinic, Rochester, Minn. **PROCTOLOGY**. b. May 16, 1906, Emmetsburg, Iowa. s. Joseph and Mary (Jennings) J. Edn.: M.D., State Univ. of Iowa, 1930; M.S., Univ. of Minn., 1937. m. Lois F. Hovenden, Jan. 19, 1934. c.: Colette; Roger; and Steven. Exp.: Instr in Proctol., Mayo Foundation, 1937-41; Asst. Prof., *ibid.*, 1941-52. Mem.: Sigma Xi. Contrb. to: Jour. of Amer. Med. Assn.; Amer. Jour. of Surgery; Surgery, Gynecol. and Obstetrics. Special Int.: Diseases of the rectum and colon and anus.

JACKSON, A. Curtis, 750 S. Clayton St., Denver, Colo. **CERAMICS**.

JACKSON, Cicero Floyd, Dir. of Biol. Inst. and Hd., Dept. of Biol., Univ. of N. H., Durham, N. H. **MAMMALOLOGY**.

JACKSON, Dennis Emerson, Prof. of Pharmacol., Coll. of Med., Univ. of Cincinnati, Eden and Bethesda Aves., Cincinnati, Ohio. **PHARMACOLOGY**, **MEDICINE**.

JACKSON, Dugald Caleb, Prof. Emer., Mass. Inst. of Tech., 5 Mercer Circle, Cambridge, Mass. **ELECTRICAL ENGINEERING**.

JACKSON, Eleanor Gertrude Alexander, Rsch. Bacteriologist, 390 Riverside Drive, New York 25, N. Y. **BACTERIOLOGY**. b. New York City, July 1, 1904. d. Jerome and Gertrude (Hammerslough) Alexander. Edn.: B.A., Wellesley Coll., 1925; M.A., Columbia Univ., 1928; Ph.D., New York Univ., 1934. m. Wm. R. Jackson, (div.) Nov. 1, 1934. c.: J. A. Togwell. Exp.: Rsch. Asst., Univ. Hosp., Ann Arbor, Mich., 1928-34; Rsch. Asst., N. Y. Univ., New York, N. Y., 1934-36; Spec. Rsch. Bacteriologist, Branch Lab., N. Y. St. Dept. of Health, N.

Y. City, 1936-39; Rosenwald Rsch. Fellow, Cornell Univ., Med. Coll., N. Y. C., 1941-50; Rsch. Bacteriologist, Cancer Rsch. Lab., Presbyterian Hospital of Newark, N. J. 1950—. Fellow: A.A.A.S.; N. Y. Microscopical Soc.; N. Y. Acad. of Med. Mem.: N. Y. Acad. of Sci.; Soc. of Amer. Bacteriologists; Sigma Xi; Sigma Delta Epsilon; Amer. Public Health. Contrb. to: Amer. Review of Tuberculosis; Sci.; Soc. Exptl. Biol. and Med.; N. Y. Acad. of Sci.; Internatl. Jour. of Leprosy; Amer. Jour. of the Med. Sci.; Jour. of Amer. Med. Women's Assn.; Jour. of Bacteriology. Gen. Int.: Demonstration of Non-Acid-Fast Forms of Mycobacterium Tuberculosis, Cultivation of Hansen's Bacillus with Production of Disease in Animals. Special Int.: Mycobacteria: Their Developmental Morphology, Staining Reactional, Cultivation.

JACKSON, Edith Banfield, M.D., Clin. Prof. of Ped. and Psychiatry, Yale Univ., New Haven, Conn. **PSYCHIATRY**. b. Colorado Springs, Colo., Jan. 2, 1895. d. William and Helen (Banfield) J. Edn.: B.A., Vassar, 1916; M.D., Johns Hopkins Univ., 1921. Exp.: Interne, Univ. Ia. Hosp., 1921-22; Interne, Ped., Bellevue Hosp., 1922-23; Asst. Phys., U. S. Children's Bur., 1923-28; Asst. Ped., Yale, Schl. of Med., 1924-25; Instr., 1925-27; Clin. Instr., 1927-29; Asst. Physician, St. Elizabeth's Hosp., 1928-29; Yale, Schl. of Med., Clin. Instr., Psychiatry and



Mental Hygiene, 1936-39; Asst. Clin. Prof., 1939-41; Asst. Clin. Prof., Pediatrics and Psychiatry, 1941-45; Assoc. Clin. Prof., 1945-49; Clin. Prof. of Pediatrics and Psychiatry, 1949—; Attending Pediatrician and Psychiatrist, Grace-New Haven Community Hosp., Univ. Serv., 1936—. Hon. Pos.: Mem. Bd. of Dir., Psychiatric Consultant of Betsy Ross Nursery Schl.; Bd. Dir., Conn. Assn. for Mental Health; Exec. Comm., Mem., Internatl. Soc. Serv. Mem.: Amer. Orthopsychiatric Assn.; Amer. Psychosomatic Soc.; Conn. Assn. Mental Health; Dir. Yale Rooming-in Rsch. Prof.; Faculty Club; Amer. Psychoanalytic Assn.; Amer. Psychiatric Assn.; Amer. Comm. on Maternal Welfare, Inc.; Fellow, Amer. Acad. of Child Psychiatry; Assoc. of World Federation for Mental Health. Contrb. to: Amer. Jour. of Nursing; Pediatrics; The Psychoanalytic Study of the Child; Amer. Jour. of Orthopsychiatry. General Int.: Received Psychoanalytic Trng., Viennese Inst. of Psychoanalysis. Travel: Europe. Hobby: Gardening. Listed in: A.M.S.; Who's Who in Amer.; Who Knows—and What; Who's Important in Med.; Who's Who in World Med.

JACKSON, Henry Hollister, Vice-Pres., National Life Insurance Co., 131 State St., Montpelier, Vt.



ACTUARIAL. b. Barre, Vt., Aug. 30, 1884. s. J. Henry and Cora Augusta (Wood) J. Edn.: B.A., Yale Univ., 1908; M.A., *ibid.*, 1911. m. Carrie Carleton Bemis, June 15, 1909 (Died July 28, 1944). 2nd m. Madine Johnson Rogers, June 26, 1946. c.: Henry Hollister; Eleanor Alice; Robert Tilden. Exp.: Tchr. and Prin., Spaulding H. S., Barre, Vt., 1908-18; Staff, Actuarial Dept., National Life Ins. Co., Montpelier, Vt., 1918—; Asst. Actuary, *ibid.*, 1920-25; Assoc. Actuary, *ibid.*, 1925-29; Actuary, 1929-43; Vice-Pres. and Actuary, *ibid.*, 1943-50; Vice-Pres., *ibid.*, 1950—. Hon. Pos.:

Pres., Bd. of Trustees, Aldrich Public Lib., Barre, Vt.; Dir., Yale Alumni Univ. Fund Assn., 1942-47. Mem.: Fellow, Actuarial Soc. of Amer.; Fellow, Amer. Inst. of Actuaries; Fellow, Casualty Actuarial Soc.; Phi Beta Kappa; etc. Author: Fragments, 1950. Contrb. to: Trans. Actuarial Soc. of Amer.; The Record; Proc. Casualty Actuarial Soc.; etc. Special Int.: Life Insurance History and Practice: In the Fields of Actuarial Sci., Classification and Selection of Risks, Investments and Executive Functions.

JACKSON, Hartley Harard Thompson, Chg. Biological Surveys, Fish and Wildlife Service, U. S. Dept. of Interior, Washington, D. C. **MAMMALOLOGY**.

JACKSON, Jesse Bythwood, Prof. of Math. and Dean of Men, Univ. of S. C., Columbia, S. C. **MATHEMATICS**.

JACKSON, Lyle W. R., Prof. of Silviculture, Forestry Schl., Univ. of Ga., Athens, Ga. **FORESTRY, PLANT PATHOLOGY**.

JACKSON, Marion LeRoy, Assoc. Prof. of Soils, Univ. of Wis., Madison, Wis. **SOIL CHEMISTRY**.

JACKSON, Oscar Branche, Supvr. Seismic Party and Seismologist, Shell Oil Co., Box 2099, Houston, Tex. **GEOPHYSICS**.

JACKSON, Richard W., Hd., Protein Div., Northern Regional Rsch. Lab., U. S. D. A., 825 N. University St., Peoria, Ill. **BIOCHEMISTRY**.

JACKSON, Robert Tracy, Peterborough, N. H. **ZOOLOGICAL SCIENCES**.

JACKSON, Theodore A., Consultant in Psychol., 25 Vanderbilt Ave., N. Y., N. Y. **INDUSTRIAL PSYCHOLOGY**.

JACKSON, Wendell Ford, Asst. Mgr., Tech. Div., Explosives Dept., E. I. du Pont de Nemours and Co., Wilmington, Del. **CHEMISTRY**. b. N. Y., N. Y., Nov. 25, 1907.



s. Lambert Lincoln and Grace (Ford) J. Edn.: A.B., Princeton Univ., 1929; M.A., *ibid.*, 1930; Ph.D., *ibid.*, 1932. m. Margaret Blunt on Sept. 11, 1931. c.: Lambert B.; Anne. Exp.: Sayre Fellow in Applied Chem., Princeton Univ., 1929-30; Procter Fellow in Chem., *ibid.*, 1930-31; Asst. in Chem., *ibid.*, 1931-32; Natl. Rsch. Fellow in Chem., Calif. Inst. of Tech., 1932-34; Rsch. Chemist, Burnside Lab.,

E. I. du Pont de Nemours and Co., Inc., Pennsgrove, N. J., 1935-40; Ballistic Engr., *ibid.*, 1940-45; Asst. Dir., *ibid.*, 1945-48; Dir., *ibid.*, 1948-50; Asst. Mgr., Tech. Div., Explosives Dept., *ibid.*, Wilmington, Del., 1950—. Mem.: Amer. Chem. Soc.; Princeton Engrng. Assn.; Fellow, A.A.A.S.; Sigma Xi; Phi Beta Kappa. Contrb. to: Jour. Amer. Chem. Soc. Special Int.: Chem. Kinetics; Smokeless Powder; Interior Ballistics; Explosives; Cellulose Chem.

JACKSON, Wilfrid James, Prof. and Chmn., Dept. of Physics, Rutgers Univ., New Brunswick, N. J. **ELECTRONICS**.

JACOB, C. E., Dept. of Geophysics, Univ. of Utah, Salt Lake City, Utah. **HYDROLOGY**.

JACOBS, Elbridge C., Prof. Geol. Emer., and Seismologist, Univ. of Vt., 146 Williams St., Burlington, Vt. **GENERAL GEOLOGY, SEISMOLOGY**.

JACOBS, Henry Russell, Asst. Prof. of Med., Northwestern Univ. Med. Schl., Chicago, Ill. **INTERNAL MEDICINE**.

JACOBS, Merkel Henry, Schl. of Med., Univ. of Pa., Philadelphia, Pa.

JACOBS, Morris Boris, Chf., Chem. Lab., Dept. of Health, 125 Worth St., N. Y., N. Y. **CHEMISTRY**.

JACOBS, Walter Abraham, Rockefeller Inst. for Med. Rsch., 66th St. and York Ave., N. Y. 21, N. Y.

JACOBSEN, Carlyle F., Dean, Grad. Coll., State Univ. of Iowa, Iowa City, Iowa. **PSYCHOLOGY**.

JACOBSON, Carl Alfred, Prof. Emer., W. Va. Univ., 447 Cedar St., Morgantown, W. Va. **CHEMISTRY**.

JACOBSON, Edmund, Dir. of Lab. Clinical Physiol., 55 E. Washington St., Chicago, Ill. **INTERNAL MEDICINE, PHYSIOLOGY**.

JACOBSON, Henry George Martin, Assoc. Soils Rsch., Conn. Agri. Expt. Sta., New Haven, Conn. **AGRONOMY**.

JACOBSON, James P., Prof. of Physics, State Tchrs. Coll., River Falls, Wis. **PHYSICS**.

JACOBUS, David Dinkel, Prof. of Chem., Stevens Inst. of Tech., Hoboken, N. J. **INDUSTRIAL CHEMISTRY**.

JACOBUS, David Schenck, retired, 93 Harrison Ave., Montclair, N. J.

JACOBY, James Ralph, 299 Park Ave., N. Y., N. Y. **NEUROPSYCHIATRY**.

JACQUES, Joseph Emile, Plant Pathologist, Montreal Botanical Garden, Montreal, Que., Canada. **PLANT PATHOLOGY**.

JAEGER, Chester George, Chmn., Dept. of Math., Pomona Coll., Claremont, Calif. **MATHEMATICS**. b. Aug. 22, 1896, St. Louis, Mo., s. Frank G. and Harriet (Mudge) J. Edn.: A.B., Univ. of Mo., 1920; B.S. in Bus. Admin., *ibid.*, 1921; A.M., *ibid.*, 1924; Ph.D., *ibid.*, 1927. m. Elfrieda Springmeier of St. Louis, Mo., June 15, 1921. d. Mr. and Mrs. Edw. Springmeier. c.: Chester E.; Harriet M. Exp.: Instr., Univ. of Mo., 1920-21; Instr., *ibid.*, 1922-28; Asst. Prof. of Math., Tulane Univ., 1928-31; Prof. of Math. and Hd. of Dept., Pomona Coll., 1931; Prof., Math., Wayne Univ., summer, 1949; Instr., Univ. Trng. Center, War Dept., Florence, Italy, fall, 1945. Hon. Pos.: Dist. Gov., Math. Assn. of Amer., 1943-45. Mem.: Math. Assn. of Amer.; Amer. Math. Soc.; A.A.U.P.; Sigma Xi; Pi Mu Epsilon; Calif. Math. Coun.; Delta Sigma Phi; Kappa Mu Epsilon; Rotary Internatl. Contrb. to: Amer. Math. Monthly; Amer. Math. Jour. Ph.D. Dissertation: A Class of Primes Relative to a Pure Cubic Field. War Record: 2nd Lt., 117th F. A., A. E. F., World War I. Travel: Extensively, U. S.; Canada; Mexico. Hobbies: Music; Dramatics; Youth Groups. Listed in: A. M. S.

JAFKE, Abram J., Dir. Manpower Prog., Bur. of Applied Soc. Rsch., Columbia Univ., 314 Allaire Ave., Leonia, N. J. **LABOR FORCE AND DEMOGRAPHY**. b. Chelsea, Mass., Feb. 28, 1912. s. George and Minnie (Ostriner) J. Edn.: Ph.D., Univ. of Chicago, 1941. m. Betty Gombarg, 1939. c.: Barbara and Anne. Exp.: Statistician, U. S. Bur. of the Census, Washington, D. C., 1939-42; Statistician, U. S. War Department, Washington, D. C., 1942-46; Statistician, U. S. Bur. of the Census, Washington, D. C., 1946-50; Staff Mem., Bur. of Applied Soc. Rsch., Columbia Univ., N. Y. C., 1950—. Mem.: Amer. Statistical Assn.; Amer. Sociol. Soc.; Population Assn. of Amer.; A.A.A.S.; Amer. Acad. of Polit. and Soc. Sci.; Internatl. Population Union. Author: Manpower Resources and Utilization, with Charles D. Stewart, 1951; Handbook of Statistical Methods for Demographers, 1951. Contrb. to: Jour. of Amer. Statistical Assn.; Sociol. Rev.; Amer. Jour. of Sociol.; Population Studies; Human Biol. Sci. Monthly; Annal. of Amer. Acad. of Polit. and Soc. Sci.; Internatl. Jour. of Opinion and Attitude Rsch.; Jour. of Heredity. Special Int.: Manpower and Labor Force Problems, Particularly in Underdeveloped Areas, and the Relationship of Population Problems to Working Force Analysis and Development.

JAFFE, Hans, Hd., Crystal Rsch. Dept., Brush Development Co., Cleveland, Ohio. CRYSTAL PHYSICS.

JAFFE, Henry Lewis, Dir. of Labs., Hosp. for Joint Diseases, 1919 Madison Ave., N. Y., N. Y. PATHOLOGY.

JAFFE, William, Assoc. Prof. Econ., Northwestern Univ., Evanston, Ill. ECONOMICS.

JAHN, Theodore Louis, Assoc. Prof. of Zool., State Univ. of Iowa, Iowa City, Iowa. PHYSIOLOGY, PROTOZOOLOGY.

JAKKULA, Arne Arthur, Exec. Dir., Texas A. and M. Rsch. Foundation, 300 Francis Dr., Coll. Sta., Tex. THEORETICAL AND APPLIED MECHANICS AND RESEARCH ADMINISTRATION. b. March 19, 1904, Hancock, Mich. s. August and Alma (Lytinen) J. Edn.: B.S. in C.E., Univ. of Minn., 1926; M.S. in C.E., ibid., 1927; Ph.D., Univ. of Mich., 1933; C.E., Univ. of Minn., 1937. m. Myrta Danner of Wash., D. C., 1926. c. Signe (daughter). Exp.: Lab. Asst., Minn. Highway Dept., 1923-24; Inspector, Minn., Highway Dept., 1925; Student, Engrng., U. S. Bur. of Pub. Roads, 1926; Inspector, Minn. Highway Dept., 1927; Rsch. Engr., ibid., 1928; Instr., Univ. of Mich., 1928-33; Rsch. Engr., Westinghouse Elec. and Mfg. Co., 1929; Soil Rsch., W. S. Housel, Univ. of Mich., 1930; Bridge Survey, J. H. Cissel for Ann Arbor, Mich., Twp., 1930; Foundation Investigation, W. S. Housel, for Detroit Edison Co., 1931; Bridge Design, E. L. Eriksen, for City of Evansville, Ind., 1931; Designer, E. O. Marty, Pottsville, Pa., 1932; Asst. Prof., Univ. of Mich., 1933-37; Cost Estimates Mackinac Straits Bridge Authority, 1934; Bridge Design, J. H. Cissel for City of Saginaw, Mich., 1935; Consultant to Forster, Wernert, and Taylor, Toledo, Ohio, 1936; Assoc. Prof., Tex. A. and M. Coll., 1937-39; Prof. of Structural Engrng., ibid., 1939-44; Rsch. on Bridges, U. S. Pub. Rd. Admin., 1939-44; Rsch. Engrng., Tex. Highway Dept., 1940; Advisory Bd. for Investigation of Suspension Bridges, 1941—; Act. Vice-Dir., Expt. Sta., Tex. A. and M. Coll., 1944-46. Hon. Pos.: Pres., Brazos Co. Branch, A.S.C.E. Mem.: Chi Epsilon; Tau Beta Pi; Sigma Xi; A.S.C.E.; Internatl. Assn. for Bridge and Structural Engrng.; A.S.E.E.; N.S.P.E.; T.A.E.; A.A.A.S. Author: Structural Analysis, 1940; An Investigation of Short Beams with Center and Third Point Loading, 1940; A Hist. of Suspension Bridges in Bibliographical Form, 1941; Two-Span Continuous Beams Under Dead Loads, 1941; Solution of Two-Span Continuous Beams Under Live Loads by Use of Nomographs, 1941; Highway Loads and Their Effects on Highway Structures Based on Traffic Data of 1942; Bulletin No. 116, Tex. Engrng. Expt. Sta., 1950. Co-author: Steel Columns: A Survey and Appraisal of Past Works, 1949. Contrb. to: Engrng. News-Record; Civil Engrng.; Amer. Welding Soc. Ph.D. Dissertation: The Theory of Suspension Bridges. Listed in: A. M. S.; Amer. Young Men; W. W. in Engrng.

JAKL, Vincent Edward, Prin. Meteorologist, U. S. Weather Bureau, 1400 U. S. Court House Bldg., Chicago, Ill. METEOROLOGY.

JAKOB, Max, Ill. Inst. of Tech., Chicago, Ill. HEAT TRANSFER.

JAKOBSEN, Bernhard Faaborg, Prin. Engr., U. S. Army Engrs., Balfour Bldg., San Francisco, Calif. DAMS.

JAMES, Harold Cedric, Head, Department of Science, Staunton Military Academy, Staunton, Va. PHYSICS. b. Paoletti, S. C., October 1, 1896. s. Bernard and Melissa (Brown) J. Edn.: B.S., Univ. of S. C., 1917; M.A., Columbia Univ., 1932. m. Mary Bell of Staunton, Va., July 17, 1924. d. Thomas and Ida Bell. c.: Janet James. Exp.: Instructor, French and Chemistry, Staunton Mil. Acad., 1917; Instr., Physics, ibid., 1922; Hd., Dept. of Sci., ibid., 1940. Mem.: A.A.A.S.; Amer. Assn. Physics Tchrs.; Phi Delta Kappa. War Record: Vet. World Wars I and II. Travel: Europe. Listed in: A.M.S.

JAMES, John W., Vice-Pres., Rsch., McDonnell & Miller, Inc., Chicago, Ill., HEATING, VENTILATING

AND AIR CONDITIONING. b. Brookville, Ind., Jan. 12, 1907. s. Charles M. and Mary Louisa (Fieber) J. Edn.: B.S., Ore. State Coll., 1928; M.S., Univ. of Wis., 1934. m. Helen Penn Hill, 1938. c.: Virginia; Kathryn. Exp.: Consulting Engr., Portland, Ore., 1928-32; Rsch. Fellow, Univ. of Wis., Madison, Wis., 1932-34; Engr., General Electric Co., Schenectady, N. Y., 1934-35; Tech. Secy., Amer. Soc. Heat and Vent. Engr., New York, N. Y., 1935-43; Res. Engr., Iron Fireman Mfg. Co., Cleveland, Ohio, 1943-48; Vice-Pres., Rsch., McDonnell & Miller, Inc., Chicago, Ill., 1948—. Mem.: A SHVE; A.S.M.E.; W.S.E.; A.S.S.E.; Pi Tau Sigma; Sigma Xi; Phi Sigma Kappa. Author: Heating and Air Conditioning. Contrb. to: Jour. Heating, Piping and Air Conditioning; Jour. of Engr.; S.P.E.E. Special Int.: Registered Prof. Engr., State of Ore. and Ohio.

JAMES, Louis Ernest, retired, Dexter, Ind.

JAMES, Preston Everett, Prof., Dept. of Geography Syracuse Univ., Syracuse, N. Y. GEOGRAPHY.

JAMES, Ralph Duncan, Prof. of Math., Univ. of British Columbia, Vancouver, B. C., Can. MATHEMATICS.

JAMES, T. H., Rochester, N. Y. PHOTOGRAPHY AND PHOTOGRAPHIC CHEMISTRY.

JAMES, Walter Herman, Prof. Emer., Mass. Inst. of Tech., Cambridge, Mass.; 158 Dale St., Waltham, Mass. MECHANICAL ENGINEERING.

JAMESON, Eloise, Rsch. Assoc., Dept. of Biochem., Univ. of Southern Calif., Los Angeles, Calif. BIOCHEMISTRY.

JAMIESON, George S., Consultant Fats and Oils Branch, Production and Marketing Admin., U. S. D. A., 3914 McKinley St., N. W., Washington, D. C. FATS AND OILS.

JAMIESON, Walter A., Dir., Biol. Labs., Eli Lilly and Co., Indianapolis, Ind. MEDICAL CHEMISTRY.

JANSKY, Cyril Methodius, Prof. Emer. Electrical Engrng., Univ. of Wis., 2117 Jefferson St., Madison, Wis. ELECTRICAL ENGINEERING.

JANSSEN, Raymond Ellsworth, Prof. and Hd. of Department of Geology, Marshall Coll., Huntington 1, W. Va. GEOLOGY. b. November 1, 1903, Springfield, Ill. s. Henry Fred and Clara Lillian (Miller) J. Edn.: Ph.D., Univ. of Chicago, 1939; M.S., ibid., 1937; B.S., Northwestern Univ., 1932. m. Mildred Marian Elliott of Rockford, Ill., October 21, 1933. d. Mr. and Mrs. Frank J. Elliott. c. Margaret Louise; Paul Elliott. Exp.: Lab. Technician, Field Museum of Nat. Hist., 1923-30; Geol., Chicago Century of Progress Exposition, 1933; Geol., Mus. of Sci. and Ind., Chicago, 1933; Geol., Texas Centennial Exposition and University of Tex., 1935-36; Rsch. Geol., Ill. State Museum, 1937-39; Instr., Univ. of Chicago, 1938-39; Sci. Writer and Ed., Encyclopaedia Britannica, 1940-42; Asst. Prof. and Hd. Geol. Dept., Marshall Coll., 1942-45; Assoc. Prof. and Hd., 1945-49; Prof. and Hd., Dept. of Geol., Marshall Coll., 1949—. Mem.: Sigma Xi; Omicron Delta Kappa; Chi Beta Phi; A.A.A.S.; Phi Eta Sigma; Natl. Speleological Soc.; Amer. Assn. of Museums; W. Va. Acad. of Sci.; Assn. of Geol. Tchrs.; Appalachian Geological Soc.; Amer. Museum of Nat. Hist.; Acacia; A.F. and A.M. Author: The Earth Before Man—The Story of How Things Began, 1937; Leaves and Stems from Fossil Forests, 1939; Some Fossil Plant Types of Ill., 1940; Buried Sunlight—The Story of Coal, 1941; Nature's Bank—The Soil, 1942. Contrb. to: Sci. Monthly; Nature Mag.; Amer. Forests; Sci.; Scientific American; Frontiers; Nat. Hist.; Amer. Photography; Nelson's Encyc.; Britannica Jr.; Geol. Ed., Amer. People's Encyc. Ph.D. Dissertation: Some Fossil Plant Types of Ill. War Record: Instr., Army Aviation Cadet Trng. Program, 47th Coll. Trng. Detachment, 1943-44. Travel: U. S.; Canada; Mexico. Gen. Int.: Authority on Fossil Plant Impressions of the Carboniferous Period; Authority on Indian Trail Tree Markers of the Mississippi Valley Region. Hobbies: Photography; Philately. Listed in: A. M. S.; A.A.A.S.; W. W. in Membership of Amer. Museums; W. W. in Amer. Supple-

ment; W. W. in the East. Special Int.: Historical Geology and Paleobotany.

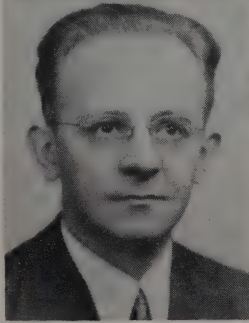
JARALEMON, Ira B., 315 Montgomery St., San Francisco, Calif. ECONOMIC GEOLOGY.

JARAMILLO, Trinidad Jaramillo, Rsch. Mathematician, Armour Rsch. Foundation, 35 W. 33rd St., Chicago, Ill. MATHEMATICS.

JARDINE, James T., 4334 P St., N. W., Washington, D. C. BOTANICAL SCIENCES.

JASPER, Herbert Henry, Neurophysiologist, Montreal Neurol. Inst., 3801 Univ. St., Montreal, P. Q., Can. NEUROLOGY.

JASTAK, Joseph F., Rsch. Prof., Psychol. Dept., Univ. of Del., 905 N. Rodney St., Wilmington, Del. PSYCHOLOGY. b. Gos-



tyczyn, Poland, Mar. 19, 1901. s. Jakob and Maria (Siewert) J. Edn.: M.A., Columbia Univ., 1928; Ph.D., ibid., 1934. m. Sarah Rickards, Apr. 26, 1946. c.: J. Theodore. Exp.: Interne Psychologist, Psychiatric Div., Bellevue Hosp., N. Y., N. Y., 1929-31; Chf. Psychologist, Brooklyn Child Guidance Clinic, 1931-35; Rsch. Psychologist, Bellevue Hosp., N. Y., 1935-36; Chf. Psychologist, Del. State Hosp., Farnhurst, Del., 1936-52; Rsch. Prof., Univ. of Del., Newark, Del., 1952—. Hon. Pos.: Consultant Del. Mental Health Assn.; Pres., Del. Psychol. Assn. Mem.: Fellow, A.A.A.S.; Fellow, Amer. Psychol. Assn.; Fellow, Amer. Assn. on Mental Deficiency; Life Mem., Natl. Rehabilitation Assn. Author: Variability of Psychometric Performances in Mental Diagnosis, 1934; Wide Range Achievement Test, 1946. Contrb. to: Jour. Clinical Psychol.; Jour. Consulting Psychol.; Jour. Applied Psychol.; Jour. Abnormal and Social Psychol.; Amer. Jour. on Mental Deficiency; Del. State Med. Jour.; Mental Hygiene. Gen. Int.: The Measurement of Personality Traits by Means of Psychometric and Aptitude Tests. Special Int.: Personality; Mental Deficiency; Test Construction; Psychometrics; Child Psychol.; Infant Testing and Counseling; Vocational Rehabilitation; Abnormal Psychol.; Cerebral Palsy and Related Physical and Mental Disorders.

JAY, Philip, Assoc. Prof. of Dentistry, Univ. of Mich., Ann Arbor, Mich. DENTISTRY.

JEAN, Frank Covert, Chmn. Emer. Sci. Div., Colo. State Coll. of Edn., 1810 Seventh Ave., Greeley, Colo. PLANT ECOLOGY.

JEFFERS, George William, Prof. and Hd., Dept. of Biol., State Tchrs. Coll., Farmville, Va. MARINE BIOLOGY.

JEFFERS, Hamilton Moore, Astronomer, Lick Observatory, Mt. Hamilton, Calif. ASTRONOMY.

JEFFERS, Katherine Rosetta, Dean of Women and Asst. Prof. of Biol., Coll. of William and Mary, Williamsburg, Va. BIOLOGY.

JEFFRESS, Lloyd Alexander, Prof. of Psychol., Univ. of Tex., Austin, Tex. PSYCHOLOGY.

JEFFREY, Edward Charles, Prof. Emer. Botany, Harvard Univ., 47 Lakeview Ave., Cambridge, Mass. BIOLOGY.

JEFFREYS, Cecil Edward Pruitt, Dir. of Rsch., Truesdail Labs., Inc., 520 W. Ave., Los Angeles, Calif. CONSULTING CHEMIST.

JEFFRIES, Zay, Vice-Chmn., Minerals and Metals Advisory Bd., Natl. Acad. Sciences, 1 Plastics Ave., Pittsfield, Mass. METALLURGICAL ENGINEERING. b. Willow Lake, S. Dak., Apr. 22, 1888. s. Johnston and Florence (Sutton) J. Edn.: B.S.,

S. Dak. State Schl. of Mines, 1910; D.Sc., Harvard Univ., 1918. Hon. Deg.: Dr. Engrng., S. Dak. Schl. of Mines, 1930; D.Sc., Case Inst. of Tech., 1937; D.Sc., Clarkson Coll. of Tech., 1950. m. Frances Schrader, Dec. 27, 1911. c.: Betty; Marian. Exp.: Instr. in Metallurgy, Case Schl. of Applied Sci., Cleveland, Ohio, 1911-16; Asst. Prof., ibid., 1916-17; Dir. of Rsch., Aluminum Castings Co., and its successor, Aluminum Manufacturers, Inc., 1916-20; Consulting Metallurgical Engr., Aluminum Co. of Amer., 1920-36; Consultant, Natl. Lamp Works of Gen. Electric Co., 1914-25, same Incandescent Lamp Dept. of Gen. Electric Co., 1925-36; Technical Dir., Lamp Dept., ibid., 1936-45; Vice-Pres., in Chg. of Chem. Dept., ibid., 1945-50; Pres., Carboly Co., Inc., 1932-36; Chmn. of Bd., ibid., 1936-49; Dir., General Electric Vapor Lamp Co., 1929-39; Dir., Middle States Securities Corp., 1929-42; Annual Lectr. Inst. of Metals Div., Amer. Inst. of Mining and Metallurgical Engrs., 1924; Special Lectr. on Nonferrous Metals, Harvard Univ., 1920; Past Pres., Amer. Soc. for Steel Treat., 1929, now Amer. Soc. for Metals; Past Chmn., Inst. of Metals Div., Amer. Inst. of Mining and Metallurgical Engrs.; Mem., Corp. of Case Inst. of Tech. and Trustee, also Chmn. on Com. on Ednl. Policy; Mem., Bd. of Trustees, Rensselaer Poly. Inst., 1940-44; Pres., Bd. of Trustees, Battelle Memorial Inst. at present; Chmn., Section of Engrng., Natl. Acad. of Sci., 1944-47; Mem., Rsch. Bd. for Natl. Security, ibid., 1945-46; Mem., Com. on Ordnance, Rsch. and Development Bd., 1948-49; Dir., Tungsten Mining Corp., 1945-47; Dir., Berkshire Life Ins. Co., 1946—; Dir., Pittsfield Natl. Bank, 1946-50; Dir., Internatl. General Electric Co., 1946-49; Dir. and Vice-Pres., Growth Companies, Inc., 1950—; Dir., Cleveland Electric Illuminating Co., 1950-52; Dir.-General of first World Metallurgical Congress of Amer. Soc. for Metals, 1951; Vice-Chmn., Metallurgical Advisory Bd., Natl. Acad. Sci., 1951—; Mem., Com. on Materials, Rsch. and Development Bd., 1951—. Mem.: A.A.A.S.; Amer. Chem. Soc.; Amer. Inst. of Electrical Engrs.; Fellow; Amer. Inst. of Mining and Metallurgical Engrs.; Hon.; Amer. Inst. of Physics; Amer. Physical Soc.; Fellow; Amer. Philos. Soc.; Amer. Soc. for Metals, Hon.; Cleveland Engrng. Soc., Hon.; Franklin Inst.; Newcomen Soc.; Japan Inst. of Metals, Hon.; Natl. Acad. Sci.; Harvard Club, N. Y.; Country Club, Pittsfield, Mass. Co-author: The Science of Metals: The Aluminum Industry; Business Ideals, Principles and Policies; etc. War Record: Vice-Chmn., War Metallurgy Com., Chmn., Advisory Div., of same Com. and Chmn., Metals Conservation and Substitution Group of Advisory Com. on Metals and Minerals, all of the Natl. Acad. of Sci., 1942-46. Gen. Int.: James Douglas Medal from A.I.M.E., 1927; Sauveur Achievement Medal from A.S.M., 1935; Gold Medal of A.S.M., first recipient, 1943; Annual Powder Metallurgy Medal of Stevens Inst. of Tech., first recipient, 1945; Francis J. Clamer Silver Medal of Franklin Inst., 1945; John Fritz Medal of A.S.C.E., A.I.M.E., A.S.M.E., A.I.E.E., 1946; Medal for Merit for Service in World War II, 1948; Distinguished Service Award, A.S.M., 1948. Special Int.: Metallurgy.

JEHLE, Herbert, Assoc. Prof. of Physics, Brace Laboratory of Physics, Univ. of Nebr., Lincoln, Nebr. BIOPHYSICS. b.



Stuttgart, Germany, Mar. 5, 1907. s. Julius and Maria (Gminder) J. Edn.: Doctor Ingenieur, Inst. of Tech., Berlin, 1933. m. Dietlinda von Kuenssberg. Exp.: 1935-36, Jahrbuch ueber die Fortschritte der Mathematik, editorial; 1937-38, Univ. Coll., Southampton, Rsch. Asst.; 1938-40, Univ. of Brussels, Rsch. Assoc.; 1942-46, Harvard Univ., Instr. in Physics; 1946-47, Franklin Inst., Phila., Rsch. Physicist, Development Projection Magnifier for Partially Blind for the Comm. for Sensory Devices, Natl. Rsch. Coun.; 1947-48, Inst. for Advanced Study, Princeton; 1947-49, Univ. of Pa., Asst. Prof.;

1949—, Univ. of Nebr.; Assoc. Prof. Mem.: Amer. Physics Soc.; Amer. Math. Soc.; Amer. Astron. Soc.; A.A.U.P.; Sigma Xi; Editor of Newsletter of the Soc. for Social Responsibility in Sci. Contrb. to: Phys. Review; Jour. of Chem. Phys.; Proc. Natl. Acad. of Sci.; Astrophys. Jour. Ph.D. Dissertation: Theorie der Rundwebverfahren. Travel: Europe. Listed in: A.M.S.; Who Knows—and What. Special Int.: Specific Interactions between Macromolecules.

JENKINS, George B., Prof. Emer. Anatomy, Geo. Washington Univ., 1336 Parkwood Pl., N. W., Washington, D. C. ENTOMOLOGY, ANATOMY.

JENKINS, Glenn Llewellyn, Dean and Prof. of Pharmaceutical Chem., Purdue Univ. Schl. of Pharmacy, Lafayette, Ind. PHARMACY.

JENKINS, James Angus, Asst. Prof. of Genetics, Univ. of Calif., Berkeley, Calif. GENETICS.

JENKINS, John G., Prof. and Chmn., Dept. of Psychol., Univ. of Md., College Park, Md. PSYCHOLOGY.

JENKINS, Lawrence Waters, Dir., Peabody Museum, Salem, Mass. ETHNOLOGY.

JENKINS, Merle Truman, Prin. Agronomist in Chg. Corn Investigations, U. S. D. A., Plant Indus. Sta., Beltsville, Md. BREEDING AND GENETICS MAIZE.

JENKINS, Olaf P., Chf. Geologist, Calif. State Div. Mines, Ferry Bldg., San Francisco, Calif. GEOLOGY.

JENKINS, William Leroy, Assoc. Prof. of Psychol., Lehigh Univ., Bethlehem, Pa. PSYCHOLOGY.

JENNESS, Arthur Freeman, Prof. and Chmn., Dept. of Psychol., Williams Coll., Williamstown, Mass. SOCIAL AND ABNORMAL PSYCHOLOGY.

JENNESS, Diamond, Chf., Div. Anthropol., Natl. Museum of Can., 108 Broadway Ave., Ottawa, Ont., Can. ANTHROPOLOGY.

JENNESS, J. R. Chmn., Dept. of Math., Parsons Coll., Fairfield, Iowa. MATHEMATICS PHYSICS.

JENNINGS, Otto Emery, Acting Dir. and Curator of Botany, Carnegie Museum, 241 Oakland Ave., Pittsburgh, Pa. BOTANY.

JENNINGS, William Harney, Engr., Western Electric Co., Hawthorne Sta., Chicago, Ill. PHYSICAL CHEMISTRY.

JENNY, Hans, Prof. of Soil Chem., Univ. of Calif., Berkeley, Calif. SOIL SCIENCE.

JENSEN, Hans Friedrich, Md. Dept., Field Rsch. Lab., Fort Knox, Ky. BIOCHEMISTRY.

JENSEN, Henry W., Dean and Instr. in Biol., Warren Wilson Coll., Swannanoa, N. C. CYTOLOGY.

JENSEN, Howard Eikenberry, Prof. and Chmn., Dept. of Sociol. and Mental Hygiene, Duke Univ., Durham, N. C. SOCIOLOGY.

JENSEN, Jens, Dir., The Clearing, Ellison Bay, Wis. ARCHITECTURE.

JENSEN, John Christian, Prof. of Physics and Astron., Nebr. Wesleyan Univ., Lincoln, Nebr. ELECTRONICS.

JENSEN, John Henry, Chmn., Div. of Sci. and Math., Northern State Tchrs. Coll., Aberdeen, S. Dak. CHEMISTRY.

JENSEN, Kai, Prof. of Edn. and Chmn., Com. on Child Development, Univ. of Wis., Madison, Wis. CHILD DEVELOPMENT.

JENSEN, Milton B., Consulting Psychologist, 2306 Alta Ave., Louisville, Ky. PSYCHOLOGY.

JENSEN, Otto Gerhard, Rsch. Chemist, Bowey's Inc., 401 W. Superior St., Chicago, Ill. CHEMISTRY.

JENSEN, Rue, Asst. Prof. of Pathol. and Asst. Pathologist, Expt. Sta., Colo. A. and M. Coll., Fort Collins, Colo. PATHOLOGY.

JEPSON, George N., Norton Co., Worcester 6, Mass. CERAMICS.

JEPSEN, Glenn Lowell, Sinclair Prof. of Vertebrate Paleontology, Princeton Univ., Princeton, N. J. VERTEBRATE PALEONTOLOGY.

JERSILD, Arthur Thomas, Prof. of Edn., Columbia Univ. Tchrs. Coll., N. Y., N. Y. PSYCHOLOGY.

JEWELL, Minna Ernestine, Hd., Dept. of Biol., Thornton Township Jr. Coll., Harvey, Ill. ANIMAL ECOLOGY.

JEWETT, Frederick William, Vice-Pres., The Emerson Engineers, 30 Rockefeller Plaza, N. Y., N. Y. MARKETING.

JEWETT, Howard Herman, Assoc. Entomologist, Ky. Agri. Expt. Sta., Lexington, Ky. ENTOMOLOGY.

JILLSON, Willard Rouse, Prof. and Hd., Dept. of Geol., Transylvania Coll., Lexington, Ky. GENERAL ECONOMIC GEOLOGY.

JOB, Robert, 649 Roslyn Ave., Westmount, Que. Can. CHEMISTRY.

JOB, Thesle T., Prof. and Chmn., Dept. of Anatomy, Loyola Univ. Schl. of Med., 706 S. Wolcott Ave., Chicago, Ill. GROSS ANATOMY.

JODON, Nelson Edgar, Assoc. Agronomist, Cereal Crops and Diseases, Bureau Plant Indus., Beltsville, Md. PLANT BREEDING.

JOFFE, Jacob Samuel, Prof. of Pedology, Rutgers Univ., New Brunswick, N. J. PEDOLOGY.

JOFFE, Solomon Achillovich, retired, 515 W. 110th St., N. Y., N. Y. MATHEMATICAL TABLES.

JOHANN, Helen, retired, 1320 Spring St., Madison, Wis. PLANT PATHOLOGY.

JOHANN, Norma Eva, Asst. Prof. of Chem., Hunter Coll., 695 Park Ave., N. Y., N. Y. INORGANIC CHEMISTRY.

JOHANNSEN, Oskar A., Prof. of Entomol., Emeritus, Comstock Hall, Cornell University, Ithaca, N. Y. EMBRYOLOGY OF INSECTS; INSECT HISTOLOGY and MORPHOLOGY; TAXONOMY and BIOLOGY OF DIPTERA. b. Davenport, Iowa, May 14, 1870. s. Christian and Caroline (Sturk) J. Edn.: B.S., Univ. of Ill., 1894; A.M., Cornell Univ., 1902; Ph.D., *ibid.*, 1904. m. Harriette Fuller, Sept. 23, 1896. c.: Dorothea; Laurence; Robert. Exp.: Engineering Practice, Chicago, Ill., 1895-99; Instr., Cornell Univ., Ithaca, N. Y., 1899-1904; Asst. Prof., *ibid.*, 1904-09; Prof. of Entomol. and Entomol. Univ. of Maine, Orono, Maine, 1909-12; Prof. of Biol., Cornell Univ., Ithaca, N. Y., 1912-18; Prof. of Entomol., *ibid.*, 1918-36; Prof. of Entomol., and Hd. of Dept., *ibid.*, 1936-38; Emer., 1938—. Hon. Pos.: Amer. Rep. on Exec. Comm., Internatl. Congresses of Entomol., 1928-48; Pres., Entomological Soc. of Amer., 1937. Mem.: Entomological Soc. of Amer.; Soc. of Zoologists; Soc. of Economic Entomologists; A.A.A.S.; Sigma Xi; Tau Beta Pi; Phi Kappa Phi; Gamma Alpha. Author: Mycetophilidae, in *Genera Insectorum*, 1909; *Handbook of Med. Entomol.*, 1915; *Embryol. of Insects and Myriapods*, 1941. Contrb. to: *Annals Ent. Soc. Amer.*; *Archiv. fur Hydrobiologie*; *Amer. Med.*; *Bull. Brooklyn Ent. Soc.*; *Bulls. Me. Agri. Sta.*; *Canadian Ent.*; *Cornell Univ. Agri. Expt. Station. Memoirs*; *Entomologische Mitteilungen*; *Ent. News*; *Insects of Conn. Parts*; *Jour. Agri. Univ. Puerto Rico*; *Jour. Econ. Ent. Soc.*; *Jour. Morph. Physiol.*; *Jour. N. Y. Ent. Soc.*; *Jour. Parasitol.*; *Kans. Univ. of Sci. Bull.*; *Ent. Monthly Mag.*; *N. Y. State Mus. Bull.*; *Proc. Ent. Soc. Wash.*; *Psyche*; *Sci.*; *Trans. Amer. Ent. Soc.*

Special Int.: Morphology, Histology, Embryology of Insects; Biol. of Aquatic Insects; Taxonomy of Diptera.

JOHANSEN, Donald Alexander, Independent Rsch., 861 Columbia Ave., Pomona, Calif. **BOTANY.**

JOHN, Charles Alfred, Hd., Crop Rsch. Dept., H. J. Heinz Co., Enterprise St., Bowling Green, Ohio. **PLANT BREEDING AND PRODUCTION OF VEGETABLE CANNING CROPS.** b. Bloomsburg, Pa., Oct. 8, 1909. s. Harry G. and Grace Isabella (Hower) J. Edn.: B.S., Bloomsburg S. T. C., 1930; M.S., Cornell Univ., 1938. m. Pauline L. Grow, Oct. 17, 1931. c.: David H.; Sidney C. Exp.: Asst. Branch Mgr., Midwest Breeding Station, Associated Seed Growers, Franklin, Ind., 1946-48; Head, Crop Rsch. Dept., H. J. Heinz Co., Bowling Green, Ohio, 1948—. Mem. Amer. Soc. for Horticultural Sci.; Amer. Phytopathol. Soc.; Amer. Genetic Assn.; Rotary. Contrb. to: Market Growers Jour.; Jour. of Heredity. War Record: Active Duty in U.S.N.R., 1944-46. Special Int.: Problems Involved in the Production of Tomatoes, Cucumbers, Beans, Squash, Spinach, etc.; Development of New Varieties of Tomatoes, Cucumbers and Squash.



JOHNSON, A. A., Westinghouse Electric and Mfg. Co., E. Pittsburgh, Pa. **ELECTRIC POWER.**

JOHNSON, A. L., Universal-Rundle Corp., Box 960, New Castle, Pa. **CERAMICS.**

JOHNSON, Aaron G., Prin. Pathologist, Div. Cereal Crops and Diseases, Bureau Plant Indus., Soils and Agri. Engrng., U. S. D. A., Beltsville, Md. **DISEASES CEREAL CROPS.**

JOHNSON, Ada Frances, Rockford Coll., Rockford, Ill. **PHYSICS.**

JOHNSON, Albert Litle, Jr., Secy., The Crete Mills, Crete, Nebr. **MATHEMATICAL PHYSICS.**

JOHNSON, Bertrand Leroy, Commodity Indus. Analyst, U. S. Bur. of Mines, Washington, D. C., 1414 Highland Dr., Woodside Park, Silver Spring, Md. **ECONOMIC GEOLOGY AND MINERAL RESOURCES.** b. Boston, Mass., May 11, 1882. s. George F. and Lucy Hill (Pike) J. Edn.: S.B., Mass. Inst. of Tech., 1905. m. Marion W. Best (dec.), Dec. 14, 1911. m. 2. Marion Louise Humber, Aug. 17, 1931. c.: Bertrand L., Jr. Exp.: Staff, U. S. Geol. Survey, Washington, D. C., 1905-25; Staff, U. S. Bur. of Mines, Washington, D. C., 1925—. Hon. Pos.: Treas., Geol. Soc. of Washington, 1917. Mem.: Fellow, Geol. Soc. of Amer.; Amer. Geophys. Union; Fellow, A.A.A.S.; Washington Acad. of Sci.; Soc. of Economic Geologists. Contrb. to: Sci.; U. S. Geological Survey Bull.; Mid-Pacific Mag.; U. S. Bur. of Mines Information Circulars; Washington Acad. of Sci. Jour.; Economic Geol.; The Coal Age; Mineral Trade Notes and many others. War Record: U. S. Govt. Service, 1905-52. Special Int.: Geol. and Mineral Resources of Maine, N. C., Wyo., N. Y. and Alaska. Phosphate Rock, Talc, Potash, Pyrophyllite, Barite, Coal, Underground Waters, Gold, Copper, Titaniferous Iron Ores, etc. Atlantic Coastal Plain Terraces.



JOHNSON, Carl Gustav Harry, Prof. of Chem., Colo. State Coll., Fort Collins, Colo. **PHYSICAL CHEMISTRY.**

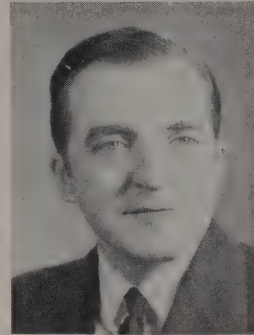
JOHNSON, Charles Frank, Jr., Physicist, Bristol Co., Waterbury, Conn. **ELECTRICITY, OPTICS.**

JOHNSON, Charles Morris, Chf. Chemist, Crucible Steel Co. of Amer., Park Works, 30th and Smallman Sts., Pittsburgh, Pa. **CHEMISTRY.**

JOHNSON, Charles Nelson, Jr., Physicist, Aviation Ord. Dept., U. S. Naval Proving Ground, Dahlgren, Va. **PHYSICS.**

JOHNSON, Clarence Albert, Asst. Prof. of Biol. Chem., Univ. of Ill. Coll. of Med., 1853 W. Polk St., Chicago, Ill. **BIOLOGICAL CHEMISTRY.**

JOHNSON, David Livingstone, Assistant Prof. of Electrical Engrng., 617 McDonald, Stillwater, Okla. **ELECTRICAL GINEERING.** b. Gustavus, Ohio, Feb. 17, 1915. s. David Charles and Margaret Ellen (Delaney) J. Edn.: A.B., Berea Coll., 1936; M.A., State Univ. of Ia., 1938; B.S., State Univ. of Ia., 1942; M.S., Okla. A. and M. Coll., 1950. Exp.: Grad. Asst. and Lab. Asst., State Univ. of Ia., 1936-42; Instr., U. S. Naval Trng. Schl., Okla. A. and M. Coll., 1942-44; U. S. Field Engr., Airborne Coordinating Group, 1944-45; Instr., Radio Schl., Spartan Schl. of Aeronautics, 1945-47; Hd., Radio Schl.,



ibid., 1947-48; Asst. Prof. of Elec. Engrng., Okla. A. and M. Coll., 1948—. Hon. Pos.: Faculty Advisor, Omega Chapt. of Eta Kappa Nu; Counselor, Okla. A. and M. Student Branch of Amer. Inst. of Elec. Engrng. Mem.: Alpha Psi Omega; Eta Kappa Nu; Sigma Xi; Sigma Tau; Tau Beta Pi; Phi Kappa Phi; Amer. Inst. of Elec. Engrs.; Amer. Soc. for Engrng. Edn.: Inst. of Radio Engrs.; Natl. Soc., Professional Engrs.; Okla. Soc. of Professional Engrs. War Record: Civilian Employee, U. S. Navy Airborne Coordinating Group. Travel: Pacific Islands. Gen. Int.: Registered Professional Engr. Special Int.: Electronics, Circuits, Relays.

JOHNSON, Edna L., Prof. of Biol., Univ. of Colo., 1005 Gilbert St., Boulder, Colo. **PLANT PHYSIOLOGY.**

JOHNSON, Edward Carl, Dean, Coll. of Agri., State Coll. of Wash., Pullman, Wash.

JOHNSON, Edward Marshall, Assoc. Plant Pathologist, Ky. Agri. Expt. Sta., Lexington, Ky. **PLANT PATHOLOGY.**

JOHNSON, Edwin Charles, Asst. to Governor, Farm Credit Admin., U. S. D. A., Washington, D. C. **ECONOMICS.**

JOHNSON, Edwin Peter, Animal Pathologist in Chg. Rsch. Animal Diseases, Va. Agri. Expt. Sta., Va. Poly. Inst., Blacksburg, Va. **ANIMAL PATHOLOGY.**

JOHNSON, Elbe Herbert, Hd., Dept. of Physics, Kenyon Coll., Gambier, Ohio. **PHYSICS.**

JOHNSON, F. Ernest, Exec. Secy., Dept. of Rsch. and Edn., Federal Council of Churches, 297 Fourth Ave., N. Y., N. Y. **EDUCATION.**

JOHNSON, Frederick, Curator, R. S. Peabody Foundation, Andover, Mass. **ARCHAEOLOGY.**

JOHNSON, George Fiske, Prof. of Agril. Extension, Pa. State Coll., 529 W. Nittany Ave., State College, Pa. **COLOR PHOTOGRAPHY AND VISUAL EDUCATION.** b. Minneapolis, Kans., May 8, 1898. s. Charles H. and Bertha (Fischer) J. Edn.: B.S., Ohio State Univ., 1919; M.S., Univ. of Wis., 1922; Ph.D., ibid., 1926. m. Inga Nelson

Nov. 29, 1924. c. Celia Ann. Exp.: Special Staff Writer and Photographer, Ind. Farmers Guide, 1919-21; Dir., Bureau of Statistics and Information, Pa. Dept. of Agri., 1924-36; In Chg., Visual Edn., Pa. Agri. Extension Service, Pa. State Coll., State Coll., Pa., 1936—. Hon. Pos.: Chmn., Color Div., Photographic Soc. Amer., 1950-52. Mem.: Biol. Photographic Soc.; Amer. Assn. Agri. Coll. Editors; Photographic Soc. Amer. Alpha Zeta; Gamma Sigma Delta; Epsilon Sigma Phi; Rotary. Contbr. to: Jour. Photographic Soc. Amer.; Jour. Biol. Photographic Assn. War Record; Private, World War I. Special Int.: Color Photography; Visual Edn.; Illustrated Lecturing.

JOHNSON, Harold Norlin, Staff Mem., Internatl. Health Div., Rockefeller Foundation, Rockefeller Inst., 66th and York Ave., N. Y., N. Y. MEDICAL RESEARCH, INFECTIOUS DISEASES.

JOHNSON, Harry L., Chf. Advisor Rsch., Amer. Viscose Corp., Roanoke, Va. APPLIED RESEARCH.

JOHNSON, Harry Miles, Prof. of Psychol., Tulane Univ., New Orleans, La. PSYCHOLOGY.

JOHNSON, Henry Herbert, Assoc. Prof. of Biol., City Coll. of N. Y., 139th and Convent Ave., N. Y., N. Y. EMBRYOLOGY.

JOHNSON, Howard W., Sr. Pathologist, Div. Forage Crops and Diseases, U. S. D. A., Delta Br. Expt. Sta., Stoneville, Miss. PLANT PATHOLOGY.

JOHNSON, John Bertrand, Physicist, Bell Telephone Labs., 463 West St., N. Y., N. Y. PHYSICS.

JOHNSON, John Christopher, Prof. of Biology, State Tchrs. Coll., Edinboro, Pa. ZOOLOGY. b. Sterling, Colo., February 25, 1891. s. John and Anna Helena (Berg) J. Edn.: A.B., 1911, Colo. State Coll. of Edn.; M.S., 1915, Univ. of Calif.; Ph.D., 1919, Univ. of Calif.; Postgrad. Study, Columbia Univ., Chicago Univ., Harvard Univ. m. (1) Vera Adams (dec.) of Gunnison, Colo., July 23, 1915. (2) Mildred Fischer of West Chester, Pa., June 2, 1934. c.: Clarence and Lawrence, twins; John C., Jr.; Clea Marie. Exp.: Instructor, Biology and Agriculture at Colo. State Normal Schl., 1911-14; Asst. in Zoology, Univ. of Calif., 1914-15; Assoc. Prof. of Biology, Colo. State Coll. of Edn., 1915-18; Fellow in Zool., Univ. of Calif., 1918-19; Dean of Coll., Hd. of Biol. Dept., Western State Coll. of Colo., 1919-28; Vice-Pres., W. State Coll. of Colo., 1927-28; Dir. of the Rocky Mtn. Biological Lab., 1928—; Pres., Dept. of Sci. Instr., Natl. Edn. Assn., 1920-21; Pres., Pa. Acad. of Sci., 1933-34; Chmn., Sci. Certification Comm. of Pa. Acad. of Sci., 1934-49; Pres., Conf. on Edn. of Tchrs. in Sci., 1933-35; Hd., Sci. Dept. and Prof. of Biol., S. T. C., W. Chester, Pa., 1928-38; Zool. Dept., Univ. of Pa., 1938-40; Prof. of Biology, Pa. State Tchrs. Coll., Edinboro, 1940—. Author: Educational Biology, 1930; Several Parasitology Rsch. Papers. Mem.: Masons; Phi Delta Kappa; Sigma Xi; Pa. Acad. of Sci.; Amer. Assn. for Adv. of Sci.; Amer. Soc. of Parasitologists; Colo.-Wyo. Acad. of Sci.; Kappa Delta Pi; Beta Beta Beta. Ph.D. Dissertation: The Life Cycle of Echinostoma Revoltum. Listed in: A.M.S. Address: 108 Meadowlark St., Edinboro, Pa. Special Int.: Parasitic Flatworms in Vertebrates.

JOHNSON, John Raven, Cornell Univ., Ithaca, N. Y.

JOHNSON, Josef Jerome, Rsch. Fellow in Astrophysics, Calif. Inst. of Tech., Pasadena, Calif. ASTRONOMY.

JOHNSON, Joseph Lealand, Prof. and Hd., Dept. of Physiol. and Dean, Schl. of Med., Howard Univ., Med. Schl., Washington, D. C. PHYSIOLOGY.

JOHNSON, Linnea Margaret, Assoc. Prof. of Nutrition, George Peabody Coll., Nashville, Tenn. BIOCHEMISTRY.

JOHNSON, Loaz Whitfield, Coordinator Curriculum, Butte County Schl., Court House Annex, Oroville, Calif. EDUCATION AND SOCIAL RELATIONS.

JOHNSON, Marion Aalvin, Assoc. Prof. and Chmn., Dept. of Botany, Rutgers Univ., New Brunswick, N. J. MORPHOLOGY OF VASCULAR PLANTS.

JOHNSON, Martin W., Assoc. Prof., Marine Biol., Univ. of Calif., Scripps Inst. Oceanography, La Jolla, Calif. MARINE BIOLOGY.

JOHNSON, Minnie May, Instr. in Botany, Stephens Coll., Columbia, Mo. BOTANY.

JOHNSON, Myra L., 161 High St., Wadsworth, Ohio. ANATOMY.

JOHNSON, Myrtle Elizabeth, retired, 4647 55th St., San Diego, Calif. INVERTEBRATE ZOOLOGY.

JOHNSON, Otto Hallen, Assoc. Prof. of Chem., Univ. of Minn., Minneapolis, Minn. INORGANIC CHEMISTRY. b. Kintire Township, Minn. Edn.: B.A., Univ. of Minn., 1923; M.S., ibid., 1925; Ph.D., ibid., 1939. m. Ruth Groff of Rapid City, S. D., September 5, 1925. Exp.: 1926-30, Indus. Rsch.; 1930-37, Asst. Prof., State Coll. of Wash.; 1937-39, Instr., Univ. of Minn.; 1940-45, Hd., Dept. of Chem., Superior State Coll., Wis.; 1945-50, Asst. Prof., Univ. of Minn.; 1950—, Assoc. Prof., ibid. Mem.: A.C.S.; A.A.U.P.; Sigma Xi; Phi Sigma; Phi Lambda Upsilon; Alpha Chi Sigma. Contbr. to: Jour. A.C.S.; Chem. Rev.; Jour. Anal. Chem.; Indus. and Engrng. Chem.; Chem. Abstracts. Listed in: A.M.S. Special Int.: Chemistry of Silicon and Germanium.

JOHNSON, Palmer Oliver, Prof. of Edn., Univ. of Minn., 3312 Edmund Blvd., Minneapolis, Minn. EDUCATION, STATISTICS.

JOHNSON, Philip Gustaf, Specialist Govt. Sci., Secondary Edn. Div., U. S. Office of Edn., Washington, D. C. SECONDARY SCHOOL SCIENCE.

JOHNSON, Ray Clifford, Instructor in Applied Mechanics, 5 Colonial Road, Rochester 9, New York. ENGINEERING. b. Canton, Ohio, August 26, 1927. s. Olaf Andreas and Hilma Deborah (Blomberg) J. Edn.: B.S. m. Helen Lindgren of Rochester, New York, July 2, 1949. d. G. Arvid Lindgren. c.: Glen Eric. Exp.: Mech. Engr., Gleason Works, Rochester, N. Y.; Instr., Univ. of Rochester. Mem.: Tau Beta Pi; Phi Beta Kappa. War Record: U. S. Navy. Hobby: Photography. Special Int.: Three Dimensional Experimental Stress Analysis by means of Polariscopes.

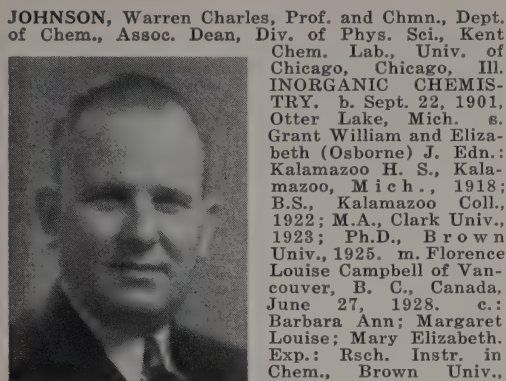
JOHNSON, Sydney Evans, Prof. of Gross Anatomy and Roentgenologist, Univ. of Louisville, 101 N. Chestnut, Louisville, Ky. ANATOMY.

JOHNSON, Victor Elnar, Secy., Council Med. Edn. and Hosp., Amer. Med. Assn., 626 S. W. Fifth St., Rochester, Minn. MEDICAL EDUCATION.

JOHNSON, Walter Curtis, Prof. and Chmn., Dept. of Elec. Engrng., Princeton Univ., Princeton, N. J. ELECTRICAL ENGINEERING. b. Weikert, Pa., Jan. 6, 1913. s. David Crawford and Mary (Ely) J. Edn.: B.S., Pa. State Coll., 1934; E.E., ibid., 1942. m. Carolyn Shirk, Sept. 1, 1934. c.: Walter Curtis, Jr.; William Stanford; David Edward. Exp.: Engr., General Electric Co., 1934-37; Instr., Dept. of Elec. Engrng., Princeton Univ., Princeton, N. J., 1937; Prof. of Elec. Engrng., ibid., 1948—; Chmn., Dept. of Elec. Engrng., ibid., 1950—. Hon. Pos.: Chmn., Princeton Section, Inst. of Radio Engrs.; 1946-47. Mem.: Amer. Physical Soc.; Amer. Inst. Elec. Engrs.; Inst. Radio Engrs.; Amer. Soc. Engrng. Edn.; Sigma Xi; Theta Upsilon Omega; Tau Beta Pi; Eta Kappa Nu; Phi Kappa Phi; Rotary Internatl. Author: Mathematical and Physical Principles of Engrng. Analysis, 1934; Transmission Lines and Networks, 1950. Contbr. to: Trans. Amer. Inst. of Elec. Engrs.; Proc. Inst. of Radio Engrs.; Jour. Indus. and Engrng. Chem. Special Int.: Magnetic Amplifiers.

JOHNSON, Wendell, SPEECH AND HEARING.

JOHNSON, William Summer, Univ. of Wis., Madison 6, Wis.



JOHNSON, Warren Charles, Prof. and Chmn., Dept. of Chem., Assoc. Dean, Div. of Phys. Sci., Kent Chem. Lab., Univ. of Chicago, Chicago, Ill. **INORGANIC CHEMISTRY**. b. Sept. 22, 1901. Otter Lake, Mich. s. Grant William and Elizabeth (Osborne) J. Edn.: Kalamazoo H. S., Kalamazoo, Mich., 1918; B.S., Kalamazoo Coll., 1922; M.A., Clark Univ., 1923; Ph.D., Brown Univ., 1925. m. Florence Louise Campbell of Vancouver, B. C., Canada, June 27, 1928. c.: Barbara Ann; Margaret Louise; Mary Elizabeth. Exp.: Rsch. Instr. in Chem., Brown Univ., 1925-27; Instr. in

Chem., Univ. of Chicago, 1927-28; Asst. Prof., ibid., 1928-32; Assoc. Prof. of Chem., ibid., 1932-43; Prof. of Chem., ibid., 1943; Chmn. of the Dept. of Chem., ibid., 1945—; Assoc. Dean, Div. of Phys. Sci., ibid., 1946—. Mem.: A.A.A.S. (Fellow); Amer. Chem. Soc.; Soc. of Sigma Xi. Author: Qualitative Analysis and Chem. Equilibrium, Hogness and Johnson. Elem. Qualitative Analysis, Hogness and Johnson. Contrb. to: Jour. of the Amer. Chem. Soc.; Jour. of Phys. Chem.; Jour. of Chem. Edn. Ph.D. Dissertation: The Properties of Solutions of Metals in Ammonia and Amines. Listed in: Who's Who in Chicago; A.M.S.; Who's Who in Amer. Special Int.: Inorganic and Analytical Chem.; Chem. as Applied to Problems of the Atomic Energy Program.

JOHNSON, Willis Hugh, Prof. and Chmn., Dept. of Zool., Wabash Coll., Crawfordsville, Ind. **PROTOZOOLOGY**.

JOHNSTON, Clarence Thomas, Prof. Emer. Geodesy and Surveying, Univ. of Mich., Ann Arbor, Mich. **GEODESY**.

JOHNSTON, Herrick Lee, 177 Brevoors Rd., Columbus, Ohio. **CHEMISTRY**.

JOHNSTON, John Robert, Third Ave., West Hyannisport, Mass. **BOTANICAL SCIENCES**.

JOHNSTON, Robert Angus Alister, retired, 112 Old Forest Hill Rd., Toronto, Ont., Can. **MINERALOGY**.

JOHNSTONE, Francis Elliott, Jr., Ednl. Service Natl. Cottonseed Prod. Assn., 618 Wilson Bldg., Dallas, Tex. **PLANT BREEDING**.

JOHNSTONE, George Rufus, Prof. of Botany, Univ. of Southern Calif., Los Angeles, Calif. **BOTANY**.

JOHNSTONE, H. F., Univ. of Ill., Urbana, Ill. **CHEMICAL ENGINEERING RECOVERY SULPHUR COMPOUNDS**.

JOHNSTONE, Herbert George, Assoc. Prof. of Parasitology, Med. Schl. and Asst. Prof. of Bacteriol., Dental Schl., Univ. of Calif., San Francisco, Calif. **PARASITOLOGY**.

JOINER, Robert R., Group Leader, Wallace and Tiernan Co., 11 Main St., Belleville, N. J. **WATER PURIFICATION AND ORGANIC CHEMISTRY**. b. Belleville, N. J., May 3, 1916. s. Robert and Louise (Gailing) J. Edn.: B.S., Brooklyn Polytech. Inst., 1941. m. Marie Mermet, Sept. 26, 1942. c.: Lynne and Robert. Exp.: Staff, Wallace and Tiernan Co., Inc., Rsch. Labs., Belleville, N. J., 1935—. Mem.: Amer. Chem. Soc. Contrb. to: Jour. of Amer. Chem. Soc.; Archives of Biochem.; Analytical Chem.; Water and Sewage Works. Special Int.: Water and Sewage Treatment Rsch.; Organic Synthesis Mostly in Fungicidal Field and Heterocycles.

JOLIAT, Joseph Sebastian, John Carroll Univ., University Hgts., Cleveland, Ohio. **CHEMISTRY**.

JOLIFFE, Charles Byron, Exec. Vice-Pres. in Chg. RCA Lab. Div., Radio Corp. of Amer., Princeton, N. J. **RADIO, ELECTRONICS**.



JONA, Franco Paolo, Rsch. Assoc., Dept. of Physics, Pa. State Coll., State College, Pa. **SOLID STATE PHYSICS**. b. Pistoia, Italy, Oct. 10, 1922. s. Federico and Gabriella (Fenoglio) J. Edn.: Diploma in Phys., Eidgenossische Technische Hochschule, Zurich, Switzerland, 1945; Ph.D., ibid., 1949. m. Elsa Bertolero, Jan. 8, 1952. Exp.: Lecturing Asst. to Prof. Dr. H. Greinacher, Physikalisches Institut, Universitat Bern, Switzerland, 1945-46; Instr. and Rsch. Assoc. to Prof. Dr. P. Scherrer, Physikaliches Institut der E. T. H., Zurich, Switzerland, 1946-52; Rsch.

Assoc., Physics Dept., Pa. State Coll., State Coll., Pa., 1952—. Mem.: Amer. Physical Soc.; Societa Italiana di Fisica; Schweizerische Physikalische Gesellschaft. Contrb. to: Helvetica Physica Acta, Swiss; Il Nuovo Cimento, Italian; Ergebnisse der exakten Naturwissenschaften, German; Physical Rev. Special Int.: Ferroelectricity and Piezoelectricity; Elasticity; Dielectric Measurements.

JONAS, Leon, Assoc. in Med., Univ. of Pa., 6500 N. Seventh St., Philadelphia, Pa. **MEDICINE**.

JONES, Arthur Taber, Prof. Emer. Physics, Smith Coll., 78 N. Elm St., Northampton, Mass. **SOUND**.

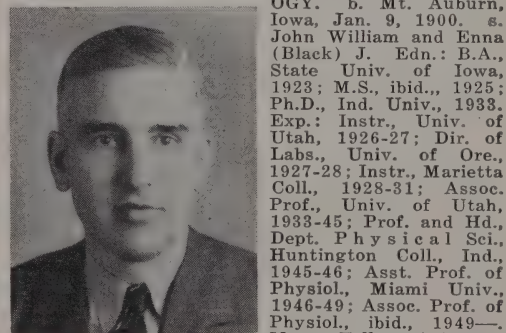
JONES, Clifford Bartlett, Pres. Emer., Tex. Tech. Coll., 3501-19th St., Lubbock, Tex. **ADMINISTRATIVE**.

JONES, Clarence F., Geog. Dept., Northwestern Univ., Evanston, Ill. **GEOGRAPHY**.

JONES, Clyde H., Curator State Herbarium and Asst. Prof. of Botany, Ohio State Univ., Columbus, Ohio. **BOTANY**.

JONES, D. Breese, Prin. Chemist in Chg. Protein Chem., Bureau Human Nutrition and Home Econ., Beltsville Rsch. Center, Beltsville, Md. **CHEMISTRY, NUTRITION**.

JONES, David Tracy, Assoc. Prof. of Physiol., Miami Univ., Oxford, Ohio. **PHYSIOLOGY; ZOOLOGY**. b. Mt. Auburn, Iowa, Jan. 9, 1900. s.



John William and Enna (Black) J. Edn.: B.A., State Univ. of Iowa, 1923; M.S., ibid., 1925; Ph.D., Ind. Univ., 1933. Exp.: Instr., Univ. of Utah, 1926-27; Dir. of Labs., Univ. of Ore., 1927-28; Instr., Marietta Coll., 1928-31; Assoc. Prof., Univ. of Utah, 1933-45; Prof. and Hd., Dept. Physical Sci., Huntington Coll., Ind., 1945-46; Asst. Prof. of Physiol., Miami Univ., 1946-49; Assoc. Prof. of Physiol., ibid., 1949—. Mem.: Fellow, A.A.A.S.;

Iowa Acad. Sci.; Ohio Acad. Sci.; Ind. Acad. Sci.; Fellow, Utah Acad. Sci., Arts and Letters; Kans. Acad. Sci.; State Historical Soc. Iowa; Amer. Malacological Union; Soc. of Protozoologists; Soc. Systematic Zool.; Ohio State Tchrs. Assn.; N.E.A.; Phi Beta Kappa; Sigma Xi. Co-author: Mollusca of Utah, 1929. Author: Practical Exercises in Basic Animal Histology, 1939, 1941; The Spinal Cord of Amphioxus, 1944. Contrb. to: Anatomical Record; Jour. Morphology; Proc. Academies of Sci. of Iowa, Utah, Ind.; Ohio Jour. Sci.; Vintonia; Iowa State Coll. Jour. of Sci.; Nautilus. War Record: Private World War I. Special Int.: Snails; Gall Stones; Solid Secretions.

JONES, Donald Forsha, Box 1106, Dept. of Genetics, Conn. Agril. Expt. Sta., New Haven, Conn.

JONES, E. Elizabeth, Natl. Cancer Inst., Bethesda, Md. COMPARATIVE PATHOLOGY.

JONES, Edmund Ruffin, Jr., Assoc. Prof. of Biol., Univ. of Fla., Gainesville, Fla. INVERTEBRATE ZOOLOGY.

JONES, Edward Newton, Pres., Tex. Coll. of Arts and Indus., Kingsville, Tex. BIOLOGY, GENETICS.

JONES, Elmer Thomas, Entomologist, B. E. & P. Q. Div., Cereal & Forage Insects, U. S. Dept. Agri., 1115 Laramie, Manhattan, Kans. ECONOMIC ENTOMOLOGY. b. Bridgend, South Wales, July 6, 1892. s. John William and Sarah Ann (Morgan) J. Edn.: B.S., Univ. of Mo., 1924; M.S., *ibid.*, 1925. m. Johannah F. Heck, Aug. 6, 1924. c.: Elmer David; Virnelle Yvonne.



Exp.: Tchr. of Voc. Agri., Butler, Mo. H. S. 1925-27; Entomologist, Bureau of Entomology and Plant Quarantine, U. S. Dept. Agri., 1927—. Mem.: Amer. Assn. Econ. Entomol.; Kans. Entomol. Soc.; Kans. Acad. of Sci.; Sigma Xi; Gamma Sigma Delta; Gamma Alpha. Contrb. to: Jour. of Econ. Entomol.; Jour. Amer. Soc. of Agron.; Trans. Kans. Acad. of Sci.; Jour. Kans. Entomol. Soc. War Record: Infantry, U. S. Army, W. W. I. Special Int.; Studies of the Hessian Fly and Wheat Insects with Special Emphasis on Host Plant Resistance to Insect Attack.

JONES, Frank Morton, 2000 Riverview Ave., Wilmington, Del. ENTOMOLOGY.

JONES, Fred Nowell, Jr., Assoc. Prof. and Hd., Dept. of Psychol., Wash. State Coll., Pullman, Wash. PSYCHOLOGY.

JONES, Fred Reuel, Sr. Pathologist, U. S. D. A., Horticultural Bldg., Univ. of Wis., Madison, Wis. PATHOLOGY, FORAGE LEGUMES.

JONES, George Ellis, Prof. of Psychol., Univ. of Pittsburgh, Pittsburgh, Pa. PSYCHOLOGY.

JONES, George Lett, Jr., Asst. Prof. of Chem., Clarkson Coll., Potsdam, N. Y. PHYSICAL CHEMISTRY. b. Suffolk, Va., Apr. 23, 1928. s. George Lett and Evelyn Estelle (Phillips) J. Edn.: B.S., Univ. of Va., 1948; M.S., *ibid.*, 1950; Ph.D. *ibid.*, 1952. Exp.: Asst. Prof. of Chem., Clarkson Coll., 1952—. Mem.: Amer. Guild of Organists; Amer. Chem. Soc.; Sigma Xi; Alpha Chi Sigma; Sigma Delta. Contrb. to: Jour. Amer. Chem. Soc.; Jour. Physical Chem. Special Inst.: Vapor Pressures of Organic Solids; Adsorption from Solution; Supercooling of Organic Liquids and Vapors.

JONES, George Tallman, Assoc. Prof. of Botany, Oberlin Coll., Oberlin, Ohio. ECOLOGICAL BOTANY.

JONES, Harold Charles, Box 61, East Carolina Tchrs. Coll., Greenville, N. C. ECOLOGY.

JONES, Harold Ellis, Prof. of Psychol. and Dir., Inst. Child Welfare, Univ. of Calif., Berkeley, Calif. PSYCHOLOGY.

JONES, Helen Thayer, Assoc. Prof. of Chem., Wellesley Coll., Wellesley, Mass. CHEMISTRY.

JONES, Henry Albert, Prin. Olericulturist, U. S. D. A., Plant Indus. Sta., Beltsville, Md. VEGETABLE BREEDING.

JONES, Herman D., Hd. Prof., Div. Sci., Oglethorpe Univ., Oglethorpe Univ., Ga. BIOCHEMISTRY, CRIMINOLOGY.

JONES, James Wilson, Prof. of Pharm., State Univ. of Ia., Ia. City, Ia. PHARMACY. b. Center Point, Ia., Dec. 7, 1889. s. Wilson W. and Marian E. (Chesebro) J. Edn.: B.S. in Pharm., St. Univ. of Ia., 1929; M.S., *ibid.*, 1930; Ph.D., *ibid.*, 1935. m. Hazel D. Hein of Center Point, Ia., June 14, 1923. d. Frank and Mary Hein. Exp.: Iowa Rural Schl. Tchr., 1919-25; Assoc., State Univ. of Ia., Coll. of Pharm., 1930-35; Assoc. Prof., *ibid.*, 1935-46; Prof., *ibid.*, 1946—. Mem.: Rho Chi; Sigma Xi; Amer. Pharm. Assn.; Ia. Pharm. Assn.; Alpha Chi Sigma; Beta Phi Sigma. Contrb. to: Jour. Amer. Pharm. Assn.; Amer. Jour. Pharm. Edn. Ph.D. Dissertation: A Study of the Preparation of Monochloroamine and Its Use in the Preparation of Amines. Travel: U. S.; Canada. Hobbies: Fishing; Refinishing Heirloom Furniture. Listed in: Who's Who in Amer. Special Int.: Pharmaceutical Chem.

JONES, Jenkins William, Prin. Agronomist in Chg. Rice Investigations, Bureau Plant Indus., Soils, and Agri. Engrng., Agri. Rsch. Admin., U. S. D. A., Beltsville, Md. AGRICULTURE.

JONES, John Courts, Mammal Control Supvr., Fish and Wildlife Service, U. S. Dept. of the Interior, Washington 25, D. C. ECONOMIC MAMMALOGY AND ORNITHOLOGY. b. Washington, D. C., Oct. 3, 1913. s. Copeland Page and M. Louise (Wood) J. Edn.: A.B., Univ. of Minn., 1934; A.M. George Wash. Univ., 1937. m. Wilma Aho, Feb. 22, 1941. Exp.: U. S. Bur. of Biol. Survey, 1936-39; Dir., Food Habits Rsch. Lab., N. Y. State Conv. Dept., 1939-42; San. Tech., U. S. Army, 1942-46; Rodent Control. Spec., Fish and Wildlife Service, U. S. Dept. of Interior, Washington, D. C., 1946-48; Mammal Control Supvr., *ibid.*, 1948—. Mem.: Amer. Ornithol. Union; Amer. Soc. Mammalogists; Audubon Soc.; Cooper Ornithol. Soc.; Wildlife Soc.; Wilson Ornithol. Soc.; Wash. Pest Control Assn.; Va. Pest Control Assn. Author: Food Habits of the Amer. Coot, 1940; Food Habits of the Ruffed Grouse, 1946; Manual of Rodent Control for the Pest Control Operator, 1947. Contrb. to: Auk; Jour. of Mammalogy; Jour. Wildlife Mgmt.; Pest Control; Public Health Engr. Abstr. War Record: U. S. Army, 1942-46.

JONES, John Leslie, Sr. Rsch. Engr., Calif. Inst. of Tech., 1201 E. California St., Los Angeles, Calif. PHYSICAL CHEMISTRY.

JONES, John McKinley, Chf., Div. Range Animal Husbandry, Tex. Agri. Expt. Sta., Tex. A. and M. Coll., College Station, Tex. RANGE ANIMAL HUSBANDRY.

JONES, John Paul, Reg. Agronomist, Soil Conservation Service, U. S. D. A., 919 Lindale Ave., Drexel Hill, Pa. AGRONOMY.

JONES, Kenneth Karl, Assoc. Prof. of Pharmacol., Northwestern Univ., Med. Schl., Chicago, Ill. PHYSIOLOGY, PHARMACOLOGY.

JONES, Kenneth Lester, Assoc. Prof. of Botany, Univ. of Mich., Ann Arbor, Mich. SOIL MICROBIOLOGY.

JONES, Lauder W., 515 S. Mariposa Ave., Los Angeles, Calif. CHEMISTRY.

JONES, Linus Hale, Asst. Rsch. Prof. of Botany, Mass. State Coll., Amherst, Mass. BOTANY.

JONES, Lloyd R., Prof. of Bacteriol., St. Louis Univ., Schl. of Med., St. Louis, Mo. BACTERIOLOGY.

JONES, Loyd Ancile, Hd. of Phys. Div., Rsch. Labs., Eastman Kodak Co., Rochester, N. Y. PHYSICS. b. York, Nebr., Apr. 12, 1884; s. Oscar R. and Roretha (Cottrell) J. Edn.: B.S., Univ. of Nebr., 1908; M.A., *ibid.*, 1910. Hon. Deg.: D.Sc., Univ. of Rochester, 1935. m. Lillian Chaplin, Dec. 4, 1911. Exp.: Asst. Physicist, Natl. Bur. of Standards, Washington, D. C., 1910-12; Asst. Physicist, Kodak Rsch. Lab., Rochester, N. Y., 1912-16; Hd., *ibid.*, 1916—. Mem.: Optical Soc. of Amer.; Fellow, Illuminating Engrng. Soc.; Amer. Soc. of Cinematographers; Fellow, Soc. of

Motion Picture and T. V. Engrs.; Fellow, Amer. Phys. Soc.; Hon. Fellow, Royal Photographic Soc. of G.B.; Hon. Fellow, Photographic Soc. Amer.; A.A.A.S.; Sigma Xi. Contrb. to: Jour. of Optical Soc. of Amer.; Jour. of Franklin Inst.; British Jour. of Photograph; Jour. of Soc. of Motion Picture Engrs.; Amer. Cinematographer; Trans. Illuminating Engrng. Soc.; Phys. Rev.; Psychol. Rev., etc. War Record: U.S.N.R.F., 1918-21. Special Int.: Photometry, Phys. Optics, Illumination, Colorimetry, Phys. of Photography, Visual Sensitometry, Physiol. and Physiol. Optics, Motion Picture Engrng.

JONES, Luther Goodrich, Prof. of Agron., Tex. A. and M. Coll., College Station, Tex. **SOILS.**

JONES, Lynds, Prof. Emer. Animal Ecology, Oberlin Coll., 352 W. College St., Oberlin, Ohio, **ZOOLOGICAL SCIENCES.**

JONES, Mark Manderville, Consulting Economist and Pres., Akron Belting Co., Akron, Ohio. **ECONOMY.**

JONES, Marvin Fisher, Surgeon Dir. Otolaryngology, Manhattan Eye, Ear and Throat Hosp., 121 E. 60th St., N. Y., N. Y. **MEDICAL SCIENCES.**

JONES, Myrna Francis, Zoologist, Natl. Inst. Health, Bethesda, Md. **PARASITOLOGY.**

JONES, Norman R. D., Sci. Instructor, Southwest High Schl., 5310 Lindenwood Ave., St. Louis 9, Mo. **BIOLOGY AND CHEMISTRY.** b. July 31, 1899, Brookville, Ind. s. Wm. Gilbert and Anna (Leonard) J. Edn.: Univ. of Ill., M.S., 1923; Eureka Coll., B.S., 1922, m. Esther M. Hamilton of Monmouth, Ill., Aug. 18, 1925. d. Mr. and Mrs. S. Leigh Hamilton. c. Margaret Annette; Donald Leigh. Exp.: U. S. Post Office, 1917-18; Instr., Sci., Mt. Morris, Ill., H. S., 1922-23; Lincoln, Ill., 1923-25; Prin., Hopevale, Ill., Community H. S., 1925-27; Instr., Sci., Alton, Ill., Community H. S., 1927-29; Safety Inspector and Instr., Shell Pet. Corp., Woodriver, Ill., 1929-30; Instr. in Sci., H. S., St. Louis, Mo., 1930—. Mem.: N.S.T.A.; N.E.A.; A.A.A.S.; British Sci. Masters Assn.; N.A.B.T.; Amer. Nature Study Soc.; Central Assn. Sci. and Math. Tchrs.; Mo. State Tchrs. Assn.; Mo. Sci. Tchrs. Assn., Sec., 1944-45; Exec. Comm., 1942; St. Louis Audubon; Boy Scout Fathers Club; Sigma Delta Sigma; Psi Alpha Lambda; Mason; St. Louis Ednl. Craftsman; Mens Club of H. S. Tchrs. Hon. Pos.: Service Award, Civilian Defense Leadership, 1942-43; Pres., Amer. Coun. of Sci. Tchrs. Assn., 1943; Vice-Pres., N.S.T.A., 1944-48; Pres., ibid., 1948-49; Retired Pres., ibid., 1949-50; Bd. of Dirs., ibid., 1950-53; Gen. Chmn., Greater St. Louis Sci. Fair, 1948—; Organizer and Conductor of Sci. Week-ends, 1950—; Organizer and Conductor of Sci. Summer H. S., 1950—; Boy Scout Councilor, 1946, etc. Author: This and That, 1943-49; Ednl. Publ. Contributions: The Bulletin of Natl. Assn. of Secondary Schl. Principals and Sci. Fairs; Sci. Edn. in the Community. War Record: U. S. Army, 1918. Travel: N. Amer. Hobby: Bird Study. Listed in: Who's Who, Monthly Supplement; A.M.S.; etc.

JONES, Paul Robert, Owner and Manufacturer of Perfumes, 237 Bonita Ave., Piedmont, Calif. **ENTOMOLOGY.**

JONES, Reginald Lamont, Vice-Pres., Bell Telephone Labs., Inc., 463 West St., N. Y., N. Y. **COMMUNICATIONS.**

JONES, Robert T., Aeronautical Rsch. Scientist, NACA, Moffet Field Calif., **AERONAUTICAL RESEARCH.**

JONES, S. Guy, Prof. of Chem., Univ. of Redlands, 807 E. Central Ave., Redlands, Calif. **INORGANIC, ANALYTICAL CHEMISTRY.**

JONES, Victor Harlan, Geologist, Soil Conservation Service, Reg. Office, U. S. D. A., 2410 Kenley St., Fort Worth, Tex. **SEDIMENTATION.**

JONES, Volney Hurt, Curator of Ethnology, Museum Anthropol., Univ. of Mich., Ann Arbor, Mich. **ETHNOBOTANY.**

JONES, Walter, Plant Pathologist, Dominion Lab. Plant Pathol., Rt. 1, Saanichton, B. C., Can. **PLANT PATHOLOGY.**

JONES, Walter Bryan, State Geologist, Geol. Survey, State of Ala., Box 66, Rt. 1, Huntsville, Ala. **ECONOMIC GEOLOGY.**

JONES, Webster N., Dir., Carnegie Inst. of Tech., Coll. of Engrng., Pittsburgh, Pa.

JONES, William Norton, Jr., Prof. of Chem. and Chmn., Division of Science and Mathematics, McMurry Coll., Abilene, Texas. **ORGANIC CHEMISTRY.** b. November 16, 1908, Augusta, Ark. s. Wm. Norton, Sr. and Beatrice (Roddy) J. Edn.: B.A., Hendrix Coll., Ark., 1928; M.A., 1930, Ph.D., 1932, Johns Hopkins Univ.; Grad. Study, Univ. of Sou. Calif., 1939. m. Roberta Jackson of Durango, Colo., June 15, 1938. d. Mr. and Mrs. Robert L. Jackson. Exp.: Sci. Instr., Hulbert, Ark., H. S., 1931-32; Supt., Citizens' Schls., Osceola, Ark., 1932-33; Assoc. Prof. of Chem. and Hd., Dept., Ft. Lewis Br., Colo. State Coll., 1933-44; Acting Vice-Dean, Colo. A. and M., Fort Lewis Br., Hesperus, Colo., 1943-46; Prof. of Chem. and Hd. of Dept., 1944-48; Prof. of Chem. and Hd. of Dept., McMurry Coll., Abilene, Tex., 1948—; Chmn., Division of Science and Mathematics, ibid., 1949—, Hon. Pos.: Mem., Executive Comm. and Marshal of Faculty, Ft. Lewis Br., Colo. State Coll. Mem.: Sigma Xi; Alpha Chi; Amer. Chem. Soc.; Fellow, Tex. Acad. of Sci.; A.A.A.S.; Gamma Alpha. Contrb. to: Amer. Photography; Chem. Rev.; N. Y. Times; The Pan Amer. Ph.D. Dissertation: The Composition and Possible Constitution of Some Sulfur Dyes. Travel: N. Amer.; Europe; N. Africa; etc. Hobbies: Photography; Writing; Handball. Author: Textbook: Inorganic Chem., published by the Blakiston Co., Jan., 1947; Lab. Exercises in Inorganic Chem., Blakiston Co., 1947. Special Int.: Dye Chem., Organic Sulfur Compounds.

JONTE, John Herbert, Prof. of Chem., Coll. of the Pacific, Stockton, Calif. **CHEMISTRY.** b. Kearney, Neb., Aug. 13, 1885. s. Henry and Elizabeth (Donham) J. Edn.: B.S., Univ. of Kans., 1911; M.S., State Univ. of Ia., 1928. m. Bada Sophia Johnson of Laramie, Wyo., Dec. 23, 1913. d. Jacob and Sophia Johnson. c. John Haworth; Donald Milton. Exp.: Special Analyst and Asst. in Chem., State Coll. of Wash., 1916-17; Analyst in Chg. Lab., Idaho State Bur. of Mines and Geol., 1917-20; Prof. of Chem., Coll. of Pacific, 1920—; Prof. of Chem., Stockton Coll., 1935-51. Mem.: Amer. Chem. Soc.; A.A.A.S.; Calif. Acad. of Sci.; Y.M.-C.A. Hobbies: Travel: Stamp Collecting. Listed in: A.M.S.

JORDAN, Arthur M., Prof. of Ednl. Psychol., Univ. of N. C., Chapel Hill, N. C. **EDUCATION, PSYCHOLOGY.**

JORDAN, Charles B., 6435 Commodore Sloat Dr., Los Angeles, Calif. **CRYSTAL STRUCTURE.**

JORDAN, Charles Neal, Prof. and Chmn., Dept. of Chem., St. Louis Univ., 1402 S. Grand Blvd., St. Louis, Mo. **ORGANIC CHEMISTRY.**

JORDAN, Edwin Pratt, Cleveland Clinic, 93rd and Euclid Sts., Cleveland, Ohio. **INTERNAL MEDICINE.**

JORDAN, Harvey Ernest, Prof. of Anatomy and Dir., Anatomical Lab., Univ. of Va., Univ. Sta., Charlottesville, Va. **ANATOMY.**

JORDAN, Harvey Herbert, Prof. and Hd., Dept. of General Engrng. Drawing, Assoc. Dean, Coll. of Engrng., Univ. of Ill., Urbana, Ill. **CIVIL ENGINEERING.**

JORDAN, Henry, retired, 1034 Oxford Way, Pasadena, Calif. **AZO DYES.**

JORDAN, Howard Vernon, Assoc. Soil Technologist, U. S. D. A. and Miss. Agri. Sta., P. O. Box 502, State College, Miss. **SOILS.**

JORDAN, Maynard Fred, Prof. of Astron., Univ. of Maine, 23 University Pl., Orono, Maine. **ASTRONOMY.**

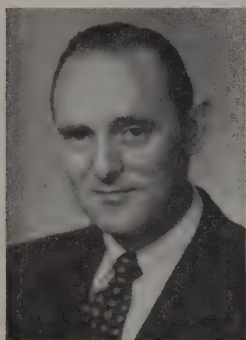
JORDAN, Richard Hollister, Operations Analyst, Air Defense Command, U.S.A.F., Colorado Springs, Colo. **GEOLOGY; SCIENCE EDUCATION.** b. Minneapolis, Minn., September 21, 1911. s. Riverda Harding and Mary Vinette (Hoover) J. Edn.: A.B., Cornell Univ., 1933; M.S., *ibid.*, 1939; Ph.D., *ibid.*, 1946 m. Mary Irvin, Aug. 26, 1939. c.: Barbara Rae; Susan Mary. Exp.: Sci. Tchr., Potsdam, N. Y., H. S., 1934-38; Sci. Tchr., Port Washington, N. Y., 1938-40; Grad. Students, 1940-42; U.S.A.F., 1942-46; Bd. of Examiners, Mich. State Coll., 1946-47; Assoc. Prof. of Geol. and Chmn., Phys. Sci., Fla. State Univ., 1947-50; Operations Analyst, U.S.A.F., 1950—. Mem.: Geol. Soc. Amer.; A.A.A.S.; A.A.U.P.; Colo. Springs Mineralogical Soc.; Natl. Assn. for Resch. in Sci. Tchng.; Operations Rsch. Soc. of Amer.; Kappa Phi Kappa; Phi Delta Kappa; Sigma Gamma Epsilon; Phi Gamma Delta. Co-Author: Comprehensive Examinations in a Program of General Edn., 1949; etc. Contrb. to: Jour. Geol.; Sci.; Fla. State Univ. Studies; Third Mental Measurements Yearbook. War Record: Lt. Col., U.S.A.F., 1942-46. Special Int.: Sci. Edn.; Geol.; Operations Analysis of Air Force.

JORDAN, Robert, Assoc., Div. Rural Hosps., Commonwealth Fund, 14 Sutton Pl., S., N. Y., N. Y. **HOSPITAL ADMINISTRATION.**

JOSE, Paul Douglas, Resident Astronomer, McDonald Observatory, Fort Davis, Tex. **ASTRONOMY.**

JOSEPH, Glenn Howe, Chemist in Chg. Rsch. Dept., Calif. Fruit Growers Exchange, P. O. Box 215, Corona, Calif. **CHEMISTRY.**

JOSEPHSON, Donald Victor, Prof. and Hd., Dept. Dairy Husbandry, Pa. State Coll., State College, Pa.



DAIRY SCIENCE. b. Stillwater, Minn., Mar. 16, 1911. s. Joseph N. and Edna H. (Anderson) J. Edn.: B.S., Univ. of Minn., 1935; M.S., Pa. State Coll., 1936; Ph.D., *ibid.*, 1943. m. Ada C. Burris, Sept. 29, 1933. c.: Donald B.; Ronald V. Exp.: Rsch. Chemist, The Borden Co., 1937-38; Instr., Pa. State Coll., 1938-43; Asst. Prof., *ibid.*, 1943-45; Assoc. Prof., Ohio State Univ., 1945-48; Prof. and Hd., Dairy Dept., Pa. State Coll., 1948—. Hon. Pos.: Chmn., Manufacturing

Section, Amer. Dairy Sci. Assn., 1950. Mem.: Amer. Dairy Sci. Assn.; Amer. Soc. Animal Production; Sigma Xi; Alpha Gamma Rho; Gamma Sigma Delta; Alpha Zeta. Special Int.: Chem. and Bacteriol. of Dairy Foods.

JOSEPHSON, Emanuel M., 127 E. 69th St., N. Y., N. Y. **OPHTHALMOLOGY, OTOLARYNGOLOGY.**

JOSEPHSON, Leonard Melvin, Agronomist, Ky. Agricultural Expt. Station, Lexington, Ky. **AGRICULTURAL RESEARCH.** b. December 4, 1913, Ashland, Wis. s. A. E. and Bertha (Mattson) J. Edn.: B.S., Univ. of Wis., 1936; Ph.D., *ibid.*, 1941. m. Joann O'Dell of Marshfield, Wis., 1940. d. C. C. O'Dell. c.: Louise; Jon Baard. Exp.: Agt., U.S.D.A., 1933-37; Rsch. Asst., Univ. of Wis., 1937-39; Sec., Field Rep., Malt Rsch. Inst., 1939-43; Asst. Agron., Ky. Agri. Exp. Sta., 1943-45; Assoc. Agron., *ibid.*, 1945-51; Agron., *ibid.*, 1951—. Mem.: Amer. Soc. Agron.; Amer. Phytopathol. Soc.; Amer. Genetic Assn.; A.A.A.S.; Natl. Geog.; Sigma Xi; A.A.U.P.; Delta Theta Sigma; Gamma Alpha; Phi Eta Sigma; Torch Club. Contrb. to: Phytopathol.; Agron. Jour.; Sci. Ph.D. Dissertation: Studies on the Intermediate Loose Smut of Barley Caused by Ustilago Medians, Bied. Hobbies: Bowling; Golf; Fishing; Hunting. Listed in: A.M.S. Special Int.: Maize and Cereal Breeding, Weed Control, Disease Control.

JOSLIN, Elliott Proctor, Med. Dir., George F. Baker Clinic, New England Deaconess Hosp., Boston, Mass. **INTERNAL MEDICINE.**

JOSSEM, E. Leonard, Cornell Univ., Ithaca, N. Y. **PHYSICS.**

JOY, Alfred H., Retired, 575 Glen Holly, Pasadena 2, Calif. **ASTRONOMICAL SPECTROSCOPY AND STELLAR DISTANCES.** b. Greenville, Ill., Sept. 23, 1882. s. Frank P. and Louise (Maynard) J. Edn.: Ph.B., Greenville Coll., 1903; A.M., Oberlin Coll., 1904. Hon. Deg.: D.Sc., Greenville Coll., 1945. m. Margherita Burns, July 23, 1919. c. Richard P. and Edith W. Exp.: Instr. and Prof., Amer. Univ. of Beirut, Lebanon, 1904-14; Instr., Univ. of Chicago, Chicago, Ill., 1914-15; Astronomer, Mt. Wilson Observatory, Calif., 1915-48; Lectr., Calif. Inst. of Tech., Pasadena, Calif., 1948-52; Retired, 1952—. Mem.: A.A.A.S.; A.A.S.; A.S.P.; Internat. Astronomical Union, Natl. Acad. Sci. Author: 200 Astronomical Rsch. Contrbns. Contrb. to: Astronomical Jour.; Astrophysical Jour. Special Int.: Astronomical Spectroscopy.

JOYCE, Wallace J. Amer. Geophysical Union. **TERRESTRIAL MAGNETISM AND ELECTRICITY.**

JUDD, Deane Brewster, Physicist, National Bur. of Standards, Wash. 25, D. C. **COLOR VISION AND COLORIMETRY.** b. South Hadley Falls, Mass., Nov. 15, 1900. s. Horace and Etta Lois (Gerry) J. Edn.: B.A., Ohio St. Univ., 1922; M.A., *ibid.*, 1923; Ph.D., Cornell Univ., 1926. m. Elizabeth Melamed, Aug. 7, 1926. c.: Dean Burritt; Audrey Lois. Exp.: Instr. Physics, Ohio St. Univ., Columbus, Ohio, 1923-24; Instr., Psychol., Ohio Wesleyan Univ., Delaware, Ohio, 1923-24; Rsch. Assoc., Munsell Rsch. Lab., Baltimore, Md., 1926-27; Assoc. Physicist, Natl. Bur. of Stand., Wash. 25, D. C. 1927-36; Physicist, *ibid.*, 1936-37; Senior Physicist, *ibid.*, 1937—. Mem.: Optical Soc. of Amer.; Amer. Soc. for Testing Materials; Wash. Philosophical Soc.; Phi Beta Kappa; Sigma Xi; Pi Mu Epsilon. Author: Color in Business, Sci. and Industry, 1952. Contrb. Jour. of the Optical Soc. of Amer.; Jour. of Rsch. of the Natl. Bur. of Standards; ASTM Bull.; Amer. Jour. of Psychol.; Oil & Fat Industries; Jour. of Experimental Psychology, Paper Trade Jour.; Jour. of the Soc. of Motion Picture Engr.; Jour. of the Amer. Ceramic Soc.; Textile Rsch.; Review of Scientific Instruments; Amer. Dyestuff Reporter. Special Int.: Colorimetry; Purkinje After-Image; Equivalent Color Stimuli; Chromaticity Sensibility; Light-Scattering Materials.

JUDD, John Hewitt, Prof. and Chmn., Dept. of Ophthalmology, Univ. of Nebr., Omaha, Nebr. **OPHTHALMOLOGY.**

JUDD, Neil M., Curator Archaeol., U. S. Natl. Museum, Washington, D. C. **ARCHAEOLOGY.**

JUDSON, Charles Morrill, Rsch. Chemist, Amer. Cyanamid Co., Stamford, Conn. **PHYSICAL CHEMISTRY.** b. Washington, D. C., July 2, 1919. s. Lewis V. and Charlotte (Morrill) J. Edn.: B.A., Swarthmore Coll., 1940; M.S., Univ. of Pa., 1942; Ph.D., *ibid.*, 1947. m. Mary Pulverman, Oct. 25, 1944. c.: Molly Ann. Exp.: Asst. Instr., Univ. of Pa., 1940-43; Rsch. Asst., Columbia Univ., 1943-44; Rsch. Chemist, Standard Oil Co. (Ind.), 1944-45; Rsch. Chemist, Amer. Cyanamid Co., Stamford, Conn., 1947—. Mem.: Amer. Chem. Soc.; Amer. Phys. Soc.; A.A.A.S.; Phi Beta Kappa; Sigma Xi. Contrb. to: Jour. Amer. Chem. Soc.; Jour. Chemical Phys.; Mining Engrng. Special Int.: Radioactive Tracers; Surface Active Agents; Mineral Flotation; Solutions of Electrolytes; Isotope Separation; Isotopic Analysis; Chemical Analysis.

JUDSON, James Edward, Wesleyan Coll., Buckhannon, W. Va. **ZOOLOGICAL SCIENCES.**

JUDSON, Lewis Van Hagen, Chf., Length Section, Metrology Div., Natl. Bureau of Standards, Washington, D. C. **METROLOGY.**

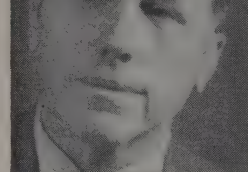
JUDSON, Sidney A., Pres., Justa Petroleum Corp., 1426 Esperson Bldg., Houston, Tex. **GEOLOGY, GEOGRAPHY.**

JUGENHEIMER, Robert W., Prof. and Chf., Plant Genetics, Chg. Corn Investigating, Univ. of Ill., Urbana, Ill. **PLANT GENETICS.**

JUHN, Mary, Rsch. Prof., Dept. of Poultry Husbandry, Univ. of Md., College Park, Md. **PHYSIOLOGY.**

JUKES, Thomas H., Dept. of Nutrition and Physiol. Rsch., Lederle Labs., Pearl River, N. Y. **BIOCHEMISTRY—NUTRITION.**

JULANDER, Odell, Range Conservationist, Intermountain Forest and Range Expt. Station, Ogden, Utah. **PLANT PHYSIOLOGY AND ECOLOGY.** b. Monroe, Utah, Oct. 3, 1903. s. John W. and Ida Delight (Asay) J. Edn.: B.S., Utah State Coll., 1931; M.S., Iowa State Coll., 1939; Ph.D., *ibid.*, 1944. m. Ora Hansen, 1930. c.: Gayle; Rod; Rhea; Joyce; John Brent.



Exp.: Range Examiner, U. S. Forest Service, 1930-36; Instr. in Forestry, Iowa State Coll., 1936-44; Assoc. Prof. of Forestry, Univ. of Ark., 1944-46; Range Conservationist in Chg. of Big Game Range Rsch., Intermountain Forest and Range Expt. Station, 1946—. Mem.: Soc. Amer. Foresters; Amer. Soc. Range Management; Utah Acad. Sci.; Sigma Xi; Phi Kappa Phi; Alpha Zeta. Co-author: Range Plant Handbook, 1937. Contr. to: Jour. Forestry; Jour. Range Management; Proc., N. Amer. Wildlife Conf.; Plant Physiology. Special Int.: Big Game Range; Game - Livestock Range Relationships; Drought Resistance of Range Plants.

JULL, Morley A., Univ. of Md., College Pk., Md. **POULTRY BREEDING.**

JUMP, John Austin, Asst. Prof. of Biol., Univ. of Notre Dame, Notre Dame, Ind. **MICROBIOLOGY.**

JUNGLEBLUT, Claus W., Prof. of Bacteriol., Columbia Univ. Med. Center, 630 W. 168th St., N. Y., N. Y. **BACTERIOLOGY.**

JUNTUNEN, John P., Chf. Chemist, McLellan Labs., Burbank, Calif. **PHARMACEUTICALS.**

JURICA, Hilary Stanislaus, Prof. of Botany, Hd. Dept. of Biol., St. Procopius Coll., Lisle, Ill. **BOTANY.**

JURSKIS, Alfonsas, Intrsr. and Lectr. in Electronics, Community Coll. and Technical Inst. of Temple Univ., 1313 W. Jerome St., Philadelphia 40, Pa. **RADIO ENGINEERING.** b. Akmenyte, Lithuania, Aug. 4, 1894. s. Juozas and Ona (Petrulyte) J. Edn.: Certificate, Imperial Poly. Inst., Petrograd, 1916; Diploma, Ecole Supérieure d'Electricité de Paris, 1924. m. Ona Tallat-Kelpsaite, Feb. 6, 1926. c.: Liutas; Sniega; Juozas. Exp.: Radio Operator, 1-st Squadron of Icebreakers, Russia-England, 1916-19; Consultant and Instr. for the Lithuanian War and Communication Dept., 1924-40; Dir., Lithuanian State Broadcasting Co., 1926-30; Lectr., Privatdocent, Docent of Lithuania Univ. of Kaunas, 1927-44; Asst. Dean, Faculty of Technol., *ibid.*, 1940-44; Dir. and Lectr. of Technical Schl. of D. P. Camp, Augsburg, 1945-47; Instr. in Language Schl. of E.C.I.S., U. S. Army, 1947-49; Instr. in Electronics, Community Coll. and Technical Inst. of Temple Univ., Philadelphia, Pa., 1949—. Hon. Pos.: Chmn., Amer. Lithuanian Engrs. Soc. in Philadelphia, Pa. Mem.: Radio Soc. of Great Britain, Inc.; Societe des Amis de la T. S. F. (France). Author: Radio Engrng., 1927; Elements of Radio-Telephony, 1933; Acoustics and Sound-Space of Rooms, 1947; Radiated Energy, 1947. Contr. to: Lithuanian Jour. of Sci.; etc. War Record: Engr. and Consultant, Lithuanian Army. Special Int.: Radiated Energy and Wave Propagation; Educational Problems and Efficiency of Academical Work in Engrng. Schls.

JUSTIN, Margaret M., Dean, Schl. of Home Econ., Kans. State Coll., Manhattan, Kans. **EDUCATION, NUTRITION.**

JUVE, A. E., B. F. Goodrich Co., Brecksville, Ohio. **RUBBER CHEMISTRY.**

KAAN, Helen Warton, 2101 Constitution Ave., Washington, D. C. **EMBRYOLOGY**.

KABAT, Elvin Abraham, Asst. Prof. of Bacteriol., Coll. of Physicians and Surgeons, Columbia Univ., N. Y., N. Y. **BIOCHEMISTRY**.

KAC, Mark, Asst. Prof. of Math., Cornell Univ., Ithaca, N. Y., N. Y. **MATHEMATICS**.

KACZMAREK, Marion Regidius, Prof. Emer., Univ. of Notre Dame, Notre Dame, Ind. **BIOLOGY**.

KADESCH, Richard Gilmore, Reynolds Rsch. Corp., Box 1385, Glen Park Sta., Gary, Ind. **PLASTICS, ORGANIC CHEMISTRY**.

KADESCH, William Henry, Prof. of Physics, Iowa State Tehrs. Coll., Cedar Falls, Iowa. **PHYSICS**.

KAISER, Margaret, Assoc. Prof. of Bot., Sou. Ill. Univ., Carbondale, Ill. **BOTANY**. b. McAlester, Okla., June 20, 1912. d. Henry Shanklin and Florence (Clayton) K. Edn.: B.S., Univ. of Okla., 1934; M.S., Univ. of Okla. 1936; Ph.D., Univ. of Ill., 1940; Univ. of Wyo. Sum., 1935. Exp.: Instr. in Biol., Pa. Coll. for Women, Pittsburgh, 1940-41; Instr. in Biol., Cedar Crest Coll., Allentown, Pa., 1941-42; Asst. Prof. in Biol., 1942-43; Assoc. Prof., 1943-44; Asst. Prof. of Biol., St. Joseph Coll., W. Hartford, Conn., 1944-47; N. Y. Univ., Summer, 1946; Res. Asst., Carn. Inst. of Wash., Cold Spring Harbor, N. Y., Summers, 1942-43; Dir., Reg. Nat. Hist. Museum, Palisades Interstate Park, N. Y., Summer, 1944; Univ. of Miami, Coral Gables, Fla., Summer, 1947; Asst. Prof. of Bot., Sou. Ill. Univ., Carbondale, Ill., 1947-50; Assoc. Prof., *ibid.*, 1950—. Mem.: Sigma Xi; Phi Sigma; Sigma Delta Epsilon; Phi Beta Kappa; A.A.A.S.; Fellow, A.A.A.S., 1945; Bot. Soc. of Amer.; Okla. Acad. of Sci.; Ill. Acad. of Sci.; A.A.U.P.; Bus. and Professional Women's Club. Contrb. to: Amer. Naturalist; Okla. Acad. of Sci.; Ill. Acad. of Sci. Ph.D. Dissertation: Morphology and Embryology of *Taxodium distichum*. Special Int.: Plant Morphology; Cytology and Wood Anatomy.

KAEMPFERT, Waldemar, Sci. Editor, N. Y. Times, 229 W. 43rd St., N. Y., N. Y. **PHYSICS**.

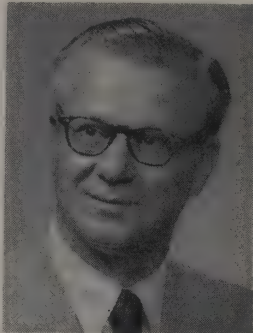
KAGAN, Benjamin M., Chmn., Dept. of Pediatrics and Dir., Dept. of Pediatric Rsch., Michael Reese



Hospital, 2901 S. Ellis Ave., Chicago 16, Ill. **PEDIATRICS**. b. Washington, Pa., July 15, 1913. s. Alexander Benjamin and Sara (Gains) K. Edn.: A.B., Washington and Jefferson Coll., 1933; M.D., Johns Hopkins Med. Schl., 1937. m. Katherine S. Hamburger, June, 1940. c.: Christopher; Robert. Exp.: Instr. in Pediatrics, Med. Coll. of Va., 1940-42; Instr., St. Phillip Schl. for Public Health Nursing, 1940-42; Asst., Dept. of Pediatrics, Columbia Med. Schl., 1946; Dir.,

Dept. of Pediatric Rsch., Michael Reese Hosp., 1946—; Asst. to Exec. Dir. of Michael Reese Hosp., in Chg. of Sarah Morris Hosp. for Children, 1947—; Chmn. of Dept. of Pediatrics, Michael Reese Hosp., 1951—; Assoc. Prof. of Pediatrics, Univ. of Ill., 1947—. Mem.: Sigma Xi; Phi Beta Kappa; Amer. Bd. of Pediatrics; Amer. Heart Assn.; Soc. for Exptl. Biol. and Med.; F.A.C.P.; A.A.A.S.; Amer. Pediatric Soc.; Amer. Acad. Pediatrics; Soc. for Pediatric Rsch.; Central Soc. for Clinical Rsch. Contrb. to: Biol. Bull.; Jour. Clinical Investigation; Jour. Lab. and Clinical Med.; Arch. Internal Med.; Proc. Exptl. Biol. and Med.; Pediatrics; Jour. of Pediatrics; Amer. Jour. Diseases of Children. Special Int.: Pediatrics; Biochem.; Nutrition; Renal Diseases; Rheumatic Fever and Prematurity.

KAHLENBERG, Herman Heald, Dir., Kahlenberg Labs., 1930 Clematis St., Sarasota, Fla. **CHEMISTRY—MEDICINE**. b.



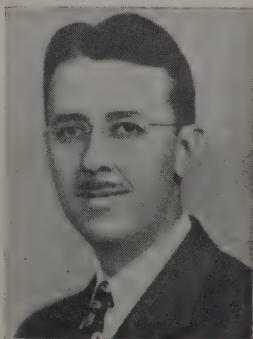
Madison, Wis., Feb. 19, 1901. s. Louis A. and Lillian Belle (Heald) K. Edn.: B.S., Univ. of Wis., 1922; M.S., *ibid.*, 1923; Cand. Chem., Univ. Freiburg, Germany, 1924; Ph.D., Univ. of Wis., 1925. m. Alice Nash (div.), Oct. 10, 1925. c.: Eilhard; Piri; Greta. Exp.: Chemist, Newport Chem. Works, 1921; Asst., Hosp. of Rockefeller Inst., 1923; Chf. Chemist and Vice-Pres., Kahlenberg Lab., 1925-41; Pres., *ibid.*, 1941-44; Scientific Dir. and Sole Owner, *ibid.*, 1944—. Hon. Pos.: Former Pres. Bd. of Edn., Two Rivers, Wis. Mem.: Amer. Chem. Soc.; Fellow, A.A.A.S.; Fellow, Amer. Inst. of Chemists; Parenteral Drug Assoc.; N. Y. Acad. of Sci. Gen. Int.: Co-Inventor Ampul and Tube Sealing Machine. Special Int.: Colloids in Med., Anti-Fouling Ship's Bottom Paints, Fungicides, Gold Therapy of Arthritis, Surgical Sutures, Larva Migrans, Preparation and Uses of Bichloroacetic Acid in Surgery Impetigo Contagiosa, Preparation of Tungsten, Boron and Their Alloys; Chem. Cauterization of Cervical Erosions, Ampul Sealing and Seasickness.

KAHN, Edgar A., Assoc. Prof. of Surgery, Univ. Hosp., Univ. of Mich., Ann Arbor, Mich. **NEUROSURGERY**.

KAHN, Morton Charles, Assoc. Prof. of Public Health and Preventive Med., Cornell Univ. Med. Coll., N. Y., N. Y. **PUBLIC HEALTH**.

KAHN, Reuben Leon, Chf. Clinical Labs., Univ. of Mich. Hosp., 1122 Michigan Ave., Ann Arbor, Mich. **IMMUNOLOGY**.

KAISER, Elmer Robert, Asst. Dir. of Rsch., Bituminous Coal Rsch., Inc., 488 W. Sixth Ave., Columbus 1, Ohio. **RESEARCH ADMINISTRATION; FUEL RESEARCH; INVENTION; MECHANICAL ENGINEERING**. b. New Holstein, Wis., Aug. 29, 1909. s. Henry and Araminta (Hanssen) K. Edn.: B.S., Univ. of Wis., 1934; M.S., *ibid.*, 1934. m. Ruby Anglin, June 6, 1936. Exp.: Fuel Rsch. Engr., Battelle Memorial Inst., 1935-44; Asst. Dir. of Rsch., Bituminous Coal Rsch., Inc., Columbus, Ohio, 1944—. Mem.: A.S.M.E.; A.I.M.E.; Air Pollution Control Assn.;



Tau Beta Pi; Phi Eta Sigma; Pi Tau Sigma. Contrb. to: Mechanical Engrng.; Power Combustion; Mining Engrng. Special Int.: Coal; Combustion; Coal and Ash Handling; Rsch. Admin.; Development of Coal-Fired Equipment.

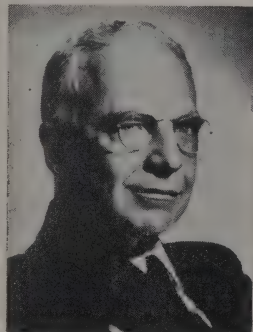
KALIS, Nathan, Sloan-Kettering Inst., 412 E. 68th St., N. Y., N. Y. **DEVELOPMENTAL GENETICS**.

KALKUS, Julius Wilbur, Vice-Dir., Wash. Agri. Expt. Sta. and Supt., Western Wash. Expt. Sta., State Coll. of Wash., Pullman, Wash. **ANIMAL PATHOLOGY**.

KALTENBORN, Howard Scholl, Chmn., Dept. of Math., Memphis State Coll., Memphis 11, Tenn. **MATHEMATICS**. b. Pittsburgh, Pa., Jan. 21, 1907. s. Philip and Sarah (Scholl) K. Edn.: B.S., Carnegie Inst. of Tech., 1928; M.S., Univ. of Mich., 1931; Ph.D., *ibid.*, 1934. m. Helen Houghtaling,

Sept. 3, 1937. c.: Alice Mathilda; Sara Helen. Exp.: Instr., Carnegie Tech., Pittsburgh, Pa., 1928-32; Instr., Univ. of Mich., Ann Arbor, Mich., 1934-37; Instr., Univ. of Tex., Austin, Tex., 1938-39; Asst. Prof., La. Polytechnic Inst., Ruston, La., 1939-43; Assoc. Prof., Univ. of Idaho, Moscow, Idaho, 1945-46; Prof., Memphis State Coll., Memphis, Tenn., 1946—. Mem.: Mathematical Assn. of Amer.; Natl. Coun. of Tchrs. of Math.; A.A.U.P.; Phi Beta Kappa; Sigma Xi. Author: Meaningful Mathematics, 1951; Basic Techniques of Mathematics, 1953, Co-author. Contrb. to: Bull., Amer. Mathematical Soc.; Tohoku Math. Jour.; Natl. Math. Magazine, Special Int.; Training Tchrs. of Secd. Math., Improving Content of Courses and Methods of Instruction in Collegiate Math.

KALICHEVSKY, Vladimir Anatole, Consulting Chem. Engr., Magnolia Petroleum Co., 820 Twentieth Street, Beaumont, Tex. **CHEMICAL ENGINEERING.** b. Caucasus, Russia, April 9, 1895. s. Anatole Joseph and Marie V. (Grodokov) K. Edn.: B.S., Calif. Inst. of Tech., 1924. m. Valetina B. Fedorenko on Aug. 30, 1924. c.: Kira V. Exp.: Rsch. Chem. Engr., Union Oil Co. of Calif., 1924-29; Rsch. Chemist, Standard Oil Development Co., 1929-31; Section Leader, Rsch. and Development Dept., Socony-Vacuum Oil Co., Inc., 1931-37; Gen. Supvr., ibid., 1937-



44; Consulting Chem. Engr., Magnolia Petroleum Co., 1944—. Mem.: Amer. Petroleum Inst.; A.A.-A.S.; Amer. Inst. of Chem. Engrs.; Amer. Chem. Soc.; C. of C. Author: Modern Methods of Refining Lubricating Oils, 1938; The Amazing Petroleum Industry, 1942. Co-author: Chemical Refining of Petroleum, 1933, 1942. Contrb. to: Proc. Amer. Petroleum Inst.; Ind. Engrng. Chem.; Natl. Petroleum News; Oil Gas Jour.; Petroleum Refiner; Petroleum Proc.; etc. War Record: World War I, 1914-17; Civil War, White Russian Army in Siberia, 1919-20; Capt., Imperial Russian Guards, 1916; Asst. Military Attache, Russian Legation, Denmark, 1917-19; Officer, Royal Rumanian Legation in Siberia and Japan, 1919-20. Special Int.: Petroleum Refining.

KAMBLY, Paul Edward, Schl. of Edn., Univ. of Ore., Eugene, Ore. **SCIENCE EDUCATION.**

KAMM, Oliver, Scientific Dir., Parke, Davis and Co., Detroit, Mich. **CHEMISTRY.**

KAMMERER, Alfred Lewis, Consulting Timber Engr., Von Schrenk and Kammerer, Tower Grove and Flad Aves., St. Louis, Mo. **CHEMICAL ENGINEERING.**

KAMMERER, E. Lowell. **AMERICAN ASSOCIATION OF BOTANICAL GARDENS AND ARBORETUMS.**

KANDEL, Alexander, Dept. of Pharmacol., Med. Schl., Univ. of Mich., Ann Arbor, Mich. **PHARMACOLOGY.**

KANNENSTINE, Fabian Miller, Owner, Kannenstine Labs., P. O. Box 6007, Houston, Tex. **PHYSICS.**

KANNING, Eugene W., 2802 Fairfield Ave., Fort Wayne, Ind. **CHEMISTRY.**

KANOLT, Clarence Whitney, Physicist, Farrand Optical Co., 238th St. and Bronx Blvd., N. Y., N. Y. **PHYSICS, OPTICS.**

KANTOR, Jacob Robert, Prof. of Psychol., Ind. Univ., Bloomington, Ind. **PSYCHOLOGY.**

KAO, Simon Tsai, Asst. Prof. and Hd., Dept. of Mathematics, Coll. of St. Joseph, 501 Marble Ave., N. W., Albuquerque, N. Mex. **MATHEMATICS.**



b. Fukien, China, Nov. 11, 1922. s. O. K. and Ming (Chen) K. Edn.: B.S., Natl. Univ. of China; Ph.D., Catholic Univ. of Amer. Exp.: Asst. Prof. and Head, Department of Mathematics, Coll. of St. Joseph, Albuquerque, N. Mexico. Mem.: Math. Assn. Amer.; Soc. Sigma Xi; Scientific Rsch. Soc. of Amer. Contrb. to: Amer. Math. Monthly.

KAPLAN, Burton, Partner, Whelpley and Paul, Seneca Hotel Arcade, Rochester, N. Y. **OPTICS.**

KAPLAN, Joseph, Prof. of Physics, Univ. of Calif., Los Angeles, Calif. **RADIOPHYSICS AND UPPER ATMOSPHERE.**

KAPLAN, Wilfred, Asst. Prof. of Math., Univ. of Mich., Ann Arbor, Mich. **DYNAMICAL SYSTEMS.**

KAPP, Mary Eugenia, Chmn., Div. of Applied Sci., and Hd., Chem. Dept., Richmond Prof. Inst. of the Coll. of William and Mary, 901 W. Franklin St., Richmond, Va. **ANALYTICAL CHEMISTRY.** b. Mt. Airy, N. C., Apr. 15, 1909. d. Eugene and Lillie (Sides) K. Edn.: A.B., Woman's Coll., Univ. of N. C., 1930; M. A., Duke Univ., 1931; Ph.D., Univ. of N. C., 1938. Exp.: 1931-34, Hd., Sci. Dept., Blackstone Coll.; 1935-37, Grad. Asst., Univ. of N. C.; 1938-39, Hd. Sci. Dept., Averett Coll.; 1939-40, Instr., Newcomb Coll. of Tulane Univ.; 1940-42, Hd. Chem. Dept., Richmond Prof. Inst. of the Coll. of William and Mary; 1942-46, Asst. Chf. Chemist, E. I. du Pont de Nemours and Co.; 1946—; Hd., Chem. Dept., Richmond Prof. Inst. of the Coll. of William and Mary. Hon. Pos.: Sec., Vice-Chmn., Chmn., Va. Sect. of A.C.S.; Sci. Talent Search Com. of Va. Acad. of Sci. Mem.: A.C.S.; Sou. Assn. of Sci. and Indus.; A.A.U.W.; Va. Acad. of Sci.; Pi Mu Epsilon; Sigma Xi; Alpha Kappa Gamma. Contrb. to: Jour. of Chem. Edn. Ph.D. Dissertation: A Semi-micro Scheme of Qualitative Analysis for the Anions. Travel: Canada; U. S. Hobbies: Classical Music; Cooking; Hiking. Listed in: A.M.S.; Chem. Who's Who.

KAPPAUF, William Emil, Jr., Assoc. Prof. of Psychol., Princeton Univ., Princeton, N. J. **PERCEPTION.**

KARCHER, John Clarence, Dir., Several Oil Companies and Banks, 4004 Euclid Ave., Dallas, Tex. **PETROLEUM GEOPHYSICS.**

KARCZMAR, Alexander George, Assoc. Prof. of Pharm., Georgetown Univ. Schl. of Med., Wash., D. C. **PHARMACOLOGY; MECHANISM OF DRUG ACTION.** b. Warsaw, Poland, May 9, 1918. s. Stanislaus and Helena (Billauer) K. Edn.: M.S., Warsaw Univ., 1939; M.A., Columbia Univ., 1941; Ph. D., ibid., 1946. m. Marion Hope Allen of Toronto, Can., Jan. 19, 1946. d. Herbert and Bertha A. Exp.: 1941-43; Rsch. Asst., Amer. Philos. Soc., N. Y. Univ.; 1943-44, Rsch. Assoc., Amherst Coll.; 1945-46, Tchng. Fellow Columbia Univ.; 1946, Lectr., Charleston Coll.;



1946 to now, Instr., Asst. and Assoc. Prof., Georgetown Univ. Schl. of Med. Mem.: Sigma Xi; Amer. Soc. of Zool.; Amer. Assn. of Anat.; A.A.U.P.; Amer.

Physiol. Soc. Contr. to: Jour. Exp. Zool.; Amer. Jour. Physiol.; Jour. Pharm. and Exp. Therap. Ph.D. Dissertation: The Role of Amputation and Nerve Resection in the Regressing Limbs of Urodele Larvae. Travel: Europe; S. Amer.; Mexico; Canada; U. S. Hobbies: Reading; Painting. Listed in: A.M.S. Special Int.: Enzymatic and Non-enzymatic factors in the Mechanism of Cholinergic Drugs.

KARLING, S. S., Purdue Univ., Lafayette, Ind. MYCOLOGY.

KARLSON, Alfred Gustav, Assoc., Exptl. Pathol., Mayo Foundation, 1510 Damon Ct., Rochester, Minn. VETERINARY PATHOLOGY.

KARN, Harry Wendell, Asst. Prof. of Psychol., Carnegie Inst. of Tech., Pittsburgh, Pa. EXPERIMENTAL PSYCHOLOGY.

KARPINSKI, Louis Charles, Prof. of Math., Univ. of Mich., Ann Arbor, Mich. HISTORY OF MATHEMATICS AND SCIENCE.

KARPLUS, R., Harvard Univ., Cambridge 38, Mass. PHYSICS.

KARRAKER, Perry Elmer, Prof. of Soils, Dept. of Agron., Expt. Sta., Univ. of Ky., Lexington, Ky. AGRONOMY. s. Henry W. and Ina Arminta (Davis) K. Edn.: B.S. (Agri.), Univ. of Ill., 1911; M.A. (Maj. in Soils), Univ. of Mo., 1914. m. Adell Mendenhall, Greentown, Ind., 1917. d. Simeon W. and Elizabeth S. Mendenhall. c.: Wm. Henry. Exp.: Asst. in Soil Survey, Expt. Sta., Univ. of Ill.; Fellow in Agron., Univ. of Mo.; Rsch. Asst. in Soils, Mich. State Coll.; Asst. Prof. of Soils, Univ. of Ky.; Assoc., *ibid.*, Prof., *ibid.* Mem.: Sigma Xi; A.A.A.S.; Amer. Soc. Agron.; Soil Sci. Soc. Amer.; Ky. Acad. of Sci. Contr. to: Jour. Agri. Rsch.; Soil Sci.; Jour. Amer. Soc. Agron.; Expt. Sta. Publications. Special Inst.: Soil Fertility, Moisture, Classification and Fertilizers.

KARSH, Frieda, 2130 Maplewood Ave., Richmond, Va. PHARMACY.

KARSNER, Howard Thomas, c/o Navy Dept., Washington 25, D. C. PATHOLOGY.

KASNER, Edward, Adrian Prof. Emeritus, Columbia Univ., 430 W. 116th St., N. Y. 27, N. Y. MATHEMATICS. b. N. Y. C., Apr. 2, 1878. s. Bernard and Fanny (Ritterman) K. Edn.: B.S., C.C.N.Y., 1896; A.M., Columbia Univ., 1897; Ph.D., *ibid.*, 1899. Exp.: Tutor, Math., Columbia Univ., N. Y. C., 1900-05; Instr., *ibid.*, 1905-06; Adj. Prof., *ibid.*, 1906-10; Prof., *ibid.*, 1910-37; Adrain Prof., *ibid.*, 1937-50; Adrain Prof. Emeritus, *ibid.*, 1950—. Hon. Pos.: Staff of Trans. and Bull. of Amer. Math. Soc.; Vice-Pres., Amer. Math. Soc.; Vice-Pres. and Chmn., Sect. of Math.



and Astronomy. A.A.A.S., 1909; Del. to Internat. Math. Cong., Bologna and Zurich. Mem.: Natl. Acad. of Sci.; Amer. Math. Soc.; A.A.A.S.: Circolo Math. di Palermo; Soci. Math. de France; Phi Beta Kappa. Author: Differential-Geometric Aspects of Dynamics, 1913; New Names in Math., 1927; Math. and the Imagination, with James Newman, 1940. Contr. to: Bull. of Amer. Math. Soc.; Trans. of Amer. Math. Soc.; Scripta Mathematica.

KASPER, Eugene Mitchell, Hd., Dept. of Obstetrics and Gynecology, St. Paul Clinic, 372 St. Peter St., St. Paul, Minn. OBSTETRICS, GYNECOLOGY.

KASTON, Benjamin Julian, Assoc. Prof. of Biol., Tchrs. Coll. of Conn., New Britain, Conn. ARANEOLOGY.

KASSNER, James Lyle, Prof. and Hd. Div. of Analytical Chem., Univ. of Ala., Tuscaloosa, Ala.



ANALYTICAL CHEMISTRY. b. Whitehall, Mich., Nov. 6, 1894. s. Charles and Linda (Larson) K. Edn.: Pd.B., Mich. State Normal Coll., 1919; B.A., Univ. of Mich., 1920; M.S., *ibid.*, 1922; Ph.D., *ibid.*, 1926. m. Esther Eisler, June 14, 1926. c.: James Lyle, Jr. and Joan Linda. Exp.: Act. Hd. of Sci. Dept., Adrian Coll., Adrian, Mich., 1927-28; Tch. of Chem. to Prof. and Hd. Div. of Analytical Chem., Univ. of Ala., Tuscaloosa, Ala., 1929—. Mem.: Sigma Xi; Gamma Alpha; Phi Lambda Upsilon; Gamma Sigma Epsilon; Amer. Chem. Soc.; Ala. Acad. of Sci.; A.A.U.P.; Optimist. Author: An Introductory Course in Quantitative Analysis. Contr. to: Jour. of Amer. Chem. Soc.; Jour. Amer. Ceramic Soc.; Analytical Chem.; Jour. of Ala. Acad. of Sci. Special Int.: Development of Analytical Methods. Gen. Int.: Discovered Use. of Vacuum Tube in Electrometric Titrations, 1932. Developed Several Analytical Methods for the Determination of Phosphorus and Aluminum.

KATES, Kenneth Casper, Parasitologist, Zool. Div., Agri. Rsch. Center, U. S. D. A., Beltsville, Md. PARASITOLOGY.

KATZ, Donald H., Chem. Engrng. Dept., Univ. of Mich., Ann Arbor, Mich. CHEMICAL ENGINEERING.

KATZ, Louis Nelson, Dir., Cardiovascular Rsch., Michael Reese Hosp., 5201 Greenwood Ave., Chicago, Ill. MEDICAL RESEARCH.

KATZIN, Martin, Naval Rsch. Lab., Washington 25, D. C. TROPOSPHERIC RADIO WAVE PROPAGATION.

KATZNELSON, Harry Prin. Bacteriologist, Div. of Bacteriology and Dairy Rsch., Sci. Service, Dept. of Agri., Ottawa, Can.



AGRICULTURAL MICROBIOLOGY. b. Starodroga, Russia, Nov. 7, 1912. s. Keva and Necha (Levine) K. Edn.: B.S.A., Univ. British Columbia, 1934; M.S.A., State Coll. of Washington, 1937; Ph.D., Rutgers Univ., 1939. m. Lillian Rose Edelson, July 6, 1941. c.: Carla Jan, Peter Richard. Exp.: Rsch. Asst., Galland Fellow, State Coll. of Washington, Pullman, Washington, 1934-37; Rsch. Scholar, Rutgers Univ., N. Brunswick, N. J., 1937-39; Res. Doctor, Cornell Univ., Ithaca, N. Y., 1939-40; Asst. Bacteriologist, Agri. Ottawa, Can., 1940—, Assoc. Bact., *ibid.*, 1940—; Bacteriologist, *ibid.*, 1946—; Senior Bacteriologist, *ibid.*, 1949-53; Principal Bacteriologist, *ibid.*, 1953—. Mem.: Agriculture Institute of Can.; Canadian Soc. Microbiologists; Canadian Phytopath. Soc.; Soc. Amer. Bacteriologists; Phi Sigma; Phi Kappa Phi; Alpha Zeta; Sigma Xi. Contr. to: Jour. Bacteriology; Can. Jour. Rsch.; Soil Sci.; Jour. Biol. Chem.; Bot. Rev.; Ann. Rev. Microbiol. Gen. Int.: Leave Absence for Post Doctorate Rsch., Hopkins Marine Sta., Pacific Grove, Calif., 1951-52. Special Int.: Soil Microbiol., Rhizosphere; Root Rots; Bacteriophage; Bact. Nutrition and Physiology; Antibiotics; Plant Pathogenic Bacteria, Halophilic Bacteria, Acetobacter; Diseases of Honeybees.

KATZMAN, Philip Aaron, Prof. of Biochem., 1402 S. Grand Blvd., St. Louis, Mo. **CHEMISTRY**. b. May 18, 1906, Omaha, Neb. s. Aaron and Anna (Gerelick) K. Edn.: A.B., Kalamazoo Coll., 1927; Ph. D., St. Louis Univ., 1932. m. Lillian Milder of St. Louis, Mo., Aug. 6, 1933. d. Mr. and Mrs. A. S. Milder. c.: Marshall Bennett; Aron Samuel. Exp.: Grad. Fellow in Biochem., St. Louis Univ., 1927-32; Instr. in Biochem., St. Louis Univ., 1932-36; Senior Instr. in Biochem., St. Louis Univ., 1936-41; Asst. Prof. of Biochem., St. Louis Univ., 1941-45; Assoc. Prof. of Biochem., St. Louis Univ., 1945-52; Prof. of Biochem., *ibid.*, 1952. Visiting Lectr., Univ. of Kans. Med. Schl., 1950. Mem.: Sigma Xi; Amer. Soc. of Biol. Chem.; Amer. Chem. Soc.; Phi Delta Epsilon; Amer. Assn. Univ. Profs.; Bd. of Edn., Univ. City, Mo. (1949-); Bd. of the Mo. Social Hygiene Assn., (1951-); Soc. of Expt. Biol. and Med.; Amer. Assn. for the Adv. of Sci. Contrb. to: Jour. of Biological Chem. Endocrinology; Proc. Soc. Exp. Biol. and Med. Ph.D. Dissertation; Preparation, Chem. and Physiological Properties of a Pituitary-Like Hormone of Human Pregnancy Urine. Hobbies: Music; Stamp Collecting; Wood Work; Golf. Travel; U. S.; Mexico; Canada. Listed in: A.M.S.

KAUFERT, Frank Henry, Prof. and Asst. Chf., Univ. of Minn., Univ. Farm, St. Paul, Minn. **FORESTRY, BOTANY**.

KAUFFMAN, George Emmett Clarence, Instr., Dept. of Physics, Univ. of Del., Newark, Del. **GENERAL PHYSICS**.

KAUFFMAN, Harry Hartman, Prof. of Poultry Husbandry Extension, Pa. State Coll., State Coll., Pa. **POULTRY HUSBANDRY**. b. Dauberville, Pa., Sept. 12, 1899. s. James Greim and Mary N. (Hartman) K. Edn.: B.S., Purdue Univ., 1922; M.S., *ibid.*, 1930. m. Christine Payne, Sept. 15, 1930. c.: Christine. Exp.: Asst. in Poultry Husbandry, Purdue Univ., Lafayette, Ind., 1922-24; Operating Home Farm, 1924-26; Poultry Extension Specialist, Pa. State Coll., State Coll., Pa., 1926-; In Chg. Poultry Extension, *ibid.*, 1945-; Poultry Consultant to the German



Govt., 1951 (on leave from Coll.). Hon. Pos.: Chmn., Standards Comm. and Show Comm. of Natl. Turkey Federation; Poultry Judges Section, Amer. Poultry Assn. Mem.: Poultry Sci.; World's Poultry Sci.; World's Poultry Congress; Acacia; Alpha Zeta; Sigma Xi; Mason. Author: A Bird's-Eye Survey of Germany's Poultry Industry. War Record: Pvt., Infantry, 1918. Special Int.: Extension Edn. in Poultry Production and Marketing; Turkey Production and Game Bird Propagation.

KAUFMAN, Nathan, Pathologist in Chg., Cleveland City Hosp., Asst. Prof. of Pathol., Western Reserve Univ., 3395 Scranton Rd., Cleveland 9, Ohio. **PATHOLOGY**. b. Lachine, P. Q., Can., Aug. 3, 1915. s. Solomon and Anna (Sabesin) K. Edn.: B.Sc., McGill Univ., 1937; M.D., *ibid.*, 1941. m. Rita Friendly Sept. 10, 1946. c.: Naomi Friendly; Michael David. Exp.: Asst. Pathologist, Cleveland City Hosp., 1948-52; Instr. in Pathol., Western Reserve Med. Schl., 1948-51; Sr. Instr. in Pathol., *ibid.*, 1951-52; Asst. Prof. of Pathol., *ibid.*, 1952-; Pathologist in Chg., Cleveland



City Hosp., 1952-. Mem.: Amer. Soc. Clinical

Pathologists; Amer. Assn. Pathologists and Bacteriologists; Canadian Med. Assn.; Internat. Assn. Med. Museums; A.A.A.S.; Sigma Xi; Soc. for Exptl. Biol. and Med.; The Amer. Soc. for Experimental Pathology; Amer. Assn. for Cancer Rsch. Contrb. to: Amer. Jour. Pathol.; Archives of Pathol.; Federation Proc.; Lab. Investigation; Jour. Nutrition; Amer. Jour. Clinical Pathol.; Jour. Optical Soc. Amer.; Annals Internal Med. War Record: Capt., Royal Canadian Army Med. Corps, 1942-46. Gen. Int.: Asst. Editor, Lab. Investigation. Special Int.: Exptl. Pathol.

KAUFFMAN, John R., Tuttle and Kift, Inc., Subsidiary, Ferro Corp., 1823 N. Monitor Ave., Chicago 39, Ill. **CERAMICS**.

KAUFMANN, Berwind Peterson, Carnegie Institution of Wash., Cold Spring Harbor, L. I., N. Y.

KAUFMANN, Herbert Moses, Chmn. Bd., Mutual Chemical Co. of Amer., 270 Madison Ave., N. Y., N. Y. **CHEMISTRY**.

KAVANAU, J. Lee, 2311 Malcolm Ave., West Los Angeles, Calif. **MATHEMATICS**.

KAY, G. Marshall, Dept. of Geol., Columbia Univ., N. Y., N. Y. **GEOLOGY**.

KAYE, Sidney, Toxicol., Office of Chf. Med. Exam., Commonwealth of Va. and Assoc. Prof., Legal Med., Med. Coll. of Va., Richmond, Va. **TOXICOLOGY AND PHARMACOLOGY**. b. Brooklyn, N. Y., Mar. 10, 1912. s. Isaac and Ida (Lefkowitz) K. Edn.: B.S., Washington Sq. Coll., 1935; M.Sc., N. Y. Univ. Grad. Schl., 1939. m. Carmen Jimenez, June, 1951. Exp.: Lab. Asst. in Chem., N. Y. Univ., New York City, 1931-36; Research Asst. in Toxicol., Dr. A. O. Getler, N. Y. C., 1939-41; Washington Univ. Schl. of Med., 1946-47; Attending Toxicol., U. S. Vet. Admin. Hosp.,



Richmond, Va., 1947-52; Toxicol., Office of Chf. Med. Examiner and Assoc. Prof. of Legal Med., Med. Coll. of Va., Richmond, Va., 1947-. Mem.: Sigma Xi; Phi Lambda Delta; Amer. Soc. of Clin. Pathol.; A.A.A.S.; Amer. Inst. of Chemists; Amer. Chem. Soc.; Amer. Acad. of Forensic Sci.; Va. Soc. of Pathol. Contrb. to: Jour. of Lab. and Clin. Med.; Army Vet. Bull.; Amer. Jour. of Clin. Pathol.; Jour. of Military Surgeon; Jour. Amer. Med. Assn.; Bull. of Duquesne Univ.; Lab. Digest., etc. Special Int.: Toxicol., Pharmacol. and Detection and Action of Poisons in Humans.

KAYE, Wilbur Irving, Sr. Rsch. Chemist, Tenn. Eastman Co., 1220 Morningside Circle, Kingsport, Tenn. **CHEMISTRY—INFRARED SPECTROSCOPY, ELECTRON MICROSCOPY, X-RAY DIFFRACTION, DIELECTRICS**. b. Pelham Manor, N. Y., Jan. 28, 1922. s. Roy George and Edith (Dusenberry) K. Edn.: B.S., J. B. Stetson Univ., 1942; Ph.D., Univ. of Ill., 1945. m. Virginia Aggett, Feb. 7, 1944. c.: Roy Arthur; Elsa Kaye. Exp.: Grad. Asst., Univ. of Ill., 1942-44; Chemist, O.S.R.D. Penicillin Program, Univ. of Ill., 1944-45; Chemist Tenn. Eastman Co., Kingsport, Tenn., 1945-. Mem.: Amer. Chem. Soc.; Amer. Phys. Soc.; Electron Microscope Soc. of Amer.; Tenn. Acad. of Sci.; Sigma Xi. Contrb. to: Analytical Chem.; Jour. Applied Phys.; Jour. Optical Soc. of Amer.; Photographic Sci. and Technique. Special Int.: Phys. Structure of Fibers and Plastics; Instrumental Analysis of Organic Compounds.

KAYS, Donald Jackson, Prof. and Chmn., Dept. of Animal Husbandry, Ohio State Univ., Columbus, Ohio. **ANIMAL HUSBANDRY**.

KAZAL, Louis A., Dir. of Biol. Development, Rsch. Lab., Sharp and Dohme Div., Merck and Co., Inc., W. Point, Pa. **BIOCHEMISTRY**. b. Newark, N. J.,

July 2, 1912. s. Leon and Anna (Wojnarowicz) K. Edn.: B.Sc., Seton Hall Coll., 1935; Ph.D., Rutgers Univ., 1940. m. Marie T. Barry, Jan. 17, 1932. c.: Marianne; Susan; Alicia. Exp.: Asst. in Physiol. and Biochem., Rutgers Univ., 1937-40; Rsch. Biochemist, Sharp and Dohme, Inc., Glenolden, Pa., 1940-50; Dir. of Biol. Development, *ibid.*, 1950—. Mem.: Amer. Chem. Soc.; A.A.A.S.; Physiol. Soc. of Philadelphia; N. Y. Acad. Sci.; Phi Lambda Upsilon; Sigma Xi; Soc. for Exptl. Biol. and Med.; Amer. Soc. of Biol. Chemists. Contrb. to: Jour. Bacteriol.; Sci.; Proc. Exptl. Biol. and Med.; Arch. Biochem.; Amer. Jour. Med. Sci.; Amer. Chem. Soc.; etc. Special Int.: Blood Coagulation; Blood Substitutes; Blood Group Specific Substances; Proteins.

KE, Ming Peng, 703 W. California St., Urbana, Ill. SOIL CHEMISTRY.

KEAN, Thomas J., 1630 N. Sydenham St., Philadelphia, Pa. MEDICINE.

KEARNEY, Thomas H., retired, Calif. Acad. Sci., San Francisco, Calif. BOTANY.

KEATING, Joseph, Asst. Supt., Chg. Mfg., McKesson and Robbins, 355 Fairfield Woods Rd., Bridgeport, Conn. PHARMACEUTICAL CHEMISTRY.

KEEBLE, William Houston, Prof. of Physics, Randolph-Macon Coll., Ashland, Va. PHYSICS.

KEEFE, Anselm Maynard, Prof. of Biol. and Dean, St. Norbert Coll., West De Pere, Wis. BOTANY, ZOOLOGY, ECOLOGY.

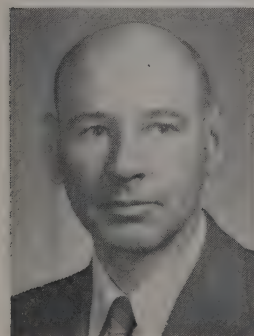
KEEGAN, Joseph Gerard, S. J., Chmn., Dept. of Psychology, Graduate School, Fordham Univ., Bronx 58, New York. EXPERIMENTAL PSYCHOLOGY. b. Brooklyn, N. Y., May 19, 1906. s. Patrick J. and Mary (Kelly) K. Edn.: B.A., Woodstock Coll., 1929; M.A., *ibid.*, 1930; S.T.L., *ibid.*, 1937; M.A., Yale Univ., 1943; Ph.D., *ibid.*, 1949. Exp.: Lectr. in Biol., Canisius Coll., 1930-33; Instr. in Psychol., Fordham Univ., 1942-46; Asst. Prof. of Psychol., *ibid.*, 1946—; Chmn., Dept. of Psychol., *ibid.*, 1949—; Asst. Dean, Grad. Schl. of Arts and Sci., *ibid.*, 1952-53. Mem.: Amer. Psychol. Assn.; N. Y. State Psychol. Assn.; Amer. Catholic Psychol. Assn.; British Psychol. Soc.; Sigma Xi. Special Int.: Psychophys. Methods; Scaling Techniques; Social, Religious and Ethical Values.

KEELER, Clyde Edgar, Assoc. Prof. of Biol., Ga. State Coll. for Women, Milledgeville, Ga. MAMMALIAN AND MEDICAL GENETICS.

KEEN, Frederick Paul, Entomologist in Chg. Forest Insect Lab., Bureau Entomol. and Plant Quarantine, U. S. D. A., Berkeley, Calif. ENTOMOLOGY.

KEENAN, George L., retired, 165 Westwood Dr., Box 113, Strongsville, Ohio. MICROCHEMISTRY, OPTICAL CRYSTALLOGRAPHY.

KEENAN, Joseph H., Prof. of Mech. Engrng. Mass. Inst. of Tech., Cambridge, Mass. THERMODY-



NAMICS. b. Wilkes-Barre, Pa., Aug. 24, 1900. s. Joseph H. and Wilhelmina (Maurer) K. Edn.: S.B., Mass. Inst. Tech., 1922. m. Isabel Morrison, Jan. 30, 1924. c.: Mrs. John W. Carr. III; M. Arnold. Exp.: Steam Turbine Engr., General Electric Co., 1922-28; Asst. Prof. Mech. Engrng., Stevens Inst. of Tech., 1928-34; Assoc. Prof., M. I. T., Cambridge, Mass., 1934-39; Prof., *ibid.*, 1939—; Rsch. Engr., Jabez Burns & Sons, Inc., 1929—; Engrng. Consultant, 1928—. Hon. Pos.: Hon. Mem. and Chmn., Comm. on Engrng. Edn., A.A.P.T. Mem.: Fellow, Amer. Soc. Mech. Engrs.; Amer. Acad. Arts and Sci.; Inst. Aero. Sci.; Amer. Soc. Engrng. Edn.; Tau Beta Pi; Sigma Xi. Author:

Thermodynamic Properties of Steam, with F. G. Keyes, 1936; Thermodynamics, 1941; Gas Tables, with J. Kaye, 1948. Contrb. to: Jour. Engrng. Edn.; Jour. Aeronautical Sci.; Trans. A.S.M.E. Special Int.: Power Plants; Heat Transfer; Mechanics of Compressible Fluids; Properties of Fluids.

KEENAN, Philip C., Assoc. Prof., Perkins Observatory, Delaware, Ohio. ASTROPHYSICS.

KEESING, Felix Maxwell, Prof. of Anthropol., Stanford Univ., Stanford Univ., Calif. ANTHROPOLOGY.

KEETON, Robert Wood, Prof. and Hd., Dept. of Med., Univ. of Ill., 1853 W. Polk St., Chicago, Ill. MEDICINE.

KEEVIL, Norman Bell, Pres., Mining Geophysics Corp., Toronto, Ont., Can. GEOPHYSICS.

KEHOE, Robert Arthur, Rsch. Prof. Physiol. and Dir., Kettering Lab., Coll. of Med., Univ. of Cincinnati, Eden and Bethesda Aves., Cincinnati, Ohio. INDUSTRIAL PHYSIOLOGY.

KEIM, Franklin David, Chmn., Dept. of Agron., Univ. of Nebr., Lincoln, Nebr. AGRONOMY.

KEITH, Marcia Aona, 393 Washington St., Braintree, Mass. PHYSICS.

KEITT, George Wannamaker, Prof. of Plant Pathol., Univ. of Wis., Madison, Wis. PLANT PATHOLOGY.

KELEMEN, George, Instr. in Otology, Harvard Med. Schl., 414 Beacon St., Boston 15, Mass. OTOLARYNGOLOGY. b. Budapest, Hungary, May 1, 1890. s. Adolf and Hermina (Drucker) K. Edn.: M.D., Fac. Med., Univ. of Budapest, 1913; M.Surg., Fac. Med., *ibid.*, 1920. Exp.: Private Docent, Univ. of Pecs, Hungary, 1926; Assoc. Prof., *ibid.*, 1937; Assoc. Prof., Tufts Coll. Med. Schl., Boston, 1940; Rsch. Assoc., *ibid.*, 1946; Instr., Harvard Med. Schl., 1946—. Mem.: Collegium Otolaryngologicum; Mass. Med. Soc.; A.M.A.; Boston Med. Library; Boston Med. History Club; New England Otolaryng. Soc.; Amer. Coll. of Surgeons; Amer. Acad. Ophth. and Otolaryng.; Amer. Laryng., Rhinol. and Otol. Soc. War Record. Med. Capt., Austro-Hung. Army; Nine Decorations. Special Int.: Otolaryngology.

KELKER, George Hills, Assoc. Prof. and Chf. Dept. of Wildlife Mgt., Utah State Agril. Coll., Logan, Utah. WILDLIFE MANAGEMENT.

KELLER, Allen Dudley, Prof. and Chmn., Dept. of Physiol. and Pharmacol., Baylor Univ. Coll. of Med., Houston, Tex. PHYSIOLOGY.

KELLER, Wesley, Geneticist, Division Forage Crops and Diseases, U. S. D. A., Utah State Agril. Coll., Logan, Utah. FORAGE PLANT BREEDING.

KELLERT, Ellis, Dir. of Labs., Ellis Hosp., 1055 Brierwood Blvd., Schenectady, N. Y. PATHOLOGY.

KELLEY, Arthur P., Landenberg, Pa. BOTANY.

KELLEY, Douglas McGlashan, Prof. of Criminology, Univ. of Calif., Berkeley, Calif. CRIMINOLOGY; PSYCHIATRY. b. Truckee, Calif., Aug. 11, 1912. s. George and June (McGlashan) K. Edn.: A.B., Univ. of Calif., 1933; M.D., Univ. of Calif. Medical Schl., 1937; Medical Sc.D., Columbia Univ., 1940. m. Alice Vivienne Hill of Chattanooga, Tenn., Oct. 19, 1940. d. Mr. and Mrs. Warren Hooper H. c.: Douglas; Alicia. Exp.: 1939-41, Fellow Rockefeller Foundation Psy. and Neur.; 1940-42, Instr., Univ. of Calif. Med. Schl.; 1944-46, Consultant Clin. Psychol., Asst. Consultant Psychiat., European Theater Op.; 1945-46, Psychiatrist, Nuremberg Jail; 1946-49, Assoc. Prof., Psychiatry, Bowman Gray Schl. of Med., Winston-Salem, N. C.; 1949—, Prof. Criminol., Schl. Criminol., Univ. of Calif., Berkeley; 1949—, Police Psychiatrist, City of Berkeley, Calif. Hon. Pos.: Pres., Amer. Soc. Adv. Criminol.; Pres., Rorschach Inst.; Mem. Com. Legal Aspects of Psychiat. Mem.: Alpha Kappa Kappa; A.A.A.S.; A.M.A.; Inst. Gen. Semantics. Author: Rorschach Technique; 22 Cells in Nuremberg; The Case of Rudolph Hess. Contrb. to: Amer. Jour.

Psychiat.; Jour. Nervous and Mental Dis.; Jour. Projective Tech. War Record: Ch. Psychiat., Sv., Univ. of Calif. Unit, 1942-43. Travel: British Isles; France; Belgium; Germany. Hobbies: Conjuring; Cooking; Astronomy. Listed in: A.M.S. Special Int.: Instrumental and Chemical detection of deception and Criminal Interrogation.

KELLEY, Joseph M., Loyola H. S., Blakefield, Towson, Md. PHYSICS.

KELLEY, Nicholas, Vice-Pres., Chrysler Corp., Detroit, Mich. LAW.

KELLEY, Truman Lee, 1611 Paterna Rd., Santa Barbara, Calif. PSYCHOLOGY.

KELLEY, Walter Dewey, Chf. Emulsion Tech., Anso Corp., Charles St., Binghamton, N. Y. GELATIN ELASTOMERS, SIBER HALIDE SENSITIVITY CENTERS, SPECIAL PACKAGING TECHNIQUES. b. Catskill on Hudson, N. Y., Aug. 10, 1912. s. William D. and Mary K. Edn.: B.A., Brown Univ., 1940; M.A., *ibid.*, 1942. m. Sally G. Kelley, Sept. 22, 1943. c.: Robert K.; Ralph G.; Henry K.; Andy P. Exp.: Asst. Chemist, Chemist, Supvng. Tech., Anso Corp., Binghamton, N. Y. Mem.: Amer. Chem. Soc.; Photographic Soc. of Amer.; Sigma Chi Epsilon; Phi Beta Kappa. Gen. Int.: 5 Patents on Photographic Emulsions. Special Int.: Photographic Emulsion Making Positive and Negative Holes in Silver Halide Crystals.

KELLEY, Walter Pearson, Prof. of Soil chem. Emeritus, 120 Hilgard Hall, Univ. of Calif., Berkeley, Calif. SOIL SCIENCE AND CLAY MINERALOGY. b. Franklin, Ky., Feb. 19, 1878. s. John William and Mary Eliza (Mayes) K. Edn.: B.S., Univ. of Ky., 1904; M.S., Purdue Univ., 1907; Ph.D., Univ. of Calif., 1912. Hon. Deg.: LL.D., Univ. of Calif., 1950. m. Sue Kathrine Eubank, Aug. 6, 1913. Exp.: Asst. Chemist, Purdue Agri. Expt. Sta., 1905-08; Chemist, Hawaii Agri. Expt. Station, 1908-14; Prof. of Agri. Chem., Univ. of Calif., 1914-38; Prof. of Soil Chem., *ibid.*, 1938-48; Consultant, U. S. Bureau of Reclamation and Geol. Dept., Gulf Rsch. and Development Co., 1948—. Hon. Pos.: Pres., Amer. Soc. Agron., 1930; Chmn., Alkali Sub Com., Internatl. Soc. Soil Sci., 1935-40; Hon. Pres., *ibid.*, 1950. Mem.: Amer. Chem. Soc.; A.A.A.S.; Amer. Soc. Agron.; Amer. Soc. Soil Sci.; Amer. Mineralogical Soc.; Natl. Acad. of Sci.; Alpha Tau Omega; Sigma Xi; Phi Beta Kappa; Phi Lambda Upsilon. Author: Base Exchange in Soils, 1948; Alkali Soils, Their Formation, Properties and Reclamation, 1951. Contrb. to: Jour. Amer. Chem. Soc.; Jour. Amer. Soc. Agron.; Soil Sci.; Proc. Soil Sci. Soc. Amer.; Proc. Internatl. Soc. Soil Sci.; Amer. Mineralogist. Gen. Int.: Investigations on Irrigation, fertilization, plant physiology, alkali soil reclamation, and soil chemistry. Special Int.: Semi-arid soils.

KELLOGG, A. Remington, Dir., U. S. Natl. Museum, Smithsonian Institution, Washington 25, D. C. MARINE MAMMALS, RECENT AND FOSSIL; MAMMALOGY. b. Davenport, Iowa, Oct. 5, 1892. s. Rolla Remington and Clara Louise (Martin) K. Edn.: A.B., Univ. of Kans., 1915; M.A., *ibid.*, 1916; Ph.D., Univ. of Calif., 1928. Hon. Deg.: Distinguished Service Citation, Univ. of Kans., 1947. m. Marguerite E. Henrich, Dec. 21, 1920. Exp.: Asst. Biologist, Bureau of Biol. Survey, Dept. of Agri., 1920-24; Assoc. Biologist, *ibid.*, 1924-28; Asst. Curator, Div. of Mammals, U. S. Natl. Museum, Smithsonian Institution, Wash., D. C., 1928-40; Curator, *ibid.*, 1941-48; Dir., *ibid.*, 1948—. Hon. Pos.: International Conferences on Regulation Whaling: Amer. Mem., Com. of Experts on Whaling, Econ. Com., League of Nations, Berlin, 1930; Appointed U. S. Delegate by Dept. of State to Internatl. Conf. on Regulation of Whaling: London, 1937; Oslo, Norway, 1938; London, England, 1938; London, England, 1944; London, England, 1945; Chmn. of Internatl. Conf. and Chmn. Amer. Delegation, Wash., D. C., 1946; Vice-Chmn., Internatl. Whaling Commn., 1949-52; Chmn., *ibid.*, 1952—. Mem.: Natl. Acad. Sci.; Amer. Soc. Naturalists; Amer. Assn. Anatomists; Geol. Soc. Amer.; Paleontol. Soc.; Soc. Vertebrate Paleontologists; Amer. Soc. Ichthyologists and Herpetologists; Biol. Soc. Wash.; Zool. Soc. London; Sigma Xi; Cosmos Club. Contrb. to: Jour. Mammalogy; Proc. Biol. Soc. Wash.; Bull.

Geol. Soc. Amer.; Quarterly Rev. Biol.; Copeia; Science; etc. War Record: Sgt., Central Med. Lab., Dijon, France, 1918-19. Special Int.: Recent and Fossil Marine Mammals; Mammals in General.

KELLOGG, Chester Elijah, Prof. of Psychol., McGill Univ., Montreal, Que., Can. PSYCHOLOGY.

KELLS, Milton Carlisle, Chemist, U. S. Atomic Energy Commn., 21-50 33rd Rd., Long Island City 6, N. Y. PHYSICAL CHEMISTRY. b. Seatle, Wash., May 7, 1920.

s. Lucas Carlisle and Edith R. (Stefani) K. Edn.: B.S., Univ. of Wash., 1942; Ph.D., Mass. Inst. of Tech., 1948. m. Kathleen Mary Sheehan, Aug. 27, 1949. c.: Lawrence Carlisle. Exp.: Tchng. Fellow, Univ. of Wash., 1942-44; Manhattan District Project, The Kellex Corp., Columbia Univ., Carbide and Carbon Chem. Corp., 1944-46; Advanced Tchng. Fellow, Mass. Inst. of Tech., 1946-48; The Kellex Corp., 1948-51; Chemist, U. S. Atomic Energy Commn., 1951—. Mem.: Amer. Chem. Soc.; Phi Beta Kappa; Sigma Xi; Phi Lambda Upsilon; Zeta Mu Tau. Contrb. to: Jour. Chem. Phys. Special Int.: U. S. Atomic Energy Commn. Chem. and Metallurgical Processes; Technical Admin. of U. S. A.E.C. Rsch. Contracts in the Above Fields.

KELLUM, Lewis Burnett, Dir., Museum Paleontology and Assoc. Prof. of Geol., Univ. of Mich., Ann Arbor, Mich. GEOLOGY.

KELLY, George A., SPEECH AND HEARING.

KELLY, George Lombard, Dean and Prof. of Anatomy, Univ. of Ga. Schl. of Med., Augusta, Ga. ANATOMY.

KELLY, James Peter, Prof. of Botany, Pa. State Coll., State College, Pa. BOTANY, GENETICS.

KELLY, Margaret W., Prof. of Chem., Conn. Coll., New London, Conn. PHYSICAL AND ANALYTICAL CHEMISTRY. b. 1886, Oakmont, Pa. d. Robert Hamerton and Margaret W. Kelly. Edn.: B.A., Mt. Holyoke Coll., 1909; M.A., Columbia Univ., 1920; Ph.D., *ibid.*, 1923. Exp.: Tehr., H. S., Pittsburgh, Pa., 1909-18; Rsch. Asst., Columbia Univ., 1919-24, 1925-28; Asst. Prof., Mt. Holyoke Coll., 1924-25, 1928-29; Asst. Prof., Vassar Coll., 1929-30; Assoc. Prof., *ibid.*, 1930-32; Assoc. Prof., Conn. Coll., 1932-46; Prof., *ibid.*, 1946—. Mem.: Amer. Chem. Soc.; A.A.A.S.; Phi Beta Kappa; Sigma Xi. Contrb. to: Jour. A.C.S.; Indus. and Engrng. Chem. Jour.; Jour. Chem. Edn.; Jour. Amer. Leather Chem. Assn.; Analytical Chem. Ph.D. Dissertation: The Fixation of Vegetable Tannins by Hide Substance. Travel: Europe; Canada; U. S. Listed in: A.M.S. Special Int.: Proteins; Tanning Materials; Colloidal Chem.

KELLY, Mervin J., Bell Telephone Labs., 463 West St., N. Y. 14, N. Y.

KELLY, Sister Mary Aquinice, O.P., Instr. in Sociology, Rosary Coll., River Forest, Ill. SOCIOLOGY. b. Chicago, Ill., Jan. 5, 1910. d. John Joseph and Catherine (Cassery) K. Edn.: B.A., Rosary Coll., 1942; M.A., Catholic Univ., 1951. Exp.: Tehr., Elem. and Jr. H. S. Level, N. Y. City, Kansas City, Mo., Milwaukee, Wis., Green Bay, Wis., 1929-50; Prin., Elem. Level, Freeport, Ill., 1939-45; Suprv. of Community Schls., Elem. Level, Washington, D. C., 1949-50; Instr. in Sociol., Rosary Coll., River Forest, Ill., 1950—. Mem.: Amer. Sociol. Soc.; Amer. Catholic Sociol. Soc.; Amer. Anthropol. Soc.; Natl. Council on Family Relations; Amer. Acad. Political and Sociol. Sci.; Pi Gamma Mu. Contrb. to: Amer. Catholic Sociol. Jour.; Social Justice. Gen. Int.: Experiments with Civic Clubs for Commn. on Amer. Edn. in Conjunction with Headquarters at Cath.

Univ. of Amer. Special Int.: Human Ecology; Social Philosophy; Group Dynamics; Educational Sociol.; The Family.

KELLY, T. Leonard, Prof. and Hd., Dept. of Chem., State Tchrs. Coll., Bridgewater, Mass. **CHEMISTRY**.

KELSEY, Elizabeth, 1300 N. Dearborn St., Chicago, Ill. **PHYSICS, MATHEMATICS**.

KELSEY, V. V., Dominion Minerals, Inc., Piney River, Va. **CERAMICS**.

KEMBLE, Edwin Crawford, Harvard Univ., Cambridge 88, Mass.

KEMMERER, Mabel C., retired, 1320 Fourth Ave., Jackson, Miss. **PSYCHOLOGY**.

KEMP, Margaret, Assoc. Prof. of Botany, Smith Coll., Northampton, Mass. **PLANT MORPHOLOGY AND ANATOMY**.

KEMP, Paul Daniel, Assoc. Forest Economist, U. S. Forest Service, Missoula, Mont. **AGRICULTURE**.

KEMPF, Edward John, Private Practice, Psychopathol., Wading River, N. Y. **PSYCHOBIOLOGY**.

KEMPNER, Aubrey J., Prof. and Hd., Dept. of Math., Univ. of Colo., Boulder, Colo. **ALGEBRA**.

KENDALL, Burton Warren, Rsch. Consultant, Bell Telephone Labs., 463 West St., N. Y., N. Y. **TELEPHONE ENGINEERING**.

KENDALL, Edward Calvin, 3 Queenston Pl., Princeton, N. J.

KENDALL, Forrest E., Assoc. Prof. of Biochem., Columbia Univ., N. Y., N. Y. **BIOCHEMISTRY**.

KENDEIGH, Samuel Charles, Assoc. Prof. of Zool., Univ. of Ill., Champaign, Ill. **ECOLOGY, ORNITHOLOGY**.

KENDRICK, James Blair, Sr., Prof. of Plant Pathol. and Plant Pathologist, Calif. Agri. Expt. Sta., Davis, Calif. **PLANT PATHOLOGY**.

KENDRICK, James Frank, Hd., Div. of Dairy Herd Improvement Investigations, Bureau of Dairy Industry, U. S. Dept. of Agri., 2506 S. Lynn St., Arlington, Va. **ECONOMICS; DAIRY HUSBANDRY**. b. Williamsport, Ohio, Apr. 20, 1904. s. James Berry and Olive B. (Ridgway) K. Edn.: B.Sc., Ohio State Univ., 1926; M.Sc., *ibid.*, 1927; Ph.D., Amer. Univ., 1935. m. Mary A. Griffith, Sept. 3, 1927. c.: James G.; Janice M. Exp.: County Agri. Ext. Agent, 1927-31; Asst. to Asst. Secy. of Agri., U. S. Dept. Agri., 1931-33; Asst. Hd., Div. of Dairy Herd Improvement Investigations, U. S. D. A., 1933-38; Hd., *ibid.*, 1938—.



Mem.: Amer. Dairy Sci. Assn.; Delta Theta Sigma; Lambda Gamma Delta; Gamma Sigma Delta; Mason; Shriner; Cosmos Club. Gen. Int.: Developed the Nation-Wide Program of Improving the Nation's Dairy Herd Through the Use of Proved Sires. Special Int.: Econ.; Statistics.

KENDRICK, Luella Pearl, Assoc. Dir. of Labs., Mich. Dept. of Health, Western Mich. Div. Lab., 720 Fuller Ave., N. E., Grand Rapids, Mich. **BACTERIOLOGY, LABORATORY ADMINISTRATION**.

KENERSON, William Herbert, Prof. Emer. Mech. Engrng., Brown Univ., 100 Morris Ave., Providence, R. I. **ENGINEERING**.

KENK, Roman, 810 Ramsey Street, Alexandria, Va. **ZOOLOGY**. b. Ljubljana, Yugoslavia, Nov. 25,

1898. s. Fran and Tekla (Velepice) K. Edn.: Ph.D., Univ. of Graz, Austria, 1921. c.: Ada A. Blanco, July 31, 1933. c.: Vida C. Exp.: Asst., Docent, Extraordinary Prof. of Zool., Univ. of Ljubljana, Yugoslavia, 1921-38; Assoc. Prof., Prof. of Biol., Univ. of Puerto Rico, 1938-48; Rockefeller Fellow, Univ. of Va., 1931-32; Rsch. Assoc., Museum Zool., Univ. of Mich., 1945—; Bibliographer and Sci. Specialist, Library of Congress, Washington, D. C., 1949—. Mem.: A.A.A.S.; Amer. Soc. Zoologists; Amer. Microscopical Soc.; Soc. Limnol. and Oceanography; Soc. Systematic Zool.; Mich. Acad. Sci.; Washington Acad. of Sci.; Sigma Xi. Contrb. to: Jour. Wash. Acad. Sci.; Zoologischer Anzeiger; Zoologische Jahrbücher; Bull. Acad. Sci., Zagreb; etc. Special Int.: Freshwater Triclad (Turbellaria); Limnology; Speleology.

KENNARD, Earle Hesse, Physicist and Chf. Supvr., Hydromechanics Div., David Taylor Model Basin, Washington, D. C. **PHYSICS**.

KENNARD, Margaret Alice, Assoc. Prof. of Neuroanatomy and Neuropsychiatry, N. Y. Univ. Coll. of Med., 477 First Ave., N. Y., N. Y. **NEUROPHYSIOLOGY**.

KENNEDY, Clarence Hamilton, Prof. of Zool. and Entomol., Ohio State Univ., Columbus, Ohio. **ENTOMOLOGY**.

KENNEDY, Foster, 410 E. 57th St., N. Y., N. Y. **MEDICINE**.

KENNEDY, Hughes, Jr., 2940 Clairmont Ave., Birmingham 5, Ala. **PEDIATRICS**. b. Birmingham, Ala., Dec. 28, 1895. s. Hughes and Katherine Estelle (Hausman) K. Edn.: A.B., Univ. of Ala., 1916; M.D., Harvard, 1921. m. Leona Esther Pipes, Jan. 2, 1922. c.: Hughes, III; William Henry; Jeanette. Exp.: Assoc. Prof. of Pediatrics, Med. Coll. of Ala., Birmingham, Ala., 1945—; Acting Hd. of Dept., *ibid.*, 1951; Attending Pediatrician South Highlands Infirmary, Salvation Army Home and Hosp., Jefferson-Hillman Hosp., Children's Hosp., Chf.-of-Staff, *ibid.*, Birmingham, Ala., 1951-52. Mem.: Amer. Acad. of Pediatrics; Phi Gamma Delta; Nu Sigma Nu; Redstone Club. Contrb. to: Southern Med. Jour.; Jour. of Med. Assn., State of Ala. Special Int.: Investigation in Rh Factor.

KENNEDY, J. W., Head, Chem. Dept., Washington Univ., St. Louis, Mo. **NUCLEAR CHEMISTRY**.

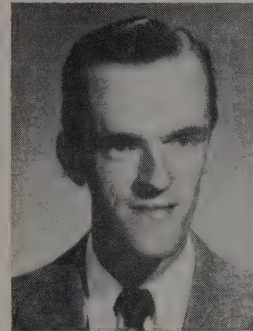
KENT, Robert Harrington, Assoc. Technical Dir., Ballistic Rsch. Labs., Aberdeen Proving Ground, Md. **EXTERIOR BALLISTICS, ESPECIALLY THE THEORY OF THE MOTION OF SPINNING SHELL AND ROCKETS**. b. Meriden, Conn., July 1, 1886. s. Silas William and Mary Elizabeth (Chapman) K. Edn.: A.B., Harvard Univ., 1910; M.A., *ibid.*, 1916. Exp.: Asst. Instr. in Physics, Part-time Instr. in Math., Harvard Univ., 1910-16; Instr. in Elec. Engrng., Univ. of Pa., 1916-17; Civilian Engaged in Exptl. and Theoretical Work in Ballistics, Office Chf. Ordnance, Wash., and Aberdeen Proving Ground, Md., 1919-36; Assoc. Dir., Ballistic Rsch. Labs., Aberdeen Proving Ground, Ordnance Dept., U. S. Army, 1936-48; Assoc. Technical Dir., *ibid.*, 1948—. Hon. Pos.: Awarded Medal for Merit, 1946; Potts Medal of Franklin Inst., 1947. Mem.: Fellow, A.A.A.S.; Amer. Phys. Soc.; Natl. Acad. Sci.; Inst. Math. Statistics; Inst. Aeronautical Sci.; Phi Beta Kappa. Contrb. to: Mech. Engrng.; Jour. Applied Physics; Jour. Franklin Inst.; Physical Rev.; etc. War Record: 1917-19, 1st Lt. to Capt., Ordnance Dept., U. S. Army in Office, Chf. of Ordnance, Wash., D. C., and Office of the Chf. Ordnance Office, A.E.F., France. Gen. Int.: Internationally Prominent as an Ordnance Scientist; The Prolific Nature of His Work has Resulted in Outstanding Achievements in Branches of Ballistics such as Instrumentation for Ballistic Measurements, Projectile Aerodynamics, and Ordnance Engrng.; Under His Direction from 1945-49, the Aberdeen Proving Ground's Wind Tunnel did a Large Portion of the Supersonic Testing Required by the Army Ordnance Corps, Air Force, Navy Bureau of Ordnance and the Navy Bureau of Aeronautics. Special Int.: Exterior Ballistics, especially in the aerodynamics of Spinning Shell; Interior Ballistics; Terminal Ballistics; Statistics.

KENNEDY, James Arthur, Prof. of Public Health and Bacteriol., Schl. of Med., Univ. of Louisville, Louisville, Ky. **BACTERIOLOGY.**

KENNEDY, John Lyon, Chmn., Dept. of Psychol., and Dir., Lab. Sensory Psychol. and Physiol., Tufts Coll., Medford, Mass. **PSYCHOLOGY.**

KENNEDY, Lou, **SPEECH AND HEARING.**

KENNEY, Charles Davis, Assoc. Prof. of Pub. Affairs and Govt., Harding Coll., Searcy, Ark. **INTERNATIONAL RELATIONS; INTERNATIONAL LAW AND ADMINISTRATION; U.S.S.R. AREA SPECIALIST.** b. Harrisburg, Pa., Mar. 10, 1923. s. William B. and Ruth (Davis) K. Edn.: A.B., cum laude, Syracuse Univ., 1948; M.A., *ibid.*, 1949; Ph.D., *ibid.*, 1951. m. Mildred Livingston, Oct. 13, 1943. c.: Karen Elizabeth; Robert Livingston. Exp.: Grad. Asst. and Full Scholar in Internatl. Relations, Syracuse Univ., 1949-51; Asst. Prof. of Political Sci., Highlands Univ., Las Vegas, N. Mex., 1951-52; Asst. Prof. of Political Sci., Harding Coll., Searcy, Ark., 1952-53; Assoc. Prof. of Pub. Affairs and Govt., *ibid.*, 1953—. Mem.: A.A.U.P.; N.E.A.; Amer. Political Sci. Assn.; Amer. Acad. Political and Social Sci.; Amer. Soc. Internatl. Law; Pi Gamma Mu; Amvets; Y.M.C.A. Contrb. to: External Rsch. Staff Paper, Dept. of State. War Record: Signal Corps, U. S. Army, 1943-46. Gen. Int.: Rsch. Facility in Four Foreign Languages, Russian, German, French, Spanish. Special Int.: Internatl. Law and Organization; Soviet Propaganda; Soviet Foreign Relations; Soviet Govt.; Soviet Econ.



KENNON, William Lee, Hd., Dept. of Physics and Astron., Univ. of Miss., P. O. Box 116, Univ., Miss. **ASTRONOMY.**

KENNY, Christopher Leo, Hd., Chem. Dept., Creighton Univ., Omaha, Nebr. **CHEMISTRY.**

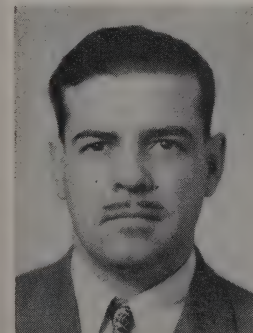
KENOYER, Leslie Alva, Hd., Dept. of Biol., Western Mich. Coll., Kalamazoo, Mich. **PLANT ECOLOGY, TROPICAL BOTANY.**

KENYON, Allan T., Billings Memorial Hosp., Chicago, Ill. **ENDOCRINOLOGY—CLINICAL RESEARCH.**

KENYON, Otis Allen, Treas., Kenyon and Eckhardt, Inc., 247 Park Ave., N. Y., N. Y. **ENGINEERING.**

KENYON, Walter Alexander, Prof. and Hd., Dept. of Biol., Hamline Univ., St. Paul, Minn. **ZOOLOGY, PHYSIOLOGY, GENETICS.**

KEPL, Maxwell Frank, Physician-Surgeon, W. 407 Riverside Ave., Spokane 1, Wash. **SURGERY.** b. Havre, Mont., Oct. 12, 1914. s. Frank and Elsie (Clements) K. Edn.: B.S., Northwestern Univ., 1940; M.D., *ibid.*, M.S., *ibid.* m. Natalie Winifred Bachemin, Mar. 3, 1943. c.: Diane Natalie; Maxwell Frank, Jr.; Michael John; David James. Exp.: Internship, Cook Co. Hosp., Chicago, Ill., 1940-41; Resident, Passavant Memorial Hosp., Dept. of Surgery, Chicago, Ill., 1942-43; Asst. in Surgery, Tulane Med. Schl., New Orleans, La., 1943-45; Fellow in Surgery, Oschner Clinic, New Orleans, La., 1944-45; Visiting Surgeon,



Charity Hosp., New Orleans, La., 1942-46; Attending Surgeon, St. Luke's Hosp., Spokane, Wash., 1946-53. Mem.: Amer. Med. Assn.; Amer. Fed. of Clin. Rsch.; Spokane Co. Med. Soc.; Fellow, Amer. Coll. of Surgeons; West. Assn. of Railway Surgeons; Sigma Alpha Epsilon; Alpha Kappa Kappa; Blue Key; Spokane C. of C. Contrb. to: Proc. Soc. of Exptl. Biol.; Arch. of Pathol.; Northwest Med.; Amer. Jour. of Surgery; Jour. of Surgery, Gynecol. and Obst. Special Int.: Thoracic Surgery.

KEPKER, John, 1 Grace Ct., Brooklyn, N. Y. **LINGUISTICS.**

KEPLINGER, Robert B., 219 17th St., N. E., Canton 4, Ohio. **CERAMICS.**

KEPNER, William Allison, Prof. of Biol., Univ. of Va., Charlottesville, Va. **LOWER INVERTEBRATES.**

KERKER, Milton, Assoc. Prof. of Chem., Clarkson Coll. of Tech., Potsdam, N. Y. **PHYSICAL CHEMISTRY.** b. Utica, N. Y., Sept. 25, 1920. s. Samuel and Sarah (Cohen) K. Edn.: A.B., Columbia Coll., 1941; M.A., Columbia Univ., 1947; Ph.D., *ibid.*, 1949. m. Reva Stemerman of Elmira, N. Y., June 16, 1946. d. Samuel and Rose Stemerman. c.: Ruth Ann; Martin Joseph. Exp.: Chemist, Edgewood Arsenal, Md., 1942; Asst., Dept. of Chem., Columbia Univ., 1946-49; Instr., Clarkson Coll., 1949; Asst. Prof., 1949-52; Assoc. Prof., *ibid.*, 1952; Rsch. Assoc., Columbia Univ., Summer, 1949; Rsch. Asst., McGill Univ., Summer, 1950; Part-time, 1950-51; Ford Foundation Fellowship, 1952-53; Research Corporation Grant, 1953-54; Dir. Office of Ordinance Rsch. Project, Clarkson Coll. Mem.: Amer. Chem. Soc.; Phi Lambda Upsilon; Sigma Xi; Hist. of Sci. Soc. Contrb. to: Jour. Amer. Chem. Soc.; Jour. Applied Physics; Jour. Chem. Physics; Scientific American; Jour. Optical Soc. of Amer.; Jour. Colloid Sci.; Jour. Meteorology; Jour. Engineering Edn.; Jour. Chem. Edn.; Jour. Atmospheric and Terrestrial Physics (London). Ph.D. Dissertation: Size Distribution of Sulfur Hydroxols by Polarimetric Analysis of Scattered Light. War Record: U. S. Army, 1942-45; Bronze Star. Travel: England; France. Listed in: A.M.S.; Who's Who in the East. Special Int.: Light Scattering; Hist. of Sci.

KERNKAMP, Milton Fredrick, Assoc. Prof., Div. of Plant Pathol., Univ. Farm, St. Paul, Minn. **PLANT PATHOLOGY.** b. St. Paul, Minn., Sept. 16, 1911. s. John H. and Laura (Mahle) K. Edn.: B.S., Univ. of Minn., 1934; M.S., *ibid.*, 1938; Ph.D., *ibid.*, 1941. m. Kathryn Griffith, 1936. Exp.: Instr., Univ. of Minn., 1936-41; Asst. Pathologist, U. S. Dept. of Agri., 1941-46; Asst. Prof., Univ. of Minn., 1946-49; Assoc. Prof., *ibid.*, 1949—. Hon. Pos.: Secy.-Treas., North Central Div., Amer. Phytopathological Soc., 1948-51; Vice-Pres., *ibid.*, 1951-52; Assoc. Editor, Phytopathology, 1947-49. Mem.: Amer. Phytopathol. Soc.; A.A.A.S.; A.A.U.P.; Sigma Xi; Gamma Alpha. Contrb. to: Phytopathol.; Amer. Jour. of Botany. War Record: Capt., U. S. Army, 1942-46. Special Int.: Special Investigations on the Genetics of the Corn Smut Fungus, Ustilago Zeae, and more recently Investigations on Diseases of Forage Crops.



KERNAGHAN, Mother Marie, R.S.C.J., Prof. of Physics and Math. and Chmn. of the Sci. Group, Maryville Coll., 2900 Meramec St., St. Louis, Mo. **PHYSICS.** b. New Orleans, La., June 9, 1889. d. William and Georgine (Mitchell) K. Edn.: A.B., St. Louis Univ., 1921; A.M., *ibid.*, 1925; Ph.D., *ibid.*, 1929. Exp.: Instr. in the Acad.: Grand Coteau, La., 1910-13; St. Michaels, La., 1913-14; St. Charles, Mo., 1914-15; Maryville, 1915-25; Prof., *ibid.*, 1925—; Visit. Prof., London, England, 1935-36; Normal Trng.

KERNAGHAN, Mother Marie, R.S.C.J., Prof. of Physics and Math. and Chmn. of the Sci. Group, Maryville Coll., 2900 Meramec St., St. Louis, Mo. **PHYSICS.** b. New Orleans, La., June 9, 1889. d. William and Georgine (Mitchell) K. Edn.: A.B., St. Louis Univ., 1921; A.M., *ibid.*, 1925; Ph.D., *ibid.*, 1929. Exp.: Instr. in the Acad.: Grand Coteau, La., 1910-13; St. Michaels, La., 1913-14; St. Charles, Mo., 1914-15; Maryville, 1915-25; Prof., *ibid.*, 1925—; Visit. Prof., London, England, 1935-36; Normal Trng.

Coll. of the Sacred Heart, Albany, N. Y., Summer 1937; San Francisco Coll. of Women, San Francisco, Calif., Summers, 1938, 1939. Mem.: A.A.A.S.; Amer. Phys. Soc.; Amer. Math. Soc.; Amer. Assn. of Physics Tchrs.; Astronomical Soc. of the Pacific; Sigma Xi; Delta Epsilon Sigma; Pi Mu Epsilon; Cath. Comm. on Intellectual and Cultural Affairs. Contbr. to: Phys. Rev. Ph.D. Dissertation: Surface Tension of Liquid Metals. Travel: U. S.; Canada; England; Italy. Gen. Int.: A Grant Has Been Given by Rsch. Corp. for Rsch. in Spectrochemical Analysis. Hobbies: Photography; Reading. Listed in: A.M.S.; Amer. Women; Cath. Who's Who; Internatl. Blue Book; Who's Who in Mondo Cattolico. Special Int.: Spectroscopy.

KERR, Charles H., 2861 Chatsworth Blvd., San Diego 6, Calif. CERAMICS.

KERR, Paul Francis, Exec. Officer and Prof., Dept. of Geol., Columbia Univ., N. Y., N. Y. MINERALOGY.

KERR, Ralph Waldo, Sr. Chemist, Chem. Div., Corn Products Refining Co., 83 Cowley Rd., Riverside,



ILL. STARCH CHEMISTRY. b. Mongaup Valley, N. Y., May 19, 1899. s. Marvin O. and Minnie (Ballard) K. Edn.: A.B., Columbia Univ., 1921; M.A., ibid., 1924; Ph.D., ibid., 1924. m. Dorothy D'Arcy, 1937. c.: Robert; Barbara; Charlotte. Exp.: Asst. in Chem., Columbia Univ., 1922-24; Instr. in Biochem. and Rsch. Assoc., ibid., 1924-29; Rsch. Chemist, Corn Products Refining Co., Argo, Illinois, 1929—. Mem.: Amer. Chem. Soc.; A.A.A.S.; N. Y. Acad. of Sci.; Sigma Xi.

Author: Chem. and Industry of Starch, 1944; 2nd Edition, ibid., 1950. Contbr. to: Jour. Amer. Chem. Soc.; Jour. Biol. Chem.; Archives for Biochem.; Cereal Chem. War Record: U. S. Navy, 1918-19. Special Int.: Chem. of Starch and related Carbohydrates; Starch Mfg. Processes; Enzyme Chem.

KERR, W. Raymond, Armstrong Cork Co., Box 441, Beaver Falls, Pa. CERAMICS.

KERSHNER, Frederick Doyle, Dean Emer., Butler Schl. of Religion, Butler Univ., 4257 Clarendon Rd., Indianapolis, Ind. THEOLOGY.

KERSHNER, Richard B., 8621 Georgia Ave., Silver Spring, Md. GUIDED MISSILES.

KERST, Donald William, Physics Rsch. Lab., Univ. of Ill., Champaign, Ill.

KERSTEN, Harold John, Prof. of Biophysics and Fellow, Grad. Schl., Univ. of Cincinnati, Cincinnati, Ohio. BIOPHYSICS.

KERTESZ, Z. I., Agril. Expt. Sta., Geneva, N. Y. FOOD TECHNOLOGY.

KESEL, Robert G., Prof. and Hd. Dept., Coll. of Dentistry, Univ. of Ill., 808 S. Wood St., Chicago, Ill. DENTISTRY.

KESLER, Martin Luther, Senior Chemist and Group Leader, Calco Chemical Div., Amer. Cyanamid Co., Bound Brook, N. J. ORGANIC CHEMISTRY. b. Thomasville, N. C., Nov. 22, 1908. s. Martin Luther and Ethel (Browne) K. Edn.: B.S., Wake Forest Coll., 1930. m. Mary Susan Brock, Nov. 26, 1932. c.: Martin L. Exp.: Dev. Chem. at Amalgamated Dyestuff and Chemical Works, Newark, N. J., 1931-36; Chief Chem., Pan Amer. Color and Chem. Co., Paterson, N. J., 1936-38; Rsch. Chemist, Senior Chemist, and Group Leader, in the Engineering and Dev. Dept. of Calco Chemical Div., Amer. Cyanamid Co., Bound Brook, N. J., 1938—. Mem.: Gamma Sigma Epsilon; Amer. Chem. Soc.; Amer. Assn. Textile Chem. and Colorists; Amer. Inst. Chem.

Engrs. Special Int.: Azo Dyes and Intermediates, Celanese and Metallized Dyes.

KESSEL, John F., Prof. of Bacteriol. and Parasitology, Univ. of Southern Calif. Schl. of Med., Los Angeles, Calif. BACTERIOLOGY, PARASITOLOGY.

KESSELI, John Ernest, Assoc. Prof. of Geography, Univ. of Calif., Berkeley, Calif. PHYSICAL GEOGRAPHY.

KESSLER, Daniel W., Retired, Chf., Building Stone Section, Natl. Bureau of Standards, 2031 Rosemont Ave., Washington 10, D. C. BUILDING MATERIALS. b. Chillicothe, Mo., Aug. 20, 1883. s. Daniel and Sarah (Faulk) K. Edn.: B.S., Univ. of Mo., 1908; C.E., Geo. Washington Univ., 1921. m. Lotta Logan, 1921. c.: Louise; Edwin; Virginia. Exp.: Assistant Observer, U. S. Weather Bureau, 1909-11; Rsch. Engr., Natl. Bureau of Standards, 1912-25; Rsch. Assoc., ibid., 1925-27; Chf., Building Stone Section, ibid., 1927-52; Retired, ibid., 1952—. Mem.: A.A.A.S.; Amer. Soc. for Testing Materials; Amer. Assn. of Engrs.; Geol. Soc. of Wash. Gen. Int.: Inventor of Several Testing Devices. Special Int.: Performance of Building Materials in Actual Use and Improvement in Methods of Selecting or Using Materials for Better Service.

KESTEN, Homer D., Assoc. Prof. of Pathol., Coll. of Physicians and Surgeons, Columbia Univ., N. Y., N. Y. PATHOLOGY.

KESTER, Ernest B., Chg. Fat and Wax Section, Western Regional Rsch. Lab., U. S. D. A., Albany, Calif. VEGETABLE OILS, FATTY ACIDS.

KESTER, Frederick Edward, retired, 1612 Louisiana St., Lawrence, Kans. PHYSICS.

KETCHAM, Basil P., Jefferson Med. Coll. Hosp., 10th and Sansom Sts., Philadelphia, Pa. PHARMACY, BACTERIOLOGY.

KETCHAM, Henry Hendricks, 6727 N. Maplewood Ave., Chicago, Ill. ENGINEERING, PHYSICS.

KETTERING, Charles, Gen. Motors Corp., Detroit, Mich. ENGINEERING.

KETY, Seymour, PHYSIOLOGIST.

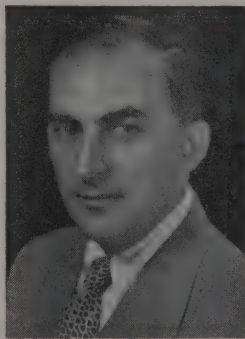
KEUFFEL, Carl W., Exec. Engr., Keuffel and Esser Co., Hoboken, N. J. PHYSICS.

KEVORKIAN, Arthur George, Harvard Univ., Cambridge, Mass. MYCOLOGY, PATHOLOGY.

KEW, William S. W., Chf. Geologist, Standard Oil Co. of Calif., 225 Bush St., San Francisco, Calif. PETROLEUM GEOLOGY.

KEY, Cora Beale, Psychologist, Natl. Child Rsch. Center and Natl. Cathedral Schl. for Girls, 628 A St., S. E., Washington, D. C. PSYCHOLOGY.

KEY, Kerim Kami, Chief, Greek-Turkish-Iranian Section, Oit., U. S. Dept. of Commerce, Washington,



25, D. C. HISTORY AND ECONOMICS. b. Istanbul, Turkey, May 21, 1913. s. Huseyin and Azize (Gafar) Kami. Key. Edn.: B.Sc., Robert College, 1932; M.A., Univ. of Calif., 1940; Ph.D., Amer. Univ., 1950. m.: Elizabeth Miller, Mar 30, 1946. Exp.: Accountant, Istanbul Telephone Co., Istanbul, Turkey, 1932-33; Turkish Army, 1934-35; Translator, Printing House, Alexandria, Egypt, 1936-37; Tourist Agent, Wagons-Lits Cook, Turkey, 1937-39; Rsch. Specialist, U. S. Dept. of State, Washington, D. C., 1945-51; Chief Greek-Turkish-Iranian Section, Oit., U. S. Dept. of

Comm., 1951—; Lectr. in History, Johns Hopkins, Washington, D. C., 1948-52; The American Univ., Washington, D. C., 1948—. Mem.: Amer. Historical Assn.; Amer. Economic Assn.; Soc. of Amer. Archivists; Amer. Oriental Soc.; Middle East Inst.; Amer. Turkish Soc.; International Soc. for Oriental Rsch.; Acad. of Political Sci.; Amer. Acad. of Political and Social Sci. Special Int.: Social, Political and Econ. Problems of the Near and Middle East.

KEY, Wilhelmine Enteman, retired, Fernwold, Somers, Conn. ZOOLOGY.

KEYES, Frederick George, Mass. Inst. of Tech., Cambridge 39, Mass.

KEYS, Ancel, Prof. and Dir., Physiol. Hygiene, Stadium South Tower, Univ. of Minn., Minneapolis, Minn. PHYSIOLOGY.

KEYS, David Arnold, Atomic Energy Project, Natl. Rsch. Council, Chalk River, Ont., Can. PHYSICS.

KEZER, Alvin, Prof. Emer., Colo. Expt. Sta., 515 Remington St., Fort Collins, Colo. AGRONOMY.

KHARASCH, Morris Selig, Univ. of Chicago, Chicago, Ill.

KIBBE, Alice Lovine, Hd., Dept. of Biol., Carthage Coll., Carthage, Ill. TAXONOMY OF PLANTS.

KIBRE, Pearl, Assoc. Prof. of History, Hunter Coll., New York 21, N. Y. HISTORY OF MEDICINE AND OF ALCHEMY. b. Philadelphia, Pa., Sept. 2, 1903. d. Kenneth and Jane de (Phone) K. Edn.: A.B., Univ. of Calif., 1924; M.A., ibid., 1925; Ph.D., Columbia Univ., 1936. Exp.: Instr., Hist., Pasadena Jr. Coll., Pasadena, Calif., 1925-28; Rsch. Asst., Columbia Univ., New York, N. Y., 1929-37; Rsch. Fellow, N. Y. Acad. of Med., Nyon, Switzerland, 1938-39; Instr., Hunter Coll., New York, N. Y., 1939-46; Asst. Prof., ibid., 1946-51; Assoc. Prof., ibid., 1951—. Mem.: Phi Beta Kappa; History of Sci. Soc.; Mediaeval Acad. of Amer.; Amer. Historical Assn. Author: The Library of Pico della Mirandola, 1936; (with Lynn Thorndike), A Catalogue of Incipits of Mediaeval Scientific Writings in Latin, 1937; Nations in the Mediaeval Universities, 1948. Contrb. to: Speculum; Jour. of the Hist. of Ideas; Isis; Osiris; Jour. of the History of Med. Special Int.: Mediaeval Alchemy; History of Med.; Bibliography of Mediaeval Sci.; Manuscripts and Printed Materials. History of Universities.

KIDD, John Graydon, Prof. and Hd., Dept. of Pathol., Cornell Univ. Med. Coll., 1300 York Ave., N. Y., N. Y. PATHOLOGY.

KIDDER, James Hugh, Dean, Coll. Pharm., Fordham Univ., N. Y. 58, N. Y. SURGERY. b. Jan. 7, 1902, N. Y. C. s. Hugh and Ann Elizabeth (Jordan) K. Edn.: A.B., Fordham, 1924; M.D., Cornell, 1928. Exp.: Dean, Coll. of Pharmacy, Fordham Univ., 1932—. Prof. of Clin. Surgery, N. Y. Med. Coll., 1948. Mem.: F.A.C.S.; Acad. Med.; F.A.A.A.S.; Alpha Sigma Phi; Phi Chi. Contrb. to: Amer. Jour. Surgery. War Record: Army Reserve Officer-Adv. to Col., Consultant to Surgeon Gen. Hobby: Music. Listed in: Who's Who in Amer.; Who's Who in East; A.M.S.; Internatl. Who's Who.

KIECH, Veon Carter, Nettleton, Ark. BIOCHEMISTRY.

KIEFER, Norvin Charles, Asst. Chf., Tuberculosis Control Div., U. S. P. H. S., Washington, D. C. PUBLIC HEALTH.

KIEFT, Lester, Prof. of Chem., Bucknell Univ., Lewisburg, Pa. ANALYTICAL CHEMISTRY. s. Martin and Dena (Rossein) K. b. Sept. 18, 1912, Grand Haven, Mich. Edn.: A.B., Hope Coll., June, 1934; M.S., Pa. State Coll., 1936; Ph.D., ibid., 1939. m. Norma Reichenbacher of Hazleton, Pa., June 28, 1941. d. Royal and Hilda Reichenbacher. c.: John Martin, Richard Leonard. Exp.: Grad. Asst., Pa. State Coll., 1934-37; Instr. in Chem., ibid., 1937-39; Asst. Prof. of Chem., ibid., 1939-42; Asst. Prof. of Chem., Bucknell Univ., 1942-46; Head of Chem. Dept., ibid., 1944—. Mem.: A.C.S.; Alpha Chi Sigma; Phi Lambda Upsilon;

Phi Kappa Alpha; Sigma Xi; Blue Key; Natl. Edn. Assn.; Amer. Assn. for Adv. of Sci.; Lions Club; Sec., Central Pa. Section, Amer. Chem. Soc., 1953; Dist. Gov., District 14 G., 1952-53; Lions International. Ph.D. Dissertation: Analytical Properties of Cinchonine Salts of the Iodometallic Acids. Hobbies: Sports; Photography; Printing. Listed in: A.M.S.; Who's Who in Amer.

KIENER, Walter Bigler, Supt., Fisheries Rsch. and Biologist, Nebr. State Game, Forestation and Parks Commn., State Fair Grounds, Lincoln, Nebr. ECOLOGY.

KIENHOLZ, Jess R., Assoc. Pathologist, U. S. Fruit Disease Lab., 1020 Oak St., Hood River, Ore. PLANT PATHOLOGY.

KIENHOLZ, Raymond, Prof. of Forestry, Univ. of Conn., Storrs, Conn. FORESTRY; FOREST BOTANY; CONSERVATION OF NATURAL RESOURCES; CONSERVATION EDUCATION. b. Bellingham, Minn., Oct. 18, 1894. s. Henry H. and Augusta (Hielscher) K. Edn.: B.S., North Central Coll., 1917; M.S., Univ. of Ill., 1920; Ph.D., ibid., 1922. m. Pearl Keating, June 10, 1922. c.: Joaquin Burroughs; Suzanne Margaret. Exp.: Prof. of Botany, Univ. of Philippines, 1922-24; Botany Dept., Univ. of Ill., 1924-30; Sr. Sterling Fellow, Yale Univ., 1930-31; Forest Rsch., Conn. Agri. Expt. Station, 1931-33; Conn. State Dept. of Forestry, 1933-41; Silviculturist, ibid., 1941-44; Conn. State Forester, 1944-48; Prof. of Forestry, Univ. of Conn., Storrs, Conn., 1948—. Mem.: Sigma Xi; Soc. Amer. Foresters; Soil Conservation Soc. of Amer.; Amer. Nature Study Soc.; Wilderness Soc.; Ecological Soc. of Amer. Contrb. to: Ecology; Jour. Forestry. War Record: A.E.F., 1918-19. Special Int.: Forestry; Forest Botany; Conservation of Natural Resources; Conservation Edn.

KIERSCH, George Alfred, Asst. Prof. of Geol., Univ. of Ariz., and Consulting Geologist, 2603 E. 7th St., Tucson, Ariz. GEOLOGY. b. Lodi, Calif., Apr. 15, 1918. s. A. T. and Viola E. (Bahmeier) K. Edn.: Geol. Engr., Colo. Schl. of Mines, 1942; Ph.D., Univ. of Ariz., 1947. m. Jane Keith, Nov. 29, 1942. c.: Dana Elizabeth; Mary Annan; George Keith. Exp.: Corps of Engrs., U. S. Army, 1942-45; Techn. Fellow, Dept. of Geol., Univ. of Ariz., Tucson, Ariz., 1945-47; Geologist, 79 Mining Co., 1946-47; Instr. in Geol., Mont. Schl. of Mines, 1947; Geologist, U. S. Corps of Engrs., 1948; Project Geologist, Folsom Dam, Calif., U. S. Corps of Engrs., 1949-50; Supvng. Geologist, Internatl. Boundary and Water Commn., 1950-51; Asst. Prof. of Geol., Univ. of Ariz., 1951—. Fld. Director and Geologist, Mineral Survey, Navajo-Hopi Indian Reservations, 1952—. Fellow, Geol. Soc. Amer. Mem.: Amer. Inst. of Mining and Metallurgical Engrs.; Sigma Xi; Tau Beta Pi; Theta Tau; Scabbard and Blade; Blue Key; Sigma Phi Epsilon; F. and A. M. Contrb. to: Amer. Assn. Petroleum Geologists Bull.; Bull. Geol. Soc. Amer.; Econ. Geol.; Mining Engrng.; Ariz. Bureau of Mines. Special Int.: Engrng. Geol.; Nonmetallic Mineral Deposits; Groundwater; Structural Geol.

KIKER, John Ewing, Jr., Prof. of Civil Engrng., 210 Engrng. Bldg., Univ. of Fla., Gainesville, Fla.



SANITARY AND PUBLIC HEALTH ENGINEERING. b. Americus, Ga., Apr. 26, 1906. s. John Ewing and Emma (Argo) K. Edn.: B.S., Mass. Inst. of Tech., 1935; M.C.E., N. Y. Univ., 1941. m. Mary Hayes, Dec. 15, 1935. c.: John Elizabeth; Carol Marie; John E., III. Exp.: Chem. Engr., H. C. Nutting Co., Tampa, Fla., Newark, N. J., 1925-30; Sanitary Engineer, Internatl. Water Co., Saigon, Indo-China, 1930-35; Sanitary Engr., Caracas, Venezuela, S. Amer., 1936; Dist. Sanitary Engrng., N. Y. State Dept. of Health, Poughkeepsie, N. Y., 1936-47; Assoc. Prof. of Civil En-

grng., Univ. of Fla., Gainesville, Fla., 1947-49; Prof., *ibid.*, 1949—. Hon. Pos.: Chmn., Fla. State Coordinating Comm. on Surface and Underground Water Pollution Prevention and Abatement. Mem.: Amer. Soc. of Civil Engrg.; Fellow, Amer. Public Health Assn.; Pres., Fla. Soc. of Prof. Engrs.; Amer. Soc. Engrng. Edn.; Fla. Sew. and Ind. Wastes Assn.; Amer. Water Works Assn.; Natl. Soc. of Prof. Engrs. Author: Subsurface Sewage Disposal, 1948. Contrb. to: Jour. Fla. Engrng. Soc.; Sewage and Indus. Wastes Jour.; Jour. Amer. Water Works Assn. War Record: 1st Lt. to Major, U. S. Army; Chf., Sanitary Engrng. Sect., Surgeon's Office, Hq. 7th Service Command., Omaha, Nebr. Special Int.: Sewage Treatment and Subsurface Sewage Disposal; Water Supply and Treatment; Diatomite Filters.

KIERSTEAD, Caroline Heminway, Dept. of Geol., Smith Coll., Northampton, Mass. **MICROPALEONTOLOGY.**

KIESSELBACH, Theodore Alexander, Prof. of Agron., Univ. of Nebr. Coll. of Agri., Lincoln, Nebr. **AGRONOMY.**

KILBY, Clinton Maury, Hd., Dept. of Physics and Astron., Randolph-Macon Woman's Coll., Lynchburg, Va. **PHYSICS, ASTRONOMY.**

KILDEE, Henry Herbert, Dean of Agri. and Dir., Agri. Extension Service, Iowa State Coll., Ames, Iowa. **AGRICULTURE.**

KILGORE, William Arlow, Instr. in Physics, Wilson Tehrs. Coll., 11th and Harvard Sts., N. W., Washington, D. C. **SCIENCE EDUCATION.**

KILLIAN, Thomas J., Chf. Scientific Branch, Office Naval Rsch., Washington, D. C. **PHYSICS.**

KILLIP, Ellsworth Paine, Curator, Div. Plants, U. S. Natl. Museum, 1650 Fuller St., Washington, D. C. **BOTANY.**

KILPATRICK, Martin, Prof. of Chem., Ill. Inst. of Tech., 3300 Federal St., Chicago, Ill. **PHYSICAL CHEMISTRY.**

KIMBALL, Richard Fuller, 148 Outer Dr., Oak Ridge, Tenn. **GENETICS.**

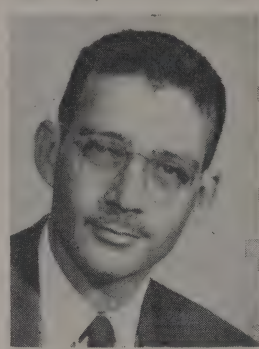
KIMBARK, Edward Wilson, Prof. of Elec. Machinery. Div. of Electronics, Instituto Tecnológico de Aeronautica, Sao José dos Campos, Sao Paulo, Brazil. **ELECTRICAL ENGINEERING.** b. Chicago, Ill., Sept. 21, 1902. s. Edward Hall and Maude (Wilson) K. Edn.: B.S., Northwestern Univ., 1924; E.E., Northwestern Univ., 1925; S.M., Mass. Inst. of Tech., 1933; Sc.D., Mass. Inst. of Tech., 1937. m. Ruth Elizabeth Merrick of Chicago, Ill., July 19, 1930. d. John and Elizabeth Happel Merrick. Exp.: Substation Operator and Asst. in Testing Lab., Pub. Serv. Co. of Northern Ill., Chicago, 1925-27; Instr. in Elec. Engrng., Univ. of Calif., 1927-29; Asst. Curator, Div. of Power, Museum of Sci. and Indus., Chicago, 1929-32; Rsch. Asst. in Elec. Engrng., Mass. Inst. of Tech., 1933-34; Asst., Mass. Inst. of Tech., 1934-35; Instr., Mass. Inst. of Tech., 1935-37; Central Sta. Dept., Gen. Elec. Co., 1937; Asst. Prof., Elec. Engrng., Poly. Inst. of Brooklyn, 1937-39; Asst. Prof., Elec. Engrng., Northwestern Univ., 1939-41; Assoc. Prof., Northwestern Univ., 1941-45; Prof., 1945-50; Act. Chmn., Dept. E. E., 1941-42; On Leave to M.I.T. Radar Schl., Boston, Mass., 1942-44; Prof. of Electrical Machinery, Instituto Tecnológico de Aeronautica, 1950—. Mem.: A.I.E.E.; A.A.U.P.; C.I.G.R.E.; A.S.E.E.; I.R.E.; Phi Beta Kappa; Sigma Xi; Eta Kappa Nu. Contrb. to: Trans. A.I.E.E.; Ed. of "Principles of Radar" by the Staff of the M.I.T. Radar Schl., Tech. Press, First Ed., 1944. Author: "Power System Stability," Vol. I, 1948; Vol. II, 1950; "Electrical Transmission of Power and Signals," 1949; Sc.D. Dissertation: The Performance of Protective Relays During Simultaneous Faults. Hobby: Internat'l. Langs. Listed in: Who's Who in Engrng.; Who's Who in Chicago and Illinois; Who's Who in Amer.; Who's Who in the Midwest; A.M.S. Special Int.: Transmission, symmetrical Components, Power System Stability.

KIMBROUGH, William Duke, Horticulturist, La. Agri. Expt. Sta., La. State Univ., University, La. **HORTICULTURE.**

KIMMEY, James William, Forest Pathologist, Div. Forest Pathol., U. S. D. A., San Francisco, Calif. **FORESTRY.**

KINCAID, C. M., Va. Poly. Inst., Blacksburg, Va. **AGRICULTURE.**

KINCAID, John Franklin, Rsch. Supvr., Rohm and Haas Co., 330 East Oak Ave., Moorestown, N. J.,



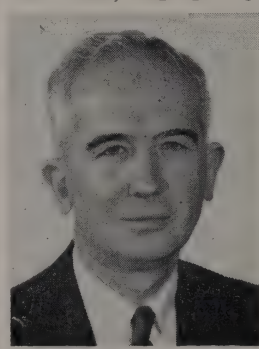
PHYSICAL CHEMISTRY. b. Blackwell, Mo., Feb. 27, 1912. s. John Randall and Rose (Rich) K. Edn.: A.B., Central Coll., 1934; M.S., Geo. Wash. Univ., 1936; Ph.D., Princeton Univ., 1938. m. Nancy Ange, June, 1938. c.: James Randall; John Peter; Thomas Franklin. Exp.: Instr. in Chem., Univ. of Rochester, N. Y., 1938-42; Group Leader, Explosives Rsch. Lab., 1942-45; Rsch. Scientist, Rsch. Lab., General Electric Co., Schenectady, N. Y., 1945-46; Hd., High Pressure Rsch. Dept., Rohm & Haas Co., 1946-49; Rsch. Supvr., *ibid.*, 1949—. Mem.: Amer. Chem. Soc. Contrb. to: Jour. Amer. Chem. Soc.; Jour. Applied Phys.; Jour. Chem. Phys.; Phys. Rev.; Jour. Phys. Chem.; Chem. Rev. Special Int.: High Pressure Chem.; Theories of Liquids; Mechanism of Organic Reactions; Rocket Propellants.

KINCAID, Randall Rich, Plant Pathologist, North Fla. Expt. Sta., Quincy, Fla. **PLANT PATHOLOGY.**

KINCAID, Trevor, Prof. of Zool., Univ. of Wash., Seattle, Wash. **ZOOLOGY.**

KINCKINER, Roy Armitage, Deputy Dir., Engrng. Rsch. Lab., Engrng. Dept., Du Pont Experimental Station, Wilmington, Del. **CHEMICAL ENGINEERING.** b. Philadelphia, Pa., July 31, 1900. s. S. Nat and Anna (Bickings) K.

Edn.: B.S., Univ. of Pa., 1922; Ch.E., *ibid.*, 1927. m. Esther M. Biggerstaff, Oct., 1927. c.: Lois A.; Marjorie J. Exp.: Chemical Engrng., Du Pont Co., Deepwater, N. J., 1933-34; Production Supt., Pigments Dept., *ibid.*, Newark, N. J., 1934-39; Dir., Dev. Engrng., *ibid.*, Wilmington, Del., 1945-47; Asst. Dir., Engr., Res. Lab., Engr. Dept. Du Pont Co., *ibid.*, 1947—. Mem.: Amer. Inst. of Chem. Engr.; Amer. Chem. Soc.; Tau Beta Pi. Contrb. to: Chemical Engrng Economics; Chemical Engr. Process. Special Int.: Chem. Engr. Econ. Engrng. Rsch. in Field of Chem. Manufacture, Production Management, Rsch. Management.



KINDER, Elaine F., Sr. Psychologist and Dir., N. Y. State Psychol. Intern Trng. Program, Rockland State Hosp., Orangeburg, N. Y. **PSYCHOLOGY.**

KINDLE, Cecil H., Asst. Prof. of Geol., City Coll. of N. Y., 590 Riverside Dr., N. Y., N. Y. **LOWER PALEOZOIC GEOLOGY.**

KINDRED, James Ernest, Prof. of Anatomy, Univ. of Va., P. O. Box 1873, Charlottesville, Va. **HISTOLOGY.**

KING, Allen Lewis, Asst. Prof. of Physics, Dartmouth Coll., Hanover, N. H. **BIOPHYSICS.**

KING, Arthur Scott, Mount Wilson Observatory, Pasadena 4, Calif.

KING, Barry G., Chf., Aeromedical Design Div., Rsch. Exec., A 313 Medical Service, Civil Aeronautics Admin., Dept. Commerce, Wash., D. C. **PHYSIOLOGY.**

KING, Burnham W., Jr., 2564 Welsford Rd., Columbus 12, Ohio. **CERAMICS.**

KING, Cecil V., Prof., N. Y. Univ., N. Y. 3, N. Y. **PHYSICAL CHEMISTRY.** b. Union City, Ind., Dec. 22, 1899. s. William and Sadie (Johnson) K. Edn.: A.B., Ind. Univ., 1919; A.M., Columbia Univ., 1922; Ph.D., ibid., 1924. m. Lillian Russell, 1941. c.: Peter F. Exp.: Asst. in Chem., Columbia Univ., 1920-24; Fellow, Amer. Scandinavian Foundation, 1924-25; Instr. in Chem., Columbia Univ., 1925-28; Asst. Prof., Assoc. Prof. and Prof. of Chem., N. Y. Univ., 1928—. Mem.: Amer. Chem. Soc.; Electrochem. Soc.; N. Y. Acad. Sci.; Sigma Xi; Phi Lambda Upsilon; A.A.A.S. Co-author: Experiments in Phys. Chem., 1950. Contrb. to: Jour. Phys. Chem.; Jour. Amer. Chem. Soc.; Jour. Electrochem. Soc. War Record: U.S.N.R.E., 1918-22. Gen. Int.: Assoc. Editor, Jour. of Electrochem. Soc., 1950. Special Int.: Reaction Kinetics; Dissolution and Corrosion of Metals.

KING, Charles Glen, Scientific Dir., The Nutrition Foundation, Inc., and Prof. of Chem., Columbia Univ., Chrysler Bldg., N. Y. 17, N. Y. **BIOCHEMISTRY; RESEARCH ADMINISTRATION.** b. Oct. 22, 1896, Entiat, Wash. s. Charles C. and Mary (Bookwalter) K. Edn.: B.S., Wash. State Coll., 1918; M.S., Univ. of Pittsburgh, 1920; Ph.D., ibid., 1923. Hon. Deg.: Sc.D., Univ. of Pittsburgh, 1950; Sc.D., State Coll. of Wash., 1950. m. Hilda Bainton, Sept. 11, 1919. c.: Dorothy; Robert B.; Kendall W. Exp.: Byproducts Specialist, State of Wash., 1918-19; Instr. in Chem., Univ. of Pittsburgh, Pa., 1920-26; Rsch. Asst., Columbia Univ., N. Y., N. Y., 1926-27; Asst. Prof., Univ. of Pittsburgh, 1927-30; Prof., ibid., 1930-43; Visiting Prof. of Chem., Columbia Univ., 1942-46; Prof., ibid., 1946—; Scientific Dir., The Nutrition Foundation, Inc., N. Y., N. Y., 1942—. Mem.: Nutrition Soc. (British); Natl. Acad. of Sci.; Amer. Chem. Soc.; Amer. Soc. of Biological Chemists; N. Y. Acad. Sci.; Amer. Inst. Nutrition; Amer. Public Health Assn.; Amer. Acad. of Political Sci.; Soc. of Chem. Industry; Lambda Chi Alpha; Sigma Xi; Phi Beta Kappa; Alpha Chi Sigma; Phi Lambda Upsilon; Phi Kappa Phi; Phi Sigma; Cosmos Club; Century Assn. Contrb. to: Jour. Biol. Chem.; Jour. Amer. Chem. Soc.; Indus. and Engrng. Chem.; Jour. Nutrition; Biochem. Jour.; etc. War Record: 12th Infantry Machine Gun Corps, World War I. Gen. Int.: Isolation and Identification of Vitamin C. Special Int.: Biochem.; Nutrition; Molecular Structure of Fats.

KING, Haitung, Assoc. Prof. of Sociol., Kans. Wesleyan Univ., Salina,



Kans. **RURAL and URBAN SOCIOLOGY; AGRICULTURAL ECONOMICS; PLANNING.** b. China, Oct. 23, 1916. s. Shenhua and Chunteh (Chang) K. Edn.: B.A., Cheeloo Univ., 1935; M.A., Univ. of Wis., 1948; Ph.D., La. State Univ., 1950. m. Louise Ling, Feb. 20, 1940. Exp.: Tehng. and Rsch. Asst. in Sociol., La. State Univ., 1948-50; Assoc. Prof. of Sociol., Kans. Wesleyan Univ., 1950—. Mem.: Amer. Sociol. Soc.; Rural Sociol. Soc.; Midwest Sociol. Soc.; Southern Sociol. Soc.; Soc. for Applied Anthropol.; Soc. for the Study of Social Problems; Amer. Farm Econ. Assn.; Western Farm Econ. Assn.; Kans. Assn. of Family Relations; Alpha Kappa Delta. Special Inst.: Rural Sociol. Theory; Rural Social Sciences; Sociol. of Religion.

KING, Harold Davis, retired, 805 E. Kaley Ave., Orlando, Fla.

KING, Helen Dean, Mem., Wistar Inst. Anatomy, 36th St. and Woodland Ave., Philadelphia, Pa. **ZOOLOGY.**

KING, Harold Skinner, Scientific Advisor, Chem. Corps Bd., Army Chemical Center, Md. **MILITARY CHEMISTRY.** b. Liverpool, N. Y., Apr. 5, 1892. s. Edward S. and Kate Irene (Colson) K. Edn.: A.B., Harvard Univ., 1917; Ph.D., ibid., 1928. m. Susan Raymond, Sept. 12, 1922. c.: Elizabeth; Nancy. Exp.: Rsch. Chemist, Eastern Lab., E. I. du Pont de Nemours and Co., Gibbstown, N. J., 1918-19; Asst. and Assoc. Prof. of Chem., Dalhousie Univ., Halifax, N. S., Can., 1922-42; Chf. Chemist and Chf. Inspector of Ordnance, Chattanooga, Tenn., 1942-44; Chf.



Chemist in Chg. of Prod., Ringwood Chem. Corp., Ringwood, Ill., 1944-46; Scientific Adv. and Hd. Agents Div., Chem. Corps Bd., Army Chemical Center, Md., 1946—. Mem.: Amer. Chem. Soc.; Fellow, A.A.A.S.; Armed Forces Chem. Assn.; Alpha Chi Sigma. Contrb. to: Jour. of Amer. Chem. Soc.; Nature; Proc. of N. S. Inst. of Sci. Special Int.: Milit. Chem.; Organic Synthesis; Isotopes.

KING, Jessie L., Prof. of Physiol., Goucher Coll., Baltimore, Md. **PHYSIOLOGY.**

KING, R. M., Lord Hall, Ohio State Univ., Columbus 10, Ohio. **CERAMICS.**

KING, Ralph Terence, Hd., Dept. of Forest Zool., N. Y., State Coll. of Forestry, Syracuse, N. Y. **VERTEBRATE ECOLOGY.**

KING, Robert Leslie, Prof. of Zool., State Univ. of Iowa, Iowa City, Iowa. **ZOOLOGY.**

KING, Robert U., Resident Geologist, Climax Molybdenum Co., Climax, Colo. **MINING GEOLOGY.**

KING, Robert Waldo, Asst. to Pres., Bell Telephone Labs., 463 West St., N. Y., N. Y. **PHYSICS.**

KING, Ronald Wyeth Percival, Gordon MacKay Prof. of Applied Physics, Craft Lab., Harvard Univ., Cambridge, Mass. **PHYSICS.**

KING, Roy Stevenson, Prof. and Hd., Mech. Engrng. Dept., Ga. Schl. of Tech., Atlanta, Ga. **MECHANICAL ENGINEERING.**

KING, Willard V., Entomologist in Chg. Orlando Rsch. Lab., Bureau Entomol. and Plant Quarantine, U. S. D. A., 414 Magnolia Ave., Orlando, Fla. **ENTOMOLOGY.**

KINGERY, Hugh M., Assoc. Prof. of Anatomy, Schl. of Med., Univ. of Colo., Denver, Colo. **HISTOLOGY, EMBRYOLOGY.**

KINGMAN, Edward Dyer, Hd., Dept. of Applied Mechanics and Materials of Construction, Wentworth Inst., Huntington Ave., Boston, Mass. **HISTORY OF SCIENCE.**

KINGSBURY, Edwin Foster, Mem., Technical Staff, Bell Telephone Labs., 463 West St., N. Y., N. Y. **OPTICS.**

KINGSBURY, Francis B., 71 Harmon Ave., Pelham, N. Y. **BIOCHEMISTRY.**

KINGSLEY, Louise, Assoc. Prof., Dept. of Geol., Wellesley Coll., Wellesley, Mass. **GEOLOGY.**

KINMAN, Charles Franklin, 4500 Amhurst Rd., College Park, Md. **AGRICULTURE.**

KINNEY, E. J., Agronomist, Hd. Agron. Dept., Univ. of Ky., Lexington, Ky. **CROPS.**

KINSEY, Alfred Charles, Prof. of Zool., Ind. Univ., Bloomington, Ind. **GALL WASP TAXONOMY, HUMAN SEX BEHAVIOR.**

KINSLEY, Carl, Consulting Engr., 1920 H St., N. W., Washington, D. C. **PHYSICS**.

KINTNER, Edward, Prof. of Biol., Manchester Coll., West Manchester, Ind. **ZOOLOGY**.

KINZIE, C. J., Box 245, Youngstown, Niagara Co., N. Y. **CERAMICS**.

KIPLINGER, Claude Clayton, Hd., Chem. Dept., West Liberty State Coll., West Liberty, W. Va. **CHEMISTRY**.

KIPP, Egbert Mason, Chf., Lubricants Div., Aluminum Rsch. Labs., P. O. Box 772, New Kensington, Pa. **PHYSICAL CHEMISTRY**. b. Angola, P. W., Africa, Nov. 27, 1914. s. Ray Bassett and Letty Mary (Mason) K. Edn.: B.S., Iowa Wesleyan Coll., 1934; A.M., Boston Univ., 1935; Ph.D., Pa. State Coll., 1939. m. Pauline Sylvia Lougee, Dec. 24, 1935. c.: David Alden; Richard Mason; Rebecca Weldon. Exp.: Phys. Chemist, Phys. Chem. Div., Aluminum Rsch. Labs., New Kensington, Pa., 1939-43; Asst. Chf. in Chg. of Oils and Lubricants Sect. of Phys. Chem. Div., ibid., 1944-46; Chf., Lubricants Div., ibid., 1947—. Hon. Pos.: Pres., Pittsburgh Chemists' Club; Chmn., Cooperative Jour. Bearing Rsch. Project Comm., Amer. Soc. of Lubrication Engrs. Mem.: Amer. Chem. Soc.; Pittsburgh Chemists Club; A.S.T.M.; Amer. Soc. of Lubrication Engrs.; Sigma Xi; Pi Mu Epsilon; Phi Lambda Upsilon; Iota Phi. Contrb. to: Sci.; Indus. and Engrng. Chem.; Mech. Engrng.; Amer. Machinist; Lubrication Engrng.; Electrical World; Iron and Steel Engr. Special Int.: Fundamental and Practical Rsch. in the General Phys. and Chem. of Rubbing Solids.

KIPPER, H. Brunswick, Dir., Kipper Rsch. Lab., Accord, Mass. **CHEMISTRY**.

KIRBER, Maria Wiener, Assoc. Prof. of Bacteriol., Woman's Med. Coll., Philadelphia 29, Pa. **VIROLOGY IMMUNOLOGY**. b. Prague, Czech., Feb. 19, 1917. d. Otto and Dora (Alberti) Wiener. Edn.: M.U.C., Univ. of Prague, 1938; M.S. Univ. of Pa., 1941; Ph.D., ibid., 1942. m. H. P. Kirber, M.D., May 21, 1943. c.: Michael Thomas; William Martin. Exp.: Asst. Bacteriology, Woman's Med. Coll., Philadelphia, Pa., 1941-43; Instr., ibid., 1943-45; Asst. Prof., ibid., 1945-50; Assoc. Prof., ibid., 1950—. Mem.: Soc. Amer. Bacteriologists; Sigma Xi. Contrb. to: Jour. of Immunology;



Jour. Expt. Med.; Proc. Soc. Expt. Biol. and Med.; Jour. A.M.A.; Amer. Jour. Med. Sci. Special Int.: Antigenic Structure of Hemolytic Streptococci; Complement Fixation Antigens of Influenza Viruses; Ocular Tissue Grafts; Ocular Viruses.

KIRBY, Daniel Bartholomew, Physician and Surgeon, 780 Park Ave., New York, N. Y. **SURGERY OPHTHALMOLOGY**. b. Cleveland, Ohio, Apr. 12, 1891. s. Daniel Bartholomew and Esther Robinson (Whitaker) K. Edn.: A.B., John Carroll Univ., 1912; A.M., ibid., 1914; M.D., Western Reserve Univ., 1916. Hon. Deg.: LL.D., John Carroll Univ., 1948. m. Cecilia Katherine Hahn, June 9, 1923. c.: Mary Elizabeth; Joan Carol; Cecilia Robinson; Janet Whitaker. Exp.: Resident Surgeon, Bellevue Hosp., N. Y. C., 1921-23; Assoc. of Dr. John Wheeler, 1923-28; Private Practice of Ophthalmol., 1923—. Mem.: Amer. Med. Assn.; N. Y. Co. and State Societies; Amer. Acad. of Ophthalmol. and Otolaryng.; Amer. Ophthalmol. Soc.; Harvey Soc. Author: Surgery of Cataract, 1950. Contrb. to: Various Med. Jours. War Record: Lt., Med. Corps, U. S. Navy, 1917-19.

KIRBY, Harold, Jr., Prof. of Zool., Univ. of Calif., Berkeley, Calif. **PROTOZOOLOGY**.

KIRCHNER, William Herman, Prof. Emer. Drawing and Descriptive Geometry, Univ. of Minn., 722

10th Ave., S. E., Minneapolis, Minn. **MATHEMATICS, ENGINEERING**.

KIRK, Edwin, Geologist, U. S. Geol. Survey, U. S. Natl. Museum, Washington, D. C. **PALEONTOLOGY**.

KIRK, John Esben, Dir. of Rsch., Assoc. Prof. of Med., Washington Univ., Schl. of Med., St. Louis 10, Mo. **GERONTOLOGY, INTERNAL MEDICINE, BIOCHEMISTRY**. b. Kallundborg, Denmark, Nov. 8, 1905. s. Ole Christian Mathias and Augusta Dorthea (Bang) K. Edn.: M.D., Univ. of Copenhagen, 1929; Ph.D., ibid., 1936. m. Irma Muser, May 28, 1934. c.: Ermalynn; Peter; Lillian; Thomas Esben; Paul Albert. Exp.: Asst., Rockefeller Inst. for Med. Rsch., N. Y. C., 1931-34; Resident Physician, Med. Dept., Univ. Hosp., Copenhagen, Denmark, 1936-39; Dir., City Health Lab., Copenhagen, Denmark, 1936-39; Chf. Physician, Med. Dept., Holstebro Co. Hosp., Denmark, 1939-47; Dir. of Rsch., Div. of Gerontol., Washington Univ., Schl. of Med., St. Louis, Mo., 1947—; Asst. Prof. of Med., ibid., 1947-50; Assoc. Prof. of Med., ibid., 1950—. Mem.: Amer. Soc. of Biol. Chemists; Gerontol. Soc.; Amer. Soc. for Study of Arteriosclerosis; Central Soc. for Clin. Rsch.; Soc. for Exptl. Biology and Medicine; A.A.A.S.; Endocrine Soc.; Harvey Soc.; Royal Soc. of Med. of London. Author: Acidosis, Clin. Aspects and Treatment with Isotonic Sodium Bicarbonate Solution, 1942. Contrb. to: Jour. of Biol. Chem.; Jour. Gerontol. Gen. Int.: Introduced Treatment of Acidosis with Isotonic Sodium Bicarbonate Solution in Europe. Special Int.: Internal Med., Particularly the Treatment of Acidosis; Development of Gasometric Methods for Carbon and Lipid Determination and for the Measurement of Tissue Metabolism.

KIRK, Lawrence Eldred, Apt. 710, 2651 16th St., N. W., Washington, D. C. **AGRONOMY, PLANT BREEDING**.

KIRK, Paul Leland, Prof. of Biochem., Univ. of Calif., Berkeley, Calif. **MICROCHEMISTRY**.

KIRK, Raymond Eller, Prof. and Hd., Dept. of Chem. and Dean, Grad. Schl., Poly. Inst. of Brooklyn, 99 Livingston St., Brooklyn, N. Y. **CHEMISTRY**.

KIRK, William, Prof. of Sociology, Pomona Coll., Claremont, Calif. **SOCIOLOGY**.

KIRKBRIDE, Mary Butler, retired, 314 State St., Albany, N. Y. **BACTERIOLOGY, IMMUNOLOGY**.

KIRKHAM, Don, Prof., Dept. of Agron., Iowa State Coll., Ames, Iowa. **SOIL PHYSICS**.

KIRKHAM, William Barri, Pres., City Library and Museums Assn., 220 State St., Springfield, Mass. **BIOLOGY**.

KIRKLAND, Burt Parsons, Forest Consultant, Amer. Forestry Assn., 3607 35th St., N. W., Washington, D. C. **FORESTRY**.

KIRKWOOD, John Gamble, Sterling Prof. of Chem. and Chmn. Dept., Sterling Chem. Lab., Yale Univ., New Haven, Conn. **PHYSICAL CHEMISTRY**. b. Gotebo, Okla., May 30, 1907. s. John Millard and Lillian (Gamble) K. Edn.: S.-B., Univ. of Chicago, 1926; Ph.D., Mass. Inst. of Tech., 1929. m. Div. c. John M. Exp.: Natl. Rsch. Fellow, Harvard Univ., 1929-30; Internatl. Rsch. Fellow, Leipzig and Munich, 1931-32; Rsch. Assoc., Mass. Inst. of Tech., 1932-34; Asst. Prof. of Chem., Cornell Univ., 1934-37; Assoc. Prof., Univ. of Chicago, 1937-38; Todd Prof., Cornell Univ., 1938-47; Arthur A. Noyes Prof., Calif. Inst. of Tech., 1947-51; Sterling Prof. and Chmn., Dept. of



Chem., Yale Univ., New Haven, Conn., 1951—Hon. Pos.; Theodore William Richards Medal, 1950; Chmn., Div. of Physical and Inorganic Chem.; Amer. Chem. Soc., 1941. Mem.: Natl. Acad. Sci.; Amer. Philos. Soc.; Amer. Acad. Arts and Sci.; Amer. Phys. Soc.; Amer. Chem. Soc. Special Int.: Physical Chem.

KIRKLE, Raymond E., Inst. of Radiobiol. and Biophysics, Univ. of Chicago, 5640 S. Ellis Ave., Chicago 37, Ill. RADIOBIOLOGY.

KIRKMAN, Hadley, Assoc. Prof. of Anatomy Stanford Univ., Stanford Univ., Calif. HISTOLOGY.

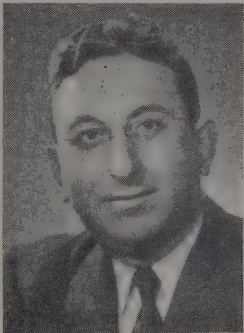
KIRKPATRICK, Donald Everett, Assoc. Prof. and Chmn., Dept. of Physics, Queens Coll., Flushing, N. Y. PHYSICS.

KIRKPATRICK, Frank, 100 S. Benita, Redondo Beach, Calif. CERAMICS.

KIRKPATRICK, Paul Harmon, Prof. of Physics, Stanford Univ., Stanford Univ., Calif. PHYSICS.

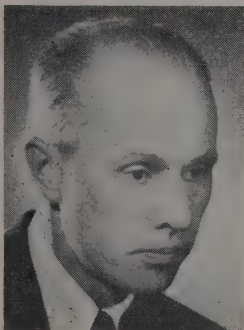
KIRSCH, Nathan Carl, Hd., Sterile Production Labs., Schering Corp., 86 Orange St., Bloomfield, N. J. BACTERIOLOGY.

KIRSNER, Joseph B., Prof. of Med., Univ. of Chicago, Chicago 37, Ill. INTERNAL MEDICINE AND GASTROENTEROLOGY.



Sept. 21, 1909. s. Harris and Ida (Waizer) K. Edn.: M.D., Tufts Coll. Med. Schl., 1933; Ph.D., Univ. of Chicago, 1942. m. Minnie Schneider of Des Moines, Ia., Jan. 6, 1934. d. Mr. and Mrs. H. Schneider. c.: Robert S. Exp.: Asst. in Med., Univ. of Chicago, 1935-39; Instr. in Med., ibid., 1939-42; Asst. Prof. of Med., ibid., 1942-47; Army of U. S., 1943-46; Assoc. Prof., Univ. of Chicago, 1947-51; Prof. of Med., ibid., 1951—. Mem.: Amer. Soc. for Clinical Investigation; Central Soc. for Clinical Rsch.; Amer. Coll. of Physicians; Inst. of Med. of Chicago; Chicago Soc. of Internal Med.; Sigma Xi; Alpha Omega Alpha. Author: Author or co-author of more than 150 scientific papers dealing principally with clinical and exp. studies in the field of gastroenterology. Contrb. to: Jour. A.M.A.; Arch. Int. Med.; Jour. Clin. Invest.; Amer. Jour. Med.; Amer. Int. Med.; Gastroenterology; Jour. Lab. Clin. Med. Ph.D. Dissertation: A Study of Alkalosis with Special Reference to the Electrolyte Composition of the Blood Serum and the Role of the Kidney. Travel: England; France; Belgium; Panama; Philippines; Japan. Hobbies: Music; Sports. Listed in: Army Med. Lib.; Who's Important in Med. Special Int.: Gastrointestinal Diseases; Gastric Secretion in Health and Disease; Diseases of Liver; Cancer of Digestive Tract.

KISTIAKOWSKY, George Bogdan, Prof. of Physical Chem., Harvard Univ., 12 Oxford St., Cambridge 38, Mass. PHYSICAL CHEMISTRY.



b. Kiev, Russia, Nov. 18, 1900. s. Bogdan and Mary (Berenstam) K. Edn.: Ph.D., Univ. of Berlin, 1925. Hon. Deg.: M.A., Harvard Univ. m. 1st, Hildegard Noebius, 1926. c.: Vena. m. 2nd, Irma E. Shuler, Sept. 21, 1945. c. Vera. Exp.: Staff, Princeton Univ., 1925-30; Staff, Harvard Univ., 1930—. Mem.: Natl. Acad. of Sci.; Amer. Philos. Soc.; etc. Author: Photochemical Processes, 1929. Special Int.: Chemical Kinetics.

KISSANE, Ray W., Assoc. Prof. of Cardiology, Ohio State Univ., Columbus, Ohio. CARDIOLOGY.

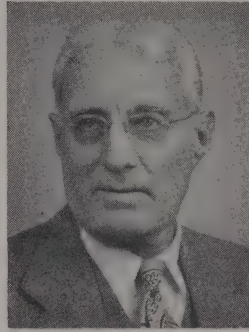
KISTLER, Samuel Stephens, Assoc. Dir. of Rsch., The Norton Co., Worcester, Mass. PHYSICAL CHEMISTRY.

KITCHIN, Paul Clifford, Secy. and Prof., Ohio State Univ. Dental Coll., Columbus, Ohio. DENTAL HISTOLOGY, EMBRYOLOGY.

KITCHIN, Thurman Delna, Pres., Wake Forest Coll., Wake Forest, N. C. INTERNAL MEDICINE.

KITTREDGE, Joseph, Prof. of Forestry, Univ. of Calif., 1747 Spruce St., Berkeley, Calif. FORESTRY.

KJERSTAD, Conrad Lund, Prof. of Philos. and Edn. and Hd. Dept. of Philos., Univ. of N. D., Grand Forks, N. D. PSYCHOLOGY.



b. 1883, Platte, S. D. s. Peter Nelson and Maria (Johnson) K. Edn.: B.A., Univ. of S. D., 1911; M.A., 1916; Ph.D., cum laude, Univ. of Chicago, 1917. m. Alma Nelson of Canton, S. D., 1916. c.: Muriel Adele; Ruth Elaine; Phyllis Clare. Exp.: Dir. of Normal Trng. Dept., Augustana Coll., S. Dak., 1911-15; Fellow, Dept. of Psychol., Univ. of Chicago, Chicago, Ill., 1915-16; Psychol., State Tchrs. Coll., Winona, Minn., 1916-17; Asst. in Psychol., State Normal Schl., Valley City, N. Dak., 1917-18; Hd. Dept. of Edn., State Tchrs. Coll., ibid., 1919-20; Hd. Dept. of Edn. and Psychol., ibid., 1920-29; Dean of the Faculty, ibid., 1924-29; Pres., State Tchrs. Coll., Dickinson, N. Dak., 1929-36; Prof. of Phil. and Edn., Univ. of N. Dak., Grand Forks, N. Dak., 1936; Prof. of Philos. and Edn., and Hd. Dept. Philos., Univ. of N. D., 1938—. Author: Monographs: Learning Curves for Memory, Psychol. Rev. Co. Ph.D. Dissertation: The Learning Curves for Memory. War Record: U. S. Army, 1918. Hobbies: Ed. of Rotary Club. Bull. Listed in: Who's Who in Amer.; A.M.S.; W. W. in Govt.; Internatl. Blue Book.

KLAGES, Karl Henry William, Prof. and Hd., Agron. Dept., Univ. of Idaho, Moscow, Idaho. AGRONOMY.

KLAPPER, Paul, Pres., Queens Coll., Flushing, N. Y. TEACHER PREPARATION.

KLAPPERICH, Alfred James, Assoc., Polydoroff and Associates, 205 W. Wacker Dr., Chicago, Ill. PHYSICS.

KLARMANN, Emil G., Vice-Pres. in Chg. of Rsch., Lohn and Fink, Inc., Bloomfield, N. J. CHEMISTRY.

KLAUBER, Laurence Monroe, Elec. Engr., Elec. Bldg., San Diego, Calif. ELECTRICAL ENGINEERING. b. San Diego, Calif., Dec. 21, 1883. s. Abraham and Theresa (Epstein) K. Edn.: A.B., Stanford Univ., 1908. Hon. Deg.: LL.D., Univ. of Calif., 1941. m. Grace Gould, Nov. 29, 1911. c.: Alice; Philip Monroe. Exp.: Salesman, Engr., Dept. Supt., Gen. Supt., Vice-Pres. in Chg. of Operation, Vice-Pres., Gen. Mgr., and Pres. Now Chmn. of Bd., San Diego Gas and Elec. Co., San Diego, Calif., 1911—. Fellow, Amer. Inst. of Elec. Engrs.; A.A.A.S.; Calif. Acad. of Sci. Mem.: Amer. Geog. Soc.; Amer. Museum of Natl. Hist.; Amer. Soc. of Civil Engrs.; Amer. Soc. of Mech. Engrs.; Amer. Chem. Soc.; Pacific Coast Elec. Assn.; Amer. Gas Assn.; Pacific Coast Gas Assn.; Amer. Math. Soc.; Math. Assn. of Amer.; Sismol. Soc. of Amer.; Amer. Soc. of Ichthyol. and Herpetol.; Herpetol. League; San Diego Zool. Soc.; Amer. Econ. Soc.; West. Soc. of Naturalists; Amer. Statistical Assn.; Inst. of Math. Statistics; Biometric Soc.; Soc. of Systematic Zool.; Fine Arts Soc. of San

Diego; Calif. Hist. Soc.; Sigma Xi; Tau Beta Pi. Contrb. to: Various Publications on Elec. Dist., also Reptiles.

KLEBBA, Anthony Arthur, Rsch. Assoc., Woods Hole Oceanographic Inst., Woods Hole, Mass. PHYSICS.

KLEIBER, Max, Prof. of Animal Husbandry, Univ. of Calif., Davis, Calif. ENERGY METABOLISM.

KLEIN, Abraham Albert, Asst. Dir. of Rsch., Norton Co., New Bond St., Worcester, Mass. ABRASIVES, CERAMICS.

KLEIN, Arthur Lewis, Asst. Prof. of Aeronautics, Calif. Inst. of Tech., Pasadena, Calif. AERONAUTICS.

KLEIN, David, General Mgr., Wilson Lab., 4221 S. Western Ave., Chicago, Ill. CHEMISTRY.

KLEINER, Israel Simon, Prof., N. Y. Med. Coll., Flower and Fifth Ave. Hosp., N. Y., N. Y. BIO-CHEMISTRY.

KLEINPELL, Robert Minssen, Assoc. Prof. of Paleontology, Univ. of Calif., Berkeley, Calif. PALEONTOLOGY.

KLEINSCHMIDT, Robert V., Consulting Engr., 20 East St., Stoneham, Mass. PHYSICS, ENGINEERING.

KLEITMAN, Nathaniel, Assoc. Prof. of Physiol., Univ. of Chicago, Chicago, Ill. PHYSIOLOGY.

KLEMME, Arnold William, Extension Prof. of Soils, Univ. of Mo., 505 Crestland Rd., Columbia, Mo. AGRONOMY. (SOIL FERTILITY). b. Gerald, Mo., Nov. 27, 1893. s. Henry A. and Elizabeth Ann (Martin) K. Edn.: B.S., Univ. of Mo., 1925; M.S., Univ. of Ill., 1932; Ph.D., Univ. of Mo., 1951. m. Lois McCause, Sept. 11, 1926. c.: William M.; Martha. Exp.: County Agri. Agent, Lawrence Co., Mo., 1925-30; Asst. in Soil Fertility, Dept. of Agron., Univ. of Ill., 1930-31; County Agent, Lawrence Co., Mo., 1932-35; Asst. Prof., Assoc. Prof., Prof. of Soils, Univ. of Mo., Columbia, Mo., 1935—. Mem.: Gamma Sigma Delta; Sigma Xi; Alpha Zeta; Amer. Soc. Agron.; Soil Sci. Soc. of Amer.; Alpha Gamma Sigma. War Record: Private, 1917-19. Special Int.: Interrelations Soil Fertility; Plant Composition and Animal Behavior; Placement of Commercial Fertilizers.

KLEMME, Roland M., Neurological Surgeon, Prof. of Surgery and Chmn., Div. of Neurosurgery, St.



Louis Univ. Schl. of Med., 4952 Maryland Ave., St. Louis, Mo. NEUROSURGERY. b. Belleville, Ill., May 17, 1896. s. G. D. and Margaret (Metzler) K. Edn.: M.D., Wash. Univ. Schl. of Med., 1921. m. Virginia Knobelock, Dec. 31, 1926. d. Mr. and Mrs. Adolph Knobelock. c.: Charles Rayhill (dec.). Exp.: Intern on the Med. Service of Barnes Hosp., St. Louis, 1921-22; Out-patient Surg. and in Chg. of the Surg. Path. Lab., 1922-23, Wash. Univ.; Asst. Res. Surg., 1922-24, Barnes Hosp., Fellow in Neurosurgery, Washington Univ., 1924; Associated with Dr. Ernest Sachs in Neurol. Surg., 1925-34; Private Practice from 1934—; Instr., Clin. Neurol. Surg., Wash. Univ., 1927-41; Assoc. Prof. of Surgery, Chmn. of the Div. of Neurol. Surg., St. Louis Univ., 1941-42; Prof. of Surg., Chmn., Div. of Neurosurg., St. Louis Univ. Schl. of Med., 1942—. Hosp. Affiliations: St. Luke's Hosp.; St. Louis City Hosp.; St. Louis Co. Hosp.; St. Mary's Hosp.; St. John's Hosp.; Firmin Desloge Hosp.; Ellis Fischel State Cancer Hosp., Columbia, Mo.; Shriners Hosp.; Mo. Baptist Hosp. Med. Schl. Affiliations: Hd. of Neurosurgical Div. of St. Louis Univ. and Affiliated Hosps.; Univ. of Mo., Columbia,

Mo. Consultant Neurosurgeon; Mo. Pacific R. R. Hosp. Assn.; Frisco R. R. Hosp. Assn.; Wabash R. R. Hosp. Assn.; Mo.-Kans.-Tex. R. R. Hosp. Assn. Mem.: World Med. Assn.; Amer. Med. Assn.; St. Louis Med. Soc.; St. Louis Neurol. and Psychiatric Soc.; Southern Med. Assn.; Life Mem., Miss. Valley Med. Soc.; Life Mem., Amer. Coll. of Surgeons; Order of Distinguished Ams.; Southwestern Surgical Congress; Founder-Fellow, Internat. Coll. of Surgeons; Amer. Soc. for Control of Cancer; Co-Founder of Harvey Cushing Soc.; Amer. Assn. of Anatomists; Hon. Mem., Terre Haute Acad. of Med.; Hon. Mem., Gorgas Soc.; Amer. Bd. of Neurol. Surgery, Oct. 1, 1940; Certified Neurosurgeon by Qualification Bd. of Internat. Coll. of Surgeons, Oct., 1949, Certificate No. 12; Hon. Mem., Asociacion Medica Argentina; Hon. Mem., Sociedad de Cirugia de La Pax; Corres. Mem., Extraordinary Sociadade de Neurologia y Psiquiatria de Buenos Aires; Hon. Mem., El Rector de la Universidad, Mayor de San Andres; Hon. Mem., Piemontese Surgial Soc.; Hon. Mem., Turkish Med. Soc.; Hon. Mem., Sociedad de Cirugie de Madrid; Hon. Mem., Societe de Cherugie Bordeaux. Author: Nursing Care of Neurosurgical Patients, 1949; Monograph on Parkinsonism; Kinesiology. Colo. Moving Pictures with Sound; Major Neuralgias, Surgical Treatment; Parkinson's Syndrome, Surgical Treatment. Contrb. to: Southern Med. Jour.; Surgery, Gynecol. and Obstetrics; The Laryngoscopy; Ill. Dental Jour.; Mo. State Med. Jour.; Ind. State Med. Amer. Jour. of Ophthalmol.; Proc. of Assn. for Rsch. in Nervous and Mental Diseases; Surgery; Arch. of Neurol. and Psychiatry; Eye, Ear, Nose and Throat Monthly; Jour. of Amer. Med. Assn.; Proc. of Soc. for Exptl. Biol. and Med.; Exptl. Med. and Surgery; Jour. of Comparative Neurology; Modern Med.; Annals of Surgery; Dental Digest; Arch. of Neurol. and Psychiatry; Jour. of Internat. Coll. of Surgeons; Jour. of Mexican Med. Assn.; Jour. of Mt. Sinai Hosp.; S. Dak. Jour. of Med. and Pharmacy; Post Grad. Med. Gen. Int.: Introduced the Following Operations: Differential Sect. for Trigeminal Neuralgia, 1934; Surgical Treatment of Oculogyric Crises, 1937; Autopsy Nerve Grasts, 1943; Spinal Cord Transplants, 1944; Surgical Treatment of Paralysis Agitans, 1947; Surgical Treatment of Angina Pectoris; Inaugurated Med. Film Library of Library of Congress, Washington, D. C.

KLEMPERER, Paul, Dept. of Pathol., Mt. Sinai Hosp., N. Y. 29, N. Y. PATHOLOGY AND BACTERIOLOGY.

KLETZIEN, Seymour William F., Biochemist, Nutrition Rsch. Clinic, 330 S. Ninth St., Philadelphia, Pa. BIOCHEMISTRY, NUTRITION.

KLEVE, Karl, Proprietor, Kleve Motor Cars, R.R. 3, Race Road, Cheviot, Ohio. AUTOMOTIVE ENGINEERING.



b. Cincinnati, Ohio, Sept. 28, 1918. s. Karl and Emma (Rattermann) K. Edn.: B.M.E., Ohio State, 1944. Exp.: Engineer, Atomic Energy Commn., 1944-45; Proprietor, Kleve Motor Cars, Auto. Rsch. Lab., 1946—. War Record: Participated in Atomic Bomb Design, World War II; U. S. Army, 1941-44. Gen. Int.: Inventor of Pneumatic Auto Suspension, Dual Rear Engine Drive Transmission, and Kleve Internal Combustion Engine. Special Int.: Automotive Design and Engrng.

KLIMSTRA, Willard, David, Assoc. Prof. of Zool., Southern Ill. Univ., Carbondale, Ill. WILDLIFE MANAGEMENT AND CONSERVATION. b. Erie, Ill., Dec. 25, 1919. s. Paul D. and Jessie (Jaarsema) K. Edn.: Blackburn Junior Coll., 1939; A.B., Maryville Coll., 1941; M.S., Iowa State Coll., Assoc., ibid.; Asst. Prof. of Zool. Southern Ill. Univ., 1949-52; Assoc. Prof., ibid., 1952—. Mem.: Wildlife Soc.; Amer. Ornithol. Union; Amer. Soc. of Agron.; Wilson Ornithol. Club; Gamma Sigma

Delta; Sigma Xi; Alpha Sigma. Contbr. to: Iowa State Coll. Jour. of Sci.; Jour. of Wildlife Mgt. Copeia. Ph.D. Dissertation: Some Factors Influencing Ecology and Management of the Interior Bobwhite Quail (*Colinus virginianus mexicanus* L.) 1948; Ph.D., *ibid.*, 1949. m. Miriam Evelyn Brown, of Gary, N. C., July 11, 1942. d. Wm. and Rose Brown. c.: David Eugene; Kay Ellen. Exp.: Student Work Manager, Blackburn Junior Coll.; Tehng. Asst., Bot. Dept., Univ. of N. C.; Foreman, Consolidation Dept., Natl. Munitions Corp., Carboro N. C.; Rsch. Fellow Iowa State Coll.; Rsch. On Marginal Lands in Southeastern Iowa. Hobbies: Sports; Gardening; Hunting; Fishing. Special Int.: Bob-white quail, Conservation and Herpetology.

KLINCK, Gustavus Herman, Chf., Section of Endocrine Path., Armed Forces Inst. of Path., Wash. 25, D. C. **PATHOLOGY**. b. Charleston, S. C., May 7, 1903. s. Gustavus H. and Edith E. (Tiedeman) K. Edn.: B.S., Coll. of Charleston, S. C., 1924; M.D., Medical Coll. of State of S. C., 1928. m. Florence Noble in June, 1932. c. Daniel N.; John L. Exp.: Assoc. Prof. of Pathol. and Bacteriol., Albany Med. Coll., 1936-47; Dir. of Laboratories, Samaritan Hosp., Troy, N. Y., 1939-48; Chf., Section of Endocrine Pathol., Armed Forces Inst. of Pathol., Wash., D. C., 1948—. Mem.: Sigma Xi; Amer. Assn. of Pathol. and Bacteriol.; Amer. Goiter Assn.; Coll. of Amer. Pathol.

KLINE, Benjamin Schoenbrun, Chf. Labs., Mt. Sinai Hosp. and Asst. Prof. of Pathol., Western Reserve Univ., Cleveland, Ohio. **PATHOLOGY**.

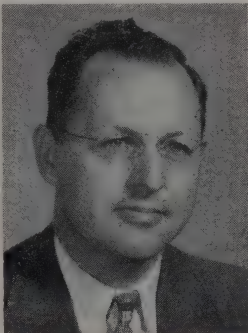
KLINE, Hayden Benjamin, Vice-Pres., Indus. Rayon Corp., Box 5846, Cleveland, Ohio. **CHEMISTRY, ENGINEERING**.

KLINE, John Robert, Thomas S. Scott Prof. of Math., Univ. of Pa., Philadelphia, Pa. **TOPOL-OGY**.

KLINE, Linus Ward, Prof. Emer. Psychol., Skidmore Coll., Saratoga Springs, N. Y.; 802 E. 14th St., Houston, Tex. **PSYCHOLOGY**.

KLINEBERG, Otto, Asst. Prof. of Psychol., Columbia Univ., N. Y., N. Y. **PSYCHOLOGY**.

KLINGMAN, Glenn Charles, Assoc. Prof. of Agron., N. C. State Coll., Raleigh, N. C. **AGRONOMY (WEED CONTROL)**. b. Jan. 7, 1915. s. William and Mabel (Eickman) K. Edn.: B.Sc., Univ. of Nebr., 1939; M.Sc., Kans. State Coll., 1941; Ph.D., Rutgers Univ., 1950. m. C. Loree Ross, June 3, 1939. c.: Charles Ross; Glenda Lee; Richard Lynn; Nila Ann. Exp.: Instr., Univ. of Nebr., 1940-46; Assoc. Prof., Tehng. and Rsch. in Agron., N. C. State Coll., Raleigh, N. C., 1947—. Hon. Pos.: Chmn., Student Sections of Amer. Soc. of Agron.; Chmn., Resident Tehng. Section.

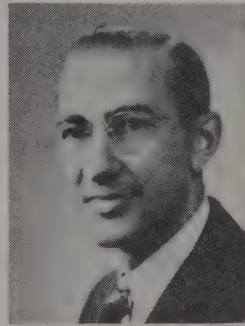


tion, *ibid.*, Vice-Chmn. of Agronomic Edn. Section, *ibid.*; etc. Mem.: Sigma Xi; Gamma Sigma Delta; Alpha Zeta; A.A.A.S.; Amer. Soc. Agron.; Southern Weed Conf. Co-author: Principles of Weed Control, 1951. Contbr. to: Botanical Gazette; Agron. Jour.; Southern Weed Conf. Proc.; etc. War Record: U. S. Navy, 1943-46; Released as Lieut. (Srg.). Gen. Int.: Established Volatility Differences in 2, 4-D Compounds; Rsch. in Weed Control Work. Special Int.: Weed Control Rsch.—Corn, Small Grains, Tobacco, Wild Garlic, Bermuda Grass.

KLINFELTER, Theron, Mineral Tech., U. S. Bur. of Mines, Box 471, Norris, Tenn. **CERAMIC ENGINEERING AND RAW MATERIALS**. b. Woodbridge, Calif., May 1, 1886. s. W. H. and Mary E. (Faivre) K. Edn.: B.A., Ohio State Univ., 1908; B.S., *ibid.*, 1915; Prof. Deg., Ceramic Engrng., *ibid.*,

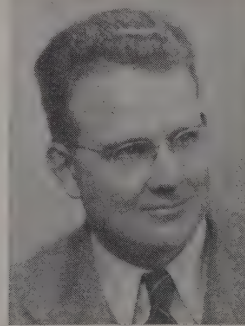
1937. m. 1. Anna Marie Coffey, May 31, 1917. m. 2. Margaret M. Boland, Feb. 11, 1952. c.: John William; James Louis; Nora Ellen. Exp.: Ceramic Engr., Westinghouse Elec. and Mfg. Co., E. Pittsburgh, Pa., 1915-20; Supt., Plant 1, Atlantic Terra Cotta Co., N. Y. C., 1920-22; Supt., Pottery Div., J. L. Mott Iron Works, Trenton, N. J., 1922-24; Ceramic Engr., Gladding McBean and Co., San Francisco, Calif., 1924-26; Rsch. Assoc., Natl. Terra Cotta Soc. and Natl. Bur. of Standards, 1926-27; Supt., Columbus Branch, Natl. Bur. of Standards, Columbus, Ohio, 1927-33; Ceramic Engr. and Tech., *ibid.*, Washington, D. C., 1933-41; Minerals Tech., U. S. Bur. of Mines, Dept. of Int., Tuscaloosa, Ala., 1941-51; Chf. Raw Materials Branch, *ibid.*, Raleigh, N. C., 1951-52; Ch. Raw Materials, *ibid.*, Norris, Tenn., 1952—. Mem.: Amer. Ceramic Soc.; Inst. of Ceramic Engrs.; Amer. Inst. M&M Engrs.; A.A.A.S.; Mason; Sigma Xi. Contbr. to: A.I.M.E.; Jour. and Bull. Amer. Ceramic Soc.; Various Govt. Publications. Special Int.: Ceramic Raw Materials; Ceramic Fields of Whitewares; Refractories and Structural Clay Products.

KLOEPFER, H. Warner, Assoc. Prof. of Anatomy, Tulane Univ. Schl. of Med., New Orleans, La. **HUMAN GENETICS**. b. Feb. 25, 1913, Roseville, Ohio. s. John A. and Mayme Grace (Ivett) K. Edn.: B.S.E., Ohio Univ., 1934; B.A., Muskingum Coll., 1935; M.A., Ohio Univ., 1938; Ph.D., Ohio State Univ., 1942; Univ. of Minn., summer, 1947; Univ. of Chicago, summer, 1950. m. Ruth Elizabeth McCoy of Ohio and Pa., May 26, 1936. d. Daniel and Bessie McCoy. c.: Jean Elizabeth; Karol Grace; Ruth Ann; John Warner. Exp.: Sci. Tchr., St. Clairsville H. S., 1935-36; Sales Mgr., Bible Co., 1932-37,



summers; Grad. Asst., Ohio State Univ., 1939-42; Prof. of Zool., Dak. Wesleyan Univ., Mitchell, S. D., 1942-46; Acad. Dean, Dean of Men, Coll. of Emporia, Emporia, Kan., 1946-47; Acad. Dean, Coll. of the Ozarks, Clarksville, Ark., 1947-52; Assoc. Prof. of Anatomy, Tulane Univ., New Orleans, La., 1952—. Mem.: A.A.A.S.; Sigma Xi; Psi Chi; Pi Gamma Mu; Tau Kappa Alpha; Phi Kappa Phi; Phi Tau Theta; Ark. Acad. Sci.; N.E.A.; Genetics Soc. of Amer.; Soc. of Human Genetics; The Biometric Soc.; Rotary. Contbr. to: Ednl. and Sci. Jours. Ph.D. Dissertation: An Investigation of 171 Possible Linkage Relationships in Man. Travel: N. Amer. Listed in: A.M.S.; Who Knows—and What.

KLOPFER, F. Dudley, Asst. Prof. of Psychol., State Coll. of Wash., Pullman, Wash. **COMPARATIVE PSYCHOLOGY**.



b. Seattle, Wash., Apr. 11, 1921. s. Florenz A. and Frances (Holcomb) K. Edn.: B.S., Univ. of Mich., 1946; M.S., *ibid.*, 1947; Ph.D., *ibid.*, 1952. m. Barbara Jean McQuary, June 26, 1945. Exp.: Tehng. Fellow in Psychol., Univ. of Mich., 1946-48; Instr. in Psychol., State Coll. of Wash., 1948-52; Asst. Prof. of Psychol., *ibid.*, 1952—. Mem.: Amer. Psychol. Assn.; Western Psychol. Assn.; State Psychol. Assn. of Wash.; A.A.A.S.; Psi Chi. Contbr. to: Amer. Jour. Psychol.; Jour. Comparative and Physiol. Psychol.; Jour. Psychol.; etc. Special Int.: Salmon Migration; Methodology for Interspecific Comparisons; Endocrinological Influences on Animal Behavior.

KLOPSTEG, Paul Ernest, Prof. of Applied Sci. and Dir. of Rsch., Tech. Inst., Northwestern Univ., Evanston, Ill. **APPLIED PHYSICS**.

KLOTZ, Irving M., Prof. of Chem., Northwestern Univ., Evanston, Ill. **PHYSICAL BIOCHEMISTRY.**

KLOTZMAN, Robert H., Acting Surgeon, Air Rescue Service, Gravelly Point (T-7), Washington, D. C. **PHARMACY.**

KLUCKHOHN, Clyde, Prof. of Anthropol., and Dir. of the Russian Rsch. Center, Dudley Hall, Harvard Univ., Cambridge 38, Mass. **ANTHROPOLOGY.** b. LeMars, Ia., Jan 11, 1905. s. Geo. Wesley and Katherine (Swanzy) K. Edn.: A.B., Wis., 1928; M.A., Oxford, 1934; Ph.D., Harvard, 1936. Hon. Deg.: L.H.D., Univ. of N. M., 1949. m. Florence Rockwood of Springfield, Ill. c.: Richard. Exp.: Asst. Prof. of Anth., Univ. of N. M., 1932-34; Instr. to Prof., Harvard, 1935—; Dir., Russian Rsch., Centre, Harvard, 1947—. Mem.: Amer. Acad. Arts and Sci.; Amer. Philos. Soc.; Natl. Acad. Sci.; Alpha Delta Phi; Phi Beta Kappa. Author: *The Navaho*, 1946; *Personality in Nature, Soc. and Culture*, 1948; *Mirror for Man*, 1949; *Navaho Means People*, 1951. Ph.D. Dissertation: *Contemporary Anthropologized Theory. Travel: Europe. Hobbies: Bridge; Horseback Riding.* Listed in: *Who's Who in Amer.*; *Who Knows—and What; Who's Who in the East.*

KLUG, Harold Philip, Hd. of the Dept. of Rsch. in Chem. Phys., Mellon Inst., Pittsburgh 13, Pa. **X-RAY DIFFRACTION, PHYSICAL CHEMISTRY.** b. Sept. 20, 1902, Zanesville, Ohio. s. Philip John and Elizabeth (Craft) K. Edn.: B.A., Ohio State Univ., 1924; M.A., *ibid.*, 1926; Ph.D., *ibid.*, 1928. m. Helen Symons, July 25, 1930. c. Henry Philip. Exp.: Instr. and Asst. Prof. of Chem., Carleton Coll., 1927-32; Fellow in Phys. Chem., Calif. Inst. of Technol., 1932-34; Asst. Prof. of Chem., Univ. of Idaho, 1934-37; Asst. and Assoc. Prof. of Chem., Univ. of Minn., 1937-45; Hd., Chem. Phys. Dept., Mellon Inst., Pittsburgh 13, Pa., 1945—. Mem.: Phi Beta Kappa; Sigma Xi; Phi Lambda Upsilon; Amer. Chem. Soc.; Amer. Crystallographic Assn. Contrb. to: *Jour. Amer. Chem. Soc.*; *Jour. Applied Phys.*; *Anal. Chem.* Special Int.: *X-Ray diffraction, crystal and molecular structure determination.*

KLUMPP, Theodore George, MD., Pres., Winthrop-Stearns, Inc., 1450 Broadway, N. Y. 18, N. Y. **INTERNAL MEDICINE.** b. May 15, 1903, N. Y. C. s. Charles and Marie (Hayo) K. Edn.: B.S., Princeton, 1924; M.D., Harvard, 1928. Hon. Deg.: D.Sc., Philadelphia Coll. of Pharmacy, 1948. m. Virginia Morgan, Aug. 3, 1934. c.: Maralys; Allan; Virginia-Ann; Karla Marie; Kathleen Morgan and Theodore George, Jr. Exp.: Med. House Officer, Peter Bent Brigham Hosp., 1929-30; Asst. Resident Phys., Lakeside Hosp., 1930-32; Assoc. Phys., New Haven Hosp., Chf. of Hermetological Clinic and Dir. Med. Lab., 1932-36; Instr., Internal Med., Yale Univ., 1932-36; Asst. Clin. Prof., *ibid.*, 1932; Chf., Drug Div., Food and Drug Admin., 1936-41; Adj. Clin. Prof. of Med., Geo. Washington Univ., 1940-41; Attending Phys., Gallinger Municipal Hosp., 1941; Dir., Div. of Drugs, Amer. Med. Assn., 1941-42; Pres., Winthrop Stearns, Amer. Med. Assn., 1941-42; Pres., Winthrop Stearns, Inc., 1942—; Chmn., Bd. of Winthrop-Stearns of Can., Ltd., 1951—; Dir. Sterwin Chem. Inc., 1949—; Dir. Geo. A. Breon & Co., 1952—; V.-P., U. S. Pharmacopeia (1950-60) and Chmn. Finance Comm.; Treas., Comm. on Chronic Illness; Dir., Amer. Foundation for Tropical Med., 1943-48; Chmn., Sub-Comm. Employment 4 Mayor's Advisory Comm. for the Aged, N. Y. C.; Pharmaceutical Mfrs. Industry Advisory Comm. and Penicillin Producers Ind. Adv. Comm., War Production Bd. (1942-47). Mem.: Amer. Coll. of Physicians; A.M.A.; Amer. Soc. of Clin. Invest.; A.A.A.S.; N. Y. Acad. of Med.; Chem. Club; Drug and Chem. Club; Amer. Pub. Health Assn.; New Haven Co. Med. Soc.; Ex. Comm. Amer. Drug Manufacturers' Assn.; Bd. Dir. Amer. Pharmaceutical Manufacturers' Assn.; Ex. Comm. Natl. Vitamin Foundation; Chmn. Task Force on the Handicapped; Dir. N. Y. Heart Assn.; Dir. World Med. Assn. Special Int.: *Longevity, Old Age and Retirement, Pharmaceutical Indus.*

KLUVER, Heinrich, Prof. of Exptl. Psychol., Univ. of Chicago, Chicago, Ill. **PSYCHOLOGY.**

KNAPP, Burton Bower, Rsch. Chem., Internatl. Nickel Co., Westfield, N. J. **CORROSION AND ELECTROPLATING.** b. May 29, 1910, Northfield, Minn. s. Asa B. and Margaret Jane (Whitney) K. Edn.: B.A., Carleton Coll., 1933; Ph.D., Wis. Univ., 1937. m. Agnes G. Heard, June 27, 1942. c. Martha; Carol; and Burton, Jr. Exp.: Rsch. Chem., Internatl. Nickel Co., Westfield, N. J., 1937—. Mem.: Amer. Chem. Soc.; Amer. Electroplater's Soc. Contrb. to: *Plating, Metal Finishing.*

KNAPP, Edwin John, Prof. and Hd. Dept., Coll. of Mines, El Paso, Tex. **PHYSICS.**

KNAPPEN, Russell Stafford, Asst. Vice-Pres., Gulf Oil Corp., 2130 S. Owasso Ave., Tulsa, Okla. **PETROLEUM GEOLOGY.**

KNAUSS, Homer Charles, Hd., Engrng. Measurements Group, Submarine Signal Co., 160 State St., Boston Mass. **ACOUSTICS.**

KNAYSIS, Ardalla Georges, Dairy Bldg., Cornell Univ., Ithaca, N. Y.

KNAYSIS, Georges Abdallah, Prof. of Bacteriol., Stocking Hall, Cornell Univ., Ithaca, N. Y. **BACTERIOLOGY, PARTICULARLY BACTERIAL CYTOLOGY.** b. Hasbaya, Lebanon, June 21, 1898. s. Abdallah and Saleemy (Mattar) K. Edn.: B.S., Cornell, 1924; M.S., *ibid.*, 1925; Ph.D., *ibid.*, 1929. Hon. Deg.: D.Sc., St. Bonaventure Univ., 1952. m. Adele Maosha, Apr. 23, 1939. c.: Georges, Jr.; Edmund Joseph; Fareed Anthony. Exp.: Instr. in Bacteriol., Cornell Univ., Ithaca, N. Y., 1926-31; Asst. Prof., *ibid.*, 1931-42; Assoc. Prof., *ibid.*, 1942-44; Prof., *ibid.*, 1944—. Mem.: A.A.A.S.; Soc. of Amer. Bacteriol.; Amer. Dairy Sci. Assn.; Sigma Xi; Phi Kappa Phi. Author: *Elements of Bacterial Cytol.*, 1944-51. Contrb. to: *Jour. of Bacteriol.*; *Sci.*; *Amer. Rev. of Tuberculosis*; *Jour. of Inf. Diseases*; *Jour. of Dairy Sci.*; *Bacteriol. Rev.*; *The Botanical Rev.* Special Int.: *Cytol. of Microorganisms.*



KNECHTEL, Maxwell McMichael, Geologist, U. S. Geol. Survey, 7 Duvall Dr., Washington, D. C. **GEOLOGY.**

KNERR, Henry William, Assoc. Prof. of Physics and Asst. to the Dean of the Grad. Schl., 219 Adams Fisher, Ill. s. William Smith and Mathilda Rosalie (Heyer) K. Edn.: A.B., Univ. of Ill., 1928; A.M., Harvard Univ., 1935; Ph.D., Univ. of Mich., 1937. m. Catherine Margaret Conner, June 17, 1929. d. Mr. and Mrs. Charles E. Conner of Olney, Ill. c.: Elizabeth Anne and Anthony David. Exp.: Instr. in Math. and Physics, Tolono Community H. S., Tolono, Ill., 1928-29; Rsch. Asst., Gen. Elec. Rsch. Lab., Schenectady, N. Y., 1930; Instr. in Math., Ga. Schl. of Tech., Atlanta, Ga., 1930-33; Tehng. Fellow in Physics, Univ. of Mich., Ann Arbor, Mich., 1934-36; Instr. in Physics, Pa. State Coll., 1936-41; Asst. Prof. of Physics, *ibid.*, 1941-42; Assoc. Prof. Ave., State Coll., Pa. **PHYSICS.** b. Dec. 6, 1905, of Physics, *ibid.*, 1942-52; Assoc. Prof. Physics and Asst. to the Dean of the Grad. Schl., *ibid.*, 1952—. Mem.: Phi Beta Kappa; Sigma Xi; Pi Mu Epsilon; Sigma Pi Sigma; Phi Eta Sigma; Fellow, A.A.A.S.; Amer. Phy. Soc.; Amer. Assn. of Physics Tchrs.; N.E.A.; Natl. Sci. Tchrs. Assn.; A.A.U.P.; Lambda Chi Alpha. Contrb. to: *Phys. Rev.* Ph.D. Dissertation: *The Electric Spectrum of Liquid Water from Five to Twenty Centimeters.* Listed in: *A.M.S.*

KNIFFEN, Fred, Prof. of Geography and Anthropology, La. State Univ., Baton Rouge 3, La. **ANTHROPOLOGY.** b. Britton, Mich., Jan. 18, 1900. s. Samuel Bradshaw and Mary Ingersoll (Bowerman) K. Edn.: A.B., Mich., 1922; Ph.D., Univ. of Calif., 1929. m. Virginia Arp, Aug. 9, 1927. c.:

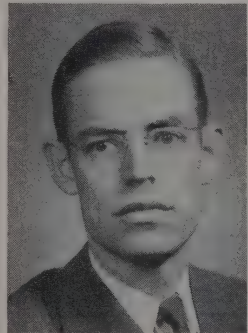
Samuel James; Donald Avery; Nancy Margaret. Exp.: Asst., Assoc. and Prof., La. State Univ., 1929—. Mem.: Phi Beta Kappa; Sigma Xi; A.A.-A.S.; Amer. Folklore Soc.; Phi Kappa Phi; Sigma Gamma Epsilon; Omicron Delta Kappa. Author: Achomawi Geography, 1928; The Primitive Cultural Landscape of the Colo. Delta, 1931; Indians of La., 1945; etc. Contrb. to: Geographical Rev.; Annals Assn. of Amer. Geographers; La. Historical Quarterly Jour. Amer. Folklore; Amer. Anthropologist. War Record: Private, 1918. Special Int.: Indian Geography; Settlement Forms; Folk House Types; Culture Hist.

KNIGHT, Frank P., Jr., Christmas, via Winkelman, Ariz. CERAMICS.

KNIGHT, Harry Hazelton, Prof. of Zool. and Entomol., Iowa State Coll., Ames, Iowa. ENTOMOL-OGY.

KNIGHT, James Brookes, Rsch. Assoc. Paleontology, Smithsonian Inst., U. S. Natl. Museum, Washington, D. C. INVERTEBRATE PALEONTOLOGY.

KNIGHT, Odon Stahlhut, Chief Engr., S. B. Penick and Co., 50 Church St., New York City. Residence:



94 Vreeland Ave., Ruth-
erford, N. Y. CHEMI-
CAL ENGINEERING. b.
Denver, Colo., June 22,
1907. s. Odon Wilkes
and Minnie A. (Stahl-
hut) K. Edn.: B.S.,
Univ. of Colo., 1928;
M.S., ibid., 1932; Ph.D.,
ibid., 1933; Ch.E., ibid.,
1935. m. Lola Dell
Johnson on Sept. 18,
1936. c.: Odon George;
Velma Elizabeth; James
Fred. Exp.: Jr. Engr.,
Link-Belt Co., Indian-
apolis, Ind., 1928-29;
Instr. in Mechanical En-
grng., Univ. of Colo.,
1929-35; Rsch. Chemist,
Link-Belt Co., Indianap-
olis, 1935-36; Asst. Prof. of Chem. Engrng., Univ.
of Colo., 1936-37; Dir., Chem. Div., J. P. Devine
Mfg. Co., Mount Vernon, Ill., 1937-39; Asst. Prof.
of Chemical Engrng., Rose Poly. Inst., Terre Haute,
Ind., 1939-44; Chem. Engr., Commercial Solvents
Corp., Terre Haute, Ind., 1943-51; Administrative
Asst. to the Chf. Engr., ibid., 1951-52; Chf. Engr.,
S. B. Penick and Co., 50 Church St., N. Y. C.,
1952—. Hon. Pos.: Chmn., Wabash Valley Section,
Amer. Chem. Soc., 1950-51. Mem.: Amer. Inst. of
Chem. Engrs.; Amer. Chem. Soc.; Amer. Soc. for
Engrng. Edn.: Sigma Xi; Tau Beta Pi; Alpha Chi
Sigma; Theta Xi. Contrb. to: Jour. of Amer.
Chem. Soc.; Industrial and Engrng. Chem.; Trans.
of the Amer. Inst. of Chem. Engrs.; Chem. Engrng.;
Jour. of Chem. Edn. Special Int.: Design. of Chem.
Process Equipment; Design and Construction of
Chem. Plants; Vapor Pressure-Temperature Rela-
tionships; Mass Spectrometry.

KNIGHT, Ray Roberts, Physician, 601 LaSalle
Bldg., Minneapolis, Minn. GASTRO-ENTEROL-
OGY. b. June 11, 1881, Nokomis, Ill. s. Charles
Wisner and Alma Phoebe (Roberts) K. Edn.:
A.B., Univ. of Minn., 1903; M.D., ibid., 1906. m.
Grace Ellen Morris, Aug. 31, 1911. c.: Morris
Charles (dec.); Margaret K. Brimhall (dec.);
Douglas Marion and Donald Ray. Exp.: Instr.,
Univ. of Minn., Schl. of Dentistry, 1911; Installed
the first X-Ray Dept., ibid., 1913; Prof., Oral
Roentgenol. and Phys. Diagnosis, ibid., 1924; Clini-
cal Prof. Emeritus, 1949; Physician, Minneapolis,
Minn., 1906—. Mem.: Amer. Roentgen Ray Soc.;
Radiol. Soc. of North Amer. Kiwanis; Amer. Phys.
Art Assn.

KNIGHT, Robert Palmer, Med. Dir., Austen Riggs
Center, Inc., Stockbridge, Mass. PSYCHIATRY AND
PSYCHO-ANALYSIS. b. July 18, 1902, Urbana,
Ohio. s. William J. and Florence (Dempcy) K.
Edn.: B.A., Oberlin Coll., 1923; M.D., Northwestern
Univ. Med. Schl., 1932. m. Florence Eichelberger,
Sept. 3, 1927. c. Robert P., Jr.; Richard P. and
William E. Exp.: Chf. of Psychotherapy Service,

Menninger Clinic and Sanitarium, 1937-46; Asst.
Dir., Topeka Inst. for Psychoanalysis, 1940-46;
Dir., ibid., 1946-47; Chf. of Staff, Menninger Clinic,
1946-47; Clin. Prof. of Psychiatry, Menninger
Foundation Schl. of Psychiatry, 1946-47; Med. Dir.,
Austen Riggs Foundation, Stockbridge, Mass.,
1947—; Clin. Prof. of Psychiatry, Yale Univ., Schl.
of Med., 1947—. Mem.: A.M.A.; Amer. Psychiat-
ric Assn.; Amer. Psychopathological Assn.; Amer.
Orthopsychiatric Assn.; Central Neuropsychiatric
Assn.; Amer. Psychoanalytic Assn., (Pres. 1951-
53); Mass. Psychiatric Soc. Contrb. to: Bull. of
Menninger Clinic; The Psychoanalytic Rev.; Jour.
of Nerv. and Ment. Disease; Amer. Jour. of
Nursing; Ind. State Med. Jour.; Jour. of Kans.
Med. Soc.; Amer. Jour. of Orthopsychiatry; Sci.
Illustrated; Jour. Soc. of Casework. Special Int.:
Psychotherapy.

KNIGHT, Samuel Howell, Prof. and Hd., Dept. of
Geol., Univ. of Wyo., Laramie, Wyo. STRATI-
GRAPHICAL GEOLOGY.

KNIGHT, William Abner, Prof. Emer. Indus.
Engrng., Ohio State Univ., 206 W. Lane Ave.,
Columbus, Ohio. ENGINEERING.

KNIPLING, Edward Fred, Asst. Chf. in Chg. of
Entomological Research, Bureau of Entomology and
Plant Quarantine, U. S. Dept. of Agri., Wash-
ington, D. C. ENTOMOLOGY. b. Mar. 20, 1909,
Port Lavaca, Tex. s. H. J. and Hulda (Rasch) K.
Edn.: B.S., Tex. A. and M. Coll., 1930; M.S., Iowa
State Coll., 1932; Ph.D., ibid., 1947. m. Phoebe
Hall, July 22, 1934. c. Edwina Hall; Anita Anne;
Edward F.; Gary D. and Ronald R. Exp.: In Chg.,
Orlando, Fla. Lab., 1942-46; In Chg., Div. of
Insects Affecting man and animals, Bureau of
Entomol. and Plant Quarantine, U. S. Dept. of
Agri., Washington, D. C., 1946-53. Mem.: En-
tomological Soc. of Amer.; A.A.A.S.; Amer. Soc. of
Trop. Med.; Sigma Xi; Amer. Mosquito Control
Assn. Contrb. to: Jour. Entomol.; Natl. Malaria
Soc. Jour.; Jour. of Parasitol.; Mosquito News.
Special Int.: Rsch. on the Biol. and control of
insects of med. and vete. importance.

KNIPMEYER, Clarence Carl, Prof. of Elec. Engrng.,
Rose Poly. Inst., Terre Haute, Ind. ENGINEER-
ING.

KNOBLAUCH, Harold Carl, Asst. Chf., Office of
Expt. Stations, U. S. Dept. of Agri., Washington
25, D. C. SOIL CONSERVATION, SOIL FERTIL-
ITY AND SOIL MANAGEMENT. b. Riga, Mich.,
Oct. 9, 1908. s. Ferdinand and Wilhelmina (Kolz)
K. Edn.: B.S., Mich. State Coll., 1931; M.S., R. I.
State Coll., 1933; Ph.D., Rutgers Univ., 1942. m.
Willette Johnson, 1939. c.: Harold; Richard; Carol.
Exp.: Rsch. in Agron., R. I. State Coll., Kingston,
R. I., 1931-35; Soil Conservation and Land Use Sur-
veys, Soil Conservation Service, N. Y. and Ga.,
1935-37; Rsch. Project Suprv., Soil Conservation
Service, New Brunswick, N. J., 1937-40; Soil Tech-
nologist and Expt. Station Administrator, Office of
Expt. Stations, U. S. Dept. of Agri., 1940-48; Asst.
Chf., ibid., 1948—. Hon. Pos.: Chmn., Natl. Soil and
Fertilizer Rsch. Com., 1948-50; Mem., U. S. Delegation,
Fourth Internat. Congress of Soil Sci., 1950;
Mem., Hoblitzelle Agril. Award Com.; Mem., Organ-
izing Com., Sixth Internat. Grassland Congress,
1952. Mem.: Phi Kappa Phi; Alpha Zeta; Alpha
Gamma Rho; Sigma Xi; Amer. Soc. Agron.; Soil
Sci. Soc. of Amer.; Internat. Soil Sci. Soc.; A.A.-
A.S. Contrb. to: Agron. Jour.; Soil Sci.; Soil Sci.
Soc. of Amer. Proc. Special Int.: Soil Fertility;
Soil Management; Soil Conservation; Minor Element
Rsch.; Rsch. Admin.

KNOBLAUGH, Armand Frank, Assoc. Prof. of
Physic., Univ. of Cincinnati, Cincinnati, Ohio.
PHYSICS. MECHANICS AND ELECTRONICS. b.
Cincinnati, Ohio, June 10, 1903. s. Frank Hill
and Nannette Wilomena (Armand) K. Edn.:
B.S.E., Univ. of Cincinnati, 1925; M.A., ibid., 1927;
Ph.D., ibid., 1929. m. Marie Eleanor Foertmeyer,
June 7, 1929. c. Joan Elizabeth and Richard
Armand. Exp.: Rsch. Asst. in Acoustics, Univ.
of Cincinnati, Cincinnati, Ohio, 1925-32; Chf. Rsch.
Physicist, The Baldwin Co., Cincinnati, Ohio, 1932-
52; Assoc. Prof. of Physics, Univ. of Cincinnati, Cin-
cinnati, Ohio, 1952—. Mem.: Inst. of Radio Engrs.;
Acoustical Soc. of Amer.; Tau Beta Pi; Engrng.

Soc. of Cincinnati; Delta Tau Delta. Gen. Int.: Numerous U. S. Patents. Special Int.: Mechanics and Electronics, Vibratory Phenomena, including Acoustics.

KNODE, Jay Carroll, 1020 13th St., Boulder, Colo. EDUCATION.

KNODT, Cloy Bernard, Prof. of Dairy Husbandry, Pa. State Coll., 525 W. Prospect, State Coll., Pa.



DAIRY CATTLE NUTRITION AND PHYSIOLOGY. b. Rosemount, Minn., Feb. 20, 1917. s. Edmund and Margaret (Schroeder) K. Edn.: B.S., Univ. of Minn., 1940; M.S., Univ. of Conn., 1942; Ph.D., *ibid.*, 1944. m. Alva Jeannette Carlson of Farmington, Minn., Mar. 25, 1940. d. Mr. and Mrs. C. A. Carlson. c.: Alva Christine; Charles Edmund; Daryl Brooks. Exp.: Rsch. Fellow, Univ. of Conn., 1940-41; Rsch. Asst., Univ. of Minn., 1942-44; Instr. and Asst. Prof., Cornell Univ., 1944-45; Prof., Pa. State Coll., 1946—. Mem.: Sigma Xi; A.A.A.S.; Amer. Gen. Assn.; Soc. Expt. Biol. and Med.; Amer. Soc. of Animal Prod. Contrb. to: Jour. Dairy Sci.; Jour. Amer. Sci.; Jour. Biol. Chem. Ph.D. Dissertation: The Carbohydrate Metabolism of the Mammary Gland. Hobbies: Photography. Listed in: Who's Who in the East; Who Knows—and What; Amer. Men of Sci. Special Int.: Nutrition and Physiology of Dairy Cattle.

KNOPF, Adolph, Stanford Univ., Palo Alto, Calif. GEOLOGY.

KNOTT, James Edward, Prof. and Hd., Div. Truck Crops, Univ. of Calif., Davis, Calif. PLANT PHYSIOLOGY.

KNOWER, Franklin Hayward, Prof. of Speech, Ohio State Univ., Columbus, Ohio. PSYCHOLOGY SPEECH.

KNOWLES, William V., 8905 Champlain Ave., Niagara Falls, N. Y. CERAMICS.

KNOWLTON, Ansel Alphonso, Prof. of Physics, Reed Coll., Portland, Ore. PHYSICS.

KNOWLTON, Clarence Hinckley, Salesman, D. C. Heath and Co., Publishers, 285 Columbus Ave., Boston, Mass. SYSTEMATIC BOTANY.

KNOWLTON, George Franklin, Prof. of Zool. and Entomology and Extension Entomologist, Utah St. Agri. Coll., Logan, Utah. ENTOMOLOGY AND GENERAL BIOLOGY. b. July 28, 1901, Farmington, Utah. s. Benjamin Franklin and Minerva (Richards) K. Edn.: B.S., 1923, M.A., 1925, Utah St. Agri. Coll.; Ph.D., 1932, Ohio St. Univ. m. Mary Watkins of Logan, Utah, July 29, 1925. d. Mr. and Mrs. L. P. Watkins. c.: Betty Jean; Kathryn Marie. Exp.: Asst. Entomologist, Utah St. Agri. Coll., 1925-30; Assoc., *ibid.*, 1930-40, *ibid.*; Rsch. Assoc. Prof. of Entomology, 1940-45, *ibid.*; Extension Entomologist, 1943—; Entomologist in Chg. of Insect and Rodent Control Unit for Ninth Serv. Command, U. S. Army Engrs., 1944-45; Prof. of Zool. and Entomol., Utah St. Agri. Coll., 1945—. St. Leader in grasshopper and mormon cricket control for Utah, 1937-51. Hon. Pos.: Vice-Pres., Utah St. Sigma Xi Club; Vice-Chmn., Rocky Mtn. Entomol. Conf., 1939-40; Vice-Pres., Amer. Assn. of Econ. Entomol., 1941-42; Chmn., Pacific Slope Branch of the Amer. Assn. of Econ. Entomologists, 1941-42; Chmn., Biological Section of the Utah Acad. of Sci., Arts and Letters, 1942-44 and 1949-50. Mem.: Amer. Assoc. for the Adv. of Sci.; Entomological Soc. of Amer.; Utah Acad. of Sci., Arts and Letters; Herpetologists League; Sigma Xi; Amer. Assn. of Econ. Entomologists; Entomological Soc. of Wash.; Pacific Coast Entomological Soc.; Utazoa Soc.; Soc. Syst. Zool.; Amer. Assn. of Univ. Prof.; Phi Beta Kappa; Lions Club. Author: One Sect., Culture Methods for In-

vertebrate Animals, 1937. Contbr. to: Jour. of Econ. Entomology, Proceedings of Utah Acad. of Sci.; Proceedings of the Entomological Soc. of Wash.; Annals of the Entomological Soc. of Amer.; Entomological News; Bulletin of the Brooklyn Entomological Soc.; Canadian Entomologist; Jour. of Entomological Soc. of Kans.; Amer. Midland Naturalist; The Auk; Condor; Fla. Entomologist; Gleanings in Bee Culture; Amer. Bee Jour.; Ohio Jour. of Sci.; Great Basin Naturalist; Pan-Pacific Entomologist; The Sanitarian. Ph.D. Dissertation: Studies on Beet Leafhopper in Northern Utah. War Record: Ninth Service Command, U. S. Army Engrs. Travel: U. S.; Canada; Mexico. Gen. Int.: Rsch. Hobbies: Study of Western insects, particularly aphids. Listed in: Who's Who in Amer.; Who Knows—and What; Who's Who in the West; A.M.S.; Naturalist Directory; Fragments of Entomological Hist.

KNOX, Arthur Stewart, Topographic Engr., U. S. Geol. Survey, Rm. A03, Wash. Auditorium, Washington, D. C. PALEOBOTANY.

KNOX, Robert Hilton, Jr., Assoc. Prof. of Math., Va. Military Inst., Lexington, Va. MATHEMATICS.

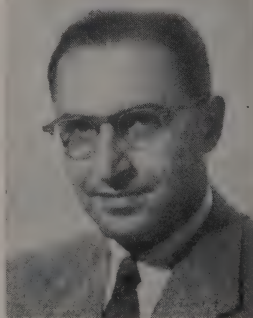
KNUDSON, Lewis, Botany Dept., Cornell Univ., Ithaca, N. Y. PLANT PHYSIOLOGY.

KNUDSEN, Vern Oliver, Prof. of Physics and Dean, Grad. Div., Univ. of Calif., Los Angeles, Calif. ACOUSTICS.

KNUDSON, Arthur, Prof. of Biochem. and Assoc. Dean, Albany Med. Coll., New Scotland Ave., Albany, N. Y. BIOCHEMISTRY.

KNUDSON, Harold William, Tech. Dir., Hollingsworth and Vose Co., East Walpole, Mass. CHEMISTRY. b. Dec. 12, 1912, Viroqua, Wis. s. Tellman C. and Anna Christine (Vig) K. Edn.: A.B., St. Olaf Coll., 1934; Ph.D., Univ. of Wis., 1939. m. Ragna O. Ullsvik, Aug., 1939. c. Rolf O. and Karen C. Exp.: Tchrr., Viroqua Public H.S., Viroqua, Wis., 1934-36; Rsch. Asst., Univ. of Wis., Grad. Schl., Madison, Wis., 1936-39; Prof. of Chem., Concordia Coll., Moorhead, Minn., 1939-43; Rsch. Chem., Naval Rsch. Lab., Chem. Div., Washington, D. C., 1943-46; Tech. Dir., Hollingsworth and Vose Co., E. Walpole, Mass., 1946—. Mem.: Amer. Chem. Soc.; Amer. Soc. for Testing Mat.; A.A.A.S.; Tech. Assn. of Pulp and Paper Ind.; Sigma Xi; Phi Lambda Upsilon. Hon. Pos.: Bd. of Trustees, Upsala Coll., East Orange, N. J.; Chmn., New England Section, Technical Assn. of Pulp and Paper Industry. Contrb. to: Jour. of Chemistry; Industrial Eng. Chem., Analytical Edition. Special Int.: Analytical Chem., Phys. Chem.; Spectrophotometry, Properties of Aerosols including generation, light scattering, detection and measurements. Filtration studies involving media for aerosol filtration, smoke filtration, air filtration and oil filtration. Rsch. on tech. and indus. papers and paper making.

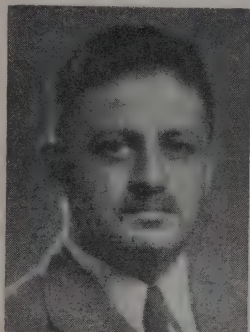
KOBERNICK, Sidney David, Dir. of Labs., Sinai Hosn., 19947 Renfrew, Detroit, Mich. EXPERIMENTAL AND CLINICAL PATHOLOGY. b. Montreal, P. Q., Can., May 7, 1919. s. David and Pauline (Finestone) K. Edn.: B.Sc., McGill Univ., 1941; M.D., *ibid.*, 1943; M.Sc., *ibid.*, 1949; Ph.D., *ibid.*, 1951. m. Isabelle Friedman, Mar. 8, 1941. c.: Alan; Joan; Michael. Exp.: Rotating Internship, Royal Victoria Hosp., Montreal, Quebec, Can., 1943; Royal Canadian Army Med. Corps, 1943-46; Internship in Pathol., McGill Univ., 1946-47; Tchng. Fellow in Pathol., *ibid.*, 1947-48; Grad. Med. Rsch. Fellow of the Natl. Rsch. Council of Can. in Exptl. Pathol., 1948-49; Postdoctoral Fellow of the Life Ins. Med. Rsch. Fund under Prof. G. L. Duff and R. H. More, 1949-50; Post-doctoral



Fellow of the Life Ins. Med. Rsch. Fund, *ibid.*, 1950-51; Asst. Prof. of Pathol., McGill Univ., Prosecutor to the Royal Victoria Hosp., 1951-52; Consulting Pathologist, Verdun Protestant Hosp., Verdun, Que., Can., 1951-52; Dir. of Labs., Sinai Hosp., Detroit, Mich., 1952—Mem.: Alpha Omega Alpha; Que. Div., Canadian Med. Assn.; Quebec Assn. of Pathologists; Canadian Assn. of Pathologists; Amer. Assn. of Pathologist and Bacteriologists; etc. Contrb. to: McGill Med. Jour.; Arch. Pathol.; Jour. Exptl. Med.; Amer. Jour. Diseases of Children; etc. War Record: Royal Canadian Army Med. Corps, 1943-46. Special Int.: Experimental Foreign Protein Carditis and Glomerulonephritis, Bronchiectasis; Hypersensitivity; Rheumatic Fever; Exptl. Cancer Rsch.

KNUTSON, John W., Chf., Dental Section, States Relations Div. and Sr. Dental Surgeon, U. S. P. H. S., Bethesda Sta., Washington, D. C. DENTAL PUBLIC HEALTH.

KOBRAK, Heinrich Guenther, Assoc. Prof. of Otolaryngol., Univ. of Chicago, 950 E. 59th St., Chicago, Ill. PHYSIOLOGICAL



ACOUSTICS AND DISEASES OF THE EAR, NOSE AND THROAT. b. Berlin, Germany, Mar. 19, 1905. s. Erwin and Gertrude (Lasker) K. Edn.: M.D., Univ. of Munich, 1928; Ph.D., Univ. of Chicago, 1937. m. Jessie Stillwell of Wautoma, Wis., June 10, 1935. d. Ward and Cora S. c.: Gertrude Ann. Exp.: 1934-36, Rsch. Asst., Dept. of Surgery, Univ. of Chicago; 1936-42. Praxis of Med.; 1942-46, Army of the U. S.; 1946—, Assoc. Prof., Univ. of Chicago.

Hon. Pos.: Hon. Mem., Soc. of Otolaryngologists of Chile (S. Amer.) and of Peru (S. Amer.); Minn. Acad. of Otolaryngology. Mem.: Amer. Acad. of Otolaryngol.; Amer. Physiol. Soc.; Acoustical Soc. of Amer.; A.A.A.S. Contrb. to: Archives of Otolaryngol.; Annals of Otolaryngol. Ph.D. Dissertation: Utilization of the Tensor Tympani Reflex in the Study of Bone Conduction. War Record: Lt. Col., U.S.A., 1942-46. Travel: Europe; N. Africa; S. Amer. Hobbies: Farming; Photography. Listed in: A.M.S.; Amer. Med. Dir. Special Int.: Function and Diseases of the Ear.

KOCH, Dr. Adolph Meyer, Consultation Service and Hotel Exec., Pres. Hotel, Atlantic City, N. J. PSYCHOLOGY. b. June 18, 1908. Poland. s. Harry and Dora (Roth) K. Edn.: A.B., Geo. Wash. Univ., 1930; M.A., Columbia Univ., 1931; Ph.D., *ibid.*, 1935; LL.B., St. John's Univ., 1937; J.S.D., St. Lawrence Univ., 1939. m. Evelyn Friedberg, June, 1939. c. Marlene Harriet and Bruce Stewart. Exp.: Rsch., Rockefeller Inst. for Med. Rsch., 1931-32; Rsch., Columbia Univ., 1935-37; Prof. of Psychol. and Hd. of Dept., Essex Jr. Coll., 1937-39; Prof. of Psychol. and Dean, *ibid.*, 1939-40; Prof. of Psychol. and Pres., 1940-46; Prof. of Med. Psychol., Essex Coll. of Med. and Surgery, 1944-46; Pres., *ibid.*, 1944-46. Consulting Service and Hotel Exec., Pres. Hotel, Atlantic City, N. J., 1946—, Mem.: Sigma Xi. Fellow: A.A.A.S.; Amer. Psychol. Assn. Contrb. to: Amer. Jour. of Psychol.; Jour. of Genetic Psychol.; Sci.; Genetic Psycho. Monographs; Jr. Coll. Jour. Special Int.: Fields of learning; comparative psychol., physiol. psychol., psycho-biol., psycho-therapy.

KOCH, Ernest Herman, Jr., retired, Ogontz Manor, Apt. F61, Olney and Ogontz Ave., Philadelphia, Pa. ENGINEERING, MATHEMATICS.

KOCH, Fred Conrad, Prof. Emer. Biochem., Univ. of Chicago, 1534 E. 59th St., Chicago, Ill. BIO-CHEMISTRY.

KOCH, Harland Clifford, Prof. of Edn., Univ. of Mich., Ann Arbor, Mich. EDUCATIONAL PSYCHOLOGY.

KOCH, Helen Lois, Prof. of Child Psychol., Univ. of Chicago, 1374 E. 57th St., Chicago, Ill. PSYCHOLOGY. d. Louis G. Koch and Sophia (Uhlisch). Edn.: Ph.B., Univ. of Chicago, 1918; Ph.D., *ibid.*, 1921. Exp.: Instr., Edn. Psychol., Univ. of Tex., 1922-23; Adjunct Prof., *ibid.*, 1924-25; Assoc. Prof., *ibid.*, 1926-27; Prof. of Edn. Psychol., *ibid.*, 1928-29; Assoc. Prof. of Child Psychol., Univ. of Chicago, 1929-42; Prof., 1942—; Dir., Univ. Cooperative Nursery Schl., 1934-38; Coordinator, Univ. of Chicago Nursery Schl., 1938-49; Exchange Prof., Johann Wolfgang Goethe Universität, Frankfurt-on-Main, Germany, and Lectr. at Julius Maximilians Universitaet, Wuerzburg, Germany, 1948-49. Hon. Pos.: Sec.-Treas., Ill. Soc. of Consulting Psychol., 1935-40, Pres., 1940-41; Pres., Chicago Psychol. Club, 1936-37; Vice-Pres., Chicago Assn. for Child Study and Parent Edn., 1935-37; Founder, The Delta Kappa Gamma Soc. Fellow; Amer. Psychol. Assn., Soc. for Rsch. in Child Development; Mem., Natl. Soc. for the Study of Edn.; Psychom. Soc.; Assn. for Childhood Edn.; Ill. Psychol. Assn.; Comm. Child Welfare, O.C.D., Chicago Metropolitan Area; Delta Kappa Gamma; Phi Beta Kappa; Sigma Xi; Pi Lambda Theta; A.A.A.S.; Sec. Ednl. Psychol. Sect., Amer. Assn. of Appl. Psychol., 1943-45; Exec. Bd. Soc. Res. in Child Development, 1942-45; Sec., Div. of Consulting Psychol., Amer. Psychological Assn., 1948—. Author: 3 Monographs. Contrb. to: Psychol. Rev.; Jour. of Expt. Psychol.; Child Develop.; Jour. of Genetic Psychol.; Genetic Psychol. Monographs; Psychol. Abstracts; Mental Hygiene; Childhood Edn.; Psychol. Bull.; Jour. of Comp. Psychol.; Jour. of Gen. Psychol.; Internatl. Jour. of Ethics; Jour. of Abn. and Soc. Psychol.; Psychol. Monographs; Jour. Soc. Psychol. Title of Ph.D. Dissertation: The Influence of Manual Guidance upon Maze Learning.

KOCH, Julius Arnold, Dean of Pharmacy Emeritus, Univ. of Pittsburgh, 921 E. Laurel St., Ocala, Fla. ORGANIC CHEMISTRY. b. Bremen, Germany, Aug. 15, 1864. s. Arnold and Amanda (Wenke) K. Edn.: Ph.G., Pittsburgh Coll. of Pharm., 1884; Phar.D., *ibid.*, 1897; Ph.D., Scio Coll., 1905; Ph.M., Philadelphia Coll. of Pharm. and Sci., 1922. Hon. Deg.: Sc.D., Washington and Jefferson, 1907. m. Albertina Strunz on Oct. 17, 1889 (dec.) 2nd m. Alice M. Cope, 1927. c. Adela (dec.); Elsa; Florence. Exp.: Pharmacist in, 1880; Instr., Pittsburgh Coll. of Pharm., 1885-90; Prof. of Pharm., Univ. of Pittsburgh, 1891-1900; Dean of Dept. of Pharm., *ibid.*, 1891-1933; Prof. of Chem., Med. Dept., *ibid.*, 1900-13; Dean of Pharm. Emeritus, *ibid.*, 1933—. Mem.: Pa. Pharm. Assn., Pres. 1905. Author: Lab. Manual for Pharm. Students, 1904; Chem. Lab. Tables, 1908.

KOCH, Wendell Reuben, Chf., Physics Branch, Air Material Command, Wright Field, Dayton, Ohio. OPTICS.

KOCK, Dr. Winston Edward, Dir. of Acoustics Rsch., Bell Telephone Laboratories, Murray Hill, N. J. ENGINEERING. b. Cincinnati, Ohio, Dec. 5, 1909. Edn.: E.E., Cincinnati, 1932; M.S., *ibid.*, 1933; Ph.D., Berlin, 1934. Hon. Degrees: Dr. Sci., Cincinnati, 1952. Exp.: Teaching fellow, Cincinnati, 1934-35; Fellow, Indian Inst., Sci., 1936; Rsch. Engr., Baldwin Piano Co., Cincinnati, Ohio, 1936-38; Director Elec. Rsch., *ibid.*, 1938-42; Rsch. Engr. Microwaves, Bell Tel. Labs., 1942-48; In Charge Acoustics, *ibid.*, 1948-52; Dir. of Acoustics Rsch., *ibid.*, 1952—. Mem.: Amer. Inst. Physics; Fellow Inst. Radio Engr. Special Int.: Executive Council Acoustical Soc.; Antennas; Electronics; Glow Discharge Oscillators; Mathematical Physics; Baldwin Electronic Organ; Wave-guide Lens Antenna; Artificial Microwave Dielectrics.

KOEHLER, Emil, Weather Forecaster, Amer. Airlines, Inc., La Guardia Field, N. Y., N. Y. WEATHER FORECASTING. b. Aug. 28, 1915, N. Y., N. Y. Edn.: B.S., Coll. of the City of N. Y., 1935; M.S., N. Y. Univ., 1947. Exp.: Weather Forecaster, Amer. Airlines, Inc., La Guardia Field N. Y., N. Y., 1945—. Mem.: Amer. Meteorol. Soc.; Phi Beta Kappa. War Record: Staff Officer, Air Force Weather Service, 1944-45.

KOEHRING, Vera, Instr., Dept. of Biol. Sciences, Hunter Coll., 695 Park Ave., N. Y., N. Y. ZOOLOGY.

KOEHN, Carl James, Lt. Col., Chf., Nutrition Branch, Preventive Med. Div., Office of the Surgeon General, Dept. of the Army, Washington, D. C. **NUTRITION**. b. Madison, Wis., Dec. 3, 1910. s. Carl J., Sr. and Kathryn (Koehn) K. Edn.: B.S., Univ. of Wis., 1932; M.S., ibid., 1934; Ph.D., ibid., 1936. m. Irene N. Senty, May 21, 1937. c.: James H. Exp.: Prof. of Animal Nutrition, Ala. Poly. Inst., Auburn, Ala., 1936-42; Nutrition Consultant, Hq. India, Burma Theater, U. S. Army, 1944-45; Chf., Nutrition Br., Preventive Med. Div., Surgeon General's Office, Dept. of the Army, Washington, D. C., 1948—. Mem.: Sigma Xi; Alpha Chi Sigma; Inst. of Nutrition; Diplomate, Amer. Bd. Nutrition. Contrb. to: Jour. Nutrition; Engrng. Chem.; Veterinary Med.; Jour. Amer. Vet. Jour. Biol. Chem.; Arch. Biochem.; Indus. and Med. Assn.; Nature. War Record: Nutrition Officer, 1942—. Special Int.: Nutrition; Biochem.

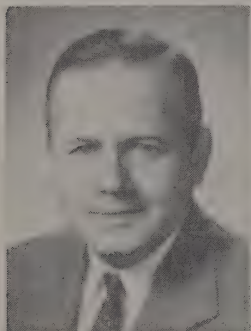


KOELSCH, Charles Frederick, Prof. of Organic Chem., Univ. of Minn., Minneapolis, Minn. **ORGANIC CHEMISTRY**.

KOENIG, Charles J., Engr. Expt. Sta., Ohio State Univ., Columbus 10, Ohio. **CERAMICS**.

KOENIG, Frederick Otto, Prof. of Chem., Stanford Univ., Stanford, Calif. **PHYSICAL CHEMISTRY**.

KOENIG, John Henry, Prof. of Ceramics, Dir. of Schl. of Ceramics, and N. J. Ceramic Rsch. Sta., Rutgers Univ., New Brunswick, N. J. **CERAMICS**. b. St. Marys, Ohio, Apr. 9, 1909. s. John H. and Clara (Boesel) K. Edn.: B.Ch.E., Ohio State Univ., 1931; Ch.E., ibid., 1936; M.Sc., ibid., 1936; Ph.D., ibid., 1938. m. Shirley Ann Smith, Jan. 4, 1941. c.: Clara Elizabeth; John Richard; Belva Madelin. Exp.: Rsch. Chemist, Gen. Elec. Col., Schenectady, N. Y., 1931-35; Rsch. Fellow, Ohio State Engrng. Expt. Sta., 1935-38; Dept. of Navy, Hd. Components Sect. Elec. Div., 1942-45; Dir. of Schl. of Ceramics and N. J. Ceramic Rsch. Sta., Rutgers Univ., New Brunswick, N. J., 1945—. Mem.: Amer. Ceramic Soc.; Ceramic Assn. of N. J.; Inst. of Ceramic Engrs.; Engr. Council for Prof. Development; Amer. Soc. for Testing Materials; Sigma Xi; Keramos; Phi Lambda Upsilon; Tau Beta Phi. Contrb. to: Jour. and Bull. of Amer. Ceramic Soc.; Ceramic Age; Ceramic Indus.; Indus. and Engrng. Chem.; Materials and Methods; Elec. Mfg.; Bull., A.S.T.M. Special Int.: Ceramics and Electronics.



KOERTH, Wilhelmine, Consulting Psychologist, 3452 S. W. Falcon St., Portland, Ore. **PSYCHOLOGY**.

KOHLER, Wolfgang, Swarthmore Coll., Swarthmore, Pa.

KOHLER, Wolfgang, Swarthmore Coll., Swarthmore, Pa.

KOHLER, Wolfgang, Swarthmore Coll., Swarthmore, Pa.

KOKATNUR, Vaman Ramachandra, Pres., Dir. Rsch. and Consultant, Autoxygen, Inc., 114 E. 32nd St., N. Y., N. Y. **CHEMISTRY**.

KOLK, Laura Alma, Asst. Prof., Brooklyn Coll., Brooklyn, N. Y. **MYCOLOGY**.

KOLLER, Lewis R., Rsch. Assoc., Rsch. Lab., General Electric Co., 1237 Glenwood Blvd., Schenectady, N. Y. **PHYSICS**.

KOLTHOFF, I. M., Univ. of Minn., Inst. of Tech., Minneapolis, Minn. **CHEMISTRY**.

KOMAREWSKY, Vasili I., Prof. of Chem. and Dir., Catalytic Lab., Ill. Inst. of Tech., Chicago, Ill. **CHEMISTRY**.

KONIG, Otto, Hd. Rsch. and Development Dept., Natl. Lead Co., Rsch. Lab., Brooklyn 1, N. Y. **ANALYTICAL AND ORGANIC CHEMISTRY**. b. Vienna, Austria, Jan. 18, 1904. s. Berthold and Anna (Foessler) K. Edn.: Dipl. Ingenieur, Vienna, Austria, 1927; Ph.D., U.C.L.A., 1947. m. Olga Koch on June 23, 1935. Exp.: Dir. of Rsch., Plant Supvr., Municipal Gas Works, Vienna, Austria, 1927-34; Various Positions in Foodstuff and Soap Factories in Czechoslovakia, 1935-39; Translator for New Zealand Govt., 1939-41; Rsch. Chem., Gaspar Color, Inc., Hollywood, Calif., 1941-42; Rsch. Chem., Baroid Sales Div., Los Angeles, Calif., Natl. Lead Co., Brooklyn, N. Y., 1942-51; Hd. Rsch. and Development Dept., Rsch. Labs., Natl. Lead Co., 1951—. Mem.: Sigma Xi; Phi Lambda Upsilon; Amer. Chem. Soc.; Metropolitan Microchem. Soc.; A.A.A.S.; Amer. Inst. of Chem. (Fellow). Contrb. to: Ind. Engrng. Chem. Anal. Edn.; Mikrochemie; Zeitsch. f. Gas und Wassenfachm. Special Int.: Application of Organic Chem. and Organic Products to Industrial Purposes; Surface Active Agents; Microanalysis; Coal and Byproducts Chem.

KONOPINSKI, Emil Jan, Assoc. Prof. of Physics, Ind. Univ., Bloomington, Ind. **NUCLEAR PHYSICS**.

KONST, Hermann, Agri. Scientist, Animal Diseases Rsch. Inst., Hull, Que., Can. **VETERINARY BACTERIOLOGY**.

KOONTZ, Amos R., Asst. Prof. of Surgery, The Johns Hopkins Univ. Schl. of Med., Baltimore, Md. **SURGERY**.

KOPELOFF, Nicholas, Prin. Rsch. Bacteriologist, N. Y. State Psychiatric Inst. and Hosp., 722 W. 168th St., N. Y., N. Y. **BACTERIOLOGY**.

KOPP, George Adams, **SPEECH AND HEARING**.

KOPPANYI, Theodore, Prof. and Chmn., Dept. of Pharmacol., Georgetown Med. Schl., 3900 Reservoir Rd., Washington, D. C. **PHARMACOLOGY**.

KORFF, Serge Alexander, Assoc. Prof. of Physics, N. Y. Univ., 181st St. and University Ave., N. Y., N. Y. **PHYSICS**.

KORMES, Mark, Consulting Actuary, 285 Madison Ave., N. Y. 17, N. Y. **ACTUARIAL SCIENCE**.

KORMES, Mark, Consulting Actuary, 285 Madison Ave., N. Y. 17, N. Y. **ACTUARIAL SCIENCE**. b. Vienna, Austria, Aug. 29, 1900. s. David and Blanca (Tishler) K. Edn.: Ph.D., Columbia Univ., 1928. m. Dr. Jennie Post on May 21, 1924. c.: Evelyn Joyce; John Winston. Exp.: Assistant Statistician, National Bureau of Casualty Underwriters, 1925-30; Actuary, Compensation Insurance Rating Bd., N. Y., 1930-38; Asst. Dir., State Insurance Fund, N. Y., 1938-40; Consulting Actuary, Private Practice, 1940—. Hon. Pos.: Gen. Chmn., Examination Comm., Casualty Actuarial Soc., 1939-40. Mem.: Amer. Math. Soc.; Amer. Statistical Assn.; Casualty Actuarial Soc. (Fellow by Exam.). Author: An Actuarial Report on the Costa Rican Social Security Fund, 1945. Contrb. to: Bull. of the Amer. Math. Soc.; Proc. of the Casualty Actuarial Soc.; Rev. of Scientific Instruments. Special Int.: All Aspects of Actuarial Sci.; Applied Math.



KORNFELD, Gertrude, Rsch. Chemist, Eastman Kodak Co., 26 Portsmouth Terrace, Rochester, 7, N. Y. **PHYSICAL CHEMISTRY.** b. Prague, then in Austria, July 25, 1891. d. Friedrich and Clara (Wiener) K. Edn.: Ph.D., German Univ., Prague, 1915; Degree of Habilitation, Berlin Univ., 1928. Exp.: Instr., Berlin Univ., 1925; Asst. Prof., ibid., 1928-33; Rsch. and Lecturing, Nottingham Univ. Coll., England, 1933-34; Rsch., Imperial Coll., London, 1935; Internatl. Fellow of A.A.-U.W., 1935-36 in Vienna, with Rsch. at Univ. of Vienna; Rsch. Chemist, Eastman Kodak Co.,



1937—. Hon. Pos.: Fellow, New York Acad. of Sci. Mem.: New York Acad. of Sci.; Amer. Chem. Soc.; Optical Soc. of Amer.; Faraday Soc.; England; A.A.U.W. Contrb. to: Monatsh. f. Chem.; Ztschr. f. anorg. Chem.; Ztschr. f. Physik. Chem.; Ztschr. f. Phys.; Nature; Jour. Phys. Chem.; Jour. Amer. Chem. Soc.; Chem. Rev.; Jour. Franklin Inst.; Jour. Opt. Soc. of Amer.; etc. Special Int.: Phys. Chem.; Photochem.; Kinetics of Chem. Reactions; Dye Sensitizing; Latent Image Theory.

KORNHAUSER, Sidney Isaac, Prof. and Hd., Dept. of Anatomy, Schl. of Med., Univ. of Louisville, 101 W. Chestnut St., Louisville, Ky. **ANATOMY.**

KORR, Irvin Morris, Prof. of Physiol., Kirksville Coll. of Osteopathy and Surgery, Kirksville, Mo. **PHYSIOLOGY.**

KORSTIAN, Clarence Ferdinand, Prof. of Silviculture and Dean, Schl. of Forestry, Duke Univ., Durham, N. C. **FORESTRY.**

KORTY, Vernon Morris, Deputy Chf., Field Evaluation Div., Technical Evaluation Dept., Naval Ordnance Lab., Silver Spring, Md. **PHYSICS.** b. Bluffs, Ill., Apr. 25, 1916. s. Fred H. and Stella Weedon (Morris) K. Edn.: A.B., Ill. Coll., 1937; A.M., Univ. of Ill., 1939. m. Margaret Ruby Barton on July 18, 1942. c.: Peggy Jo; Frederick William; Robert David. Exp.: Tehng. Asst. in Phys., Univ. of Ill., 1937-41; Special Rsch. Asst., Mech. Engrng. Expt. Station, 1941-42; Physicist, Naval Ordnance Lab., Silver Spring, Md., 1942—. Hon. Pos.: Chairman, Joint Army-



Navy Fuse Field Test Subcom., 1951-53; Secy., JAN Fuze Lab. Tests Subcom., 1949-51. Mem.: Phi Beta Kappa; Sigma Xi; A.A.A.S.; Amer. Phys. Soc.; Amer. Soc. for Quality Control; Gamma Alpha; Amer. Ordnance Assn.; Masons. Contrb. to: WGY Sci. Forum. Gen. Int.: Meritorious Civilian Service Award, U. S. Navy. Special Int.: Tests Methods in Ordnance Phys.; Safety and Reliability of Explosive Components; Effects of Blast Pressures on Structures.

KORZYBSKI, Alfred, Dir., Inst. General Semantics, Lakeville, Conn. **GENERAL SEMANTICS.**

KOSAK, Alvin Ira, Asst. Prof. of Chem., Univ. of Cincinnati, Cincinnati, Ohio. **ORGANIC CHEMISTRY.** b. N. Y., N. Y., Feb. 29, 1924. s. Samuel and Pauline (Gantscher) K. Edn.: B.S., Coll. of the City of N. Y., 1943; Ph.D., Ohio State Univ., 1948. Exp.: Rsch. Chem., Socony-Vacuum Laboratories, 1943-45; Asst., Rsch. Fellow, Asst. Instr., Ohio State Univ., 1945-48; Jewett Postdoctoral Fellow, Harvard, 1948-49; Asst. Prof., Univ. of

Cincinnati, 1949—. Mem.: Amer. Chem. Soc.; The Chem. Soc. (London); A.A.A.S.; Sigma Xi; Phi Lambda Upsilon; Alpha Chi Sigma. Contrb. to: Jour. of the Amer. Chem. Soc.; Jour. of Organic Chem. Special Int.: Thiophene chem., carcinogenic polynuclear hydrocarbons, organic reaction mechanisms.

KOSANKE, Robert Max, Asst. Geologist, Coal Div., Ill. Geol. Survey, Natural Resources Bldg., Urbana, Ill. **PALEOBOTANY.**

KOSER, Stewart Arment, Prof. of Bact., Univ. of Chicago, Chicago, Ill. **BACTERIOLOGY.** s. Alexander Stewart and Ella



Lucretia (Arment) K. Edn.: Ph.B., Yale Univ., 1915; M.A., ibid., 1917; Ph.D., ibid., 1918. m. Hilda Marion Croll, Womelsdorf, Pa., 1927. d. Rev. and Mrs. P. C. Croll. c.: Marion Aimee. Exp.: Bact., U. S. Bureau of Chem., 1919-23; Asst. Prof. Bact., Univ. of Ill., 1923-28; Asst. Prof., Assoc. Prof., and Prof., Chicago, 1928—. Hon. Pos.: Ed. Bd., Jour. of Bact., 1935-51; Jour. Infect. Diseases, 1941—; Pasteur Award, Soc. of Ill. Bact., 1949. Mem.: Soc. Amer. Bact. (Councilor, 1934-36, 1938-40; Director of Local Branches, 1936-39); Soc. Ill. Bact. (Pres., 1943-44); Amer. Public Health Assn.; Soc. Expt. Biol. and Med.; Intern. Assn. Dental Rsch.; Sigma Xi; Gamma Alpha. Contrb. to: Various Scientific Jours. Title of Ph.D. Dissertation: Studies on Bacterial Nutrition. War Record: Med. Corps, U. S. Army, 1918-19. Special Int.: Bacterial Nutrition and Metabolism.

KOSTIR, Wencel J., Prof. of Zool., Ohio State Univ., Columbus, Ohio. **ZOOLOGY.**

KOTEN, Irvin Alvin, Prof. of Chem., North Central Coll., Naperville, Ill. **CHEMISTRY (ORGANIC AND BIOCHEMISTRY).** b. Bonduel, Wis., Dec. 15, 1899. s. H. G. and Elizabeth (Dorau) K. Edn.: B.A., North Central Coll., 1920; M.S., Univ. of Ill., 1921; Ph.D., ibid., 1924. m. Dora L. Mahlkuch, 1924. c.: Jean; Don. Exp.: Grad. Asst. in Chem., Univ. of Ill., 1920-23; Fellow in Chem., 1923-24; Asst. Prof., Ill. Wesleyan Univ., 1924-29; Prof., ibid., 1929-30; Prof. of Chem., Battle Creek Coll., 1930-38; Lectr. in Organic Chem., Hiram Coll., 1938-39; Prof. of Chem., North



Central Coll., Naperville, Ill., 1939—. Mem.: Phi Kappa Phi; Sigma Xi; Phi Lambda Upsilon; Gamma Sigma Epsilon; N. Y. Acad. Sci.; Amer. Chem. Soc.; Gamma Alpha; Alpha Chi Sigma. Contrb. to: Jour. Amer. Chem. Soc.; Chemist Analyst; Jour. Chem. Edn. War Record: Army, World War I. Special Int.: Organic Compounds of Arsenic.

KOTOK, Edward I., Asst. Chf., U. S. Forest Service Chg. Rsch., U. S. D. A., Washington, D. C. **FORESTRY.**

KOTTER, Fred Ralph, Asst. Prof. of Elec. Measurements, Mass. Inst. of Tech., 48 Massachusetts Ave., Cambridge 39, Mass. **ELECTRICAL MEASUREMENTS.** b. Salt Lake City, Utah, Dec. 8, 1915. s. Fred O. and Bertha (Midgley) K. Edn.: B.S., Univ. of Utah, 1937; M.A., George Washington Univ., 1940. m. Lora Norman, Mar. 28, 1949. c.: Lora-lee. Exp.: Physicist, Natl. Bureau of Standards, 1937-46; Instr. in Elec. Engrng., Mass. Inst. of

Tech., 1946-50; Asst. Prof. of Elec. Measurements, *ibid.*, 1951—. Mem.: Sigma Pi Sigma; Phi Kappa Phi; Phi Beta Kappa. Contbr. to: Natl. Bureau of Standards; Jour. Rsch. Special Int.: Precise Elec. Measurements.

KOTTKE, Esther Hendee, 103 Johnson St., Chapel Hill, N. C. ZOOLOGY, PUBLIC HEALTH EDUCATION.

KOUWENHOVEN, William Bennett, Dean, Schl. of Engrng., Prof. of Elec. Engrng., Johns Hopkins Univ., Baltimore 18, Md. ELECTRICAL ENGINEERING. b. Brooklyn, N. Y., Jan. 13, 1886. s. Tunis Gerrit Bergen and Phebe Florence (Benett) K. Edn.: B.E., Brooklyn Poly. Inst., 1906; M.E., *ibid.*, 1907; Diplom. Ing., Karlsruhe Technische Hochschule, Baden, Germany, 1912; Doktor Ing., *ibid.*, 1913. m. Abigail Baxter Remsen, June 22, 1910. c.: William Gerrit. Exp.: Asst. in Phys., Brooklyn Poly. Inst., 1906-07; Instr. in Phys. and Elec. *ibid.*, 1907-10; Instr. in Elec. Engrng., Wash. Univ., 1913-14; Instr. in Elec. Engrng., Johns Hopkins Univ., 1914-17; Assoc. in Elec. Engrng., *ibid.*, 1917-19; Assoc. Prof. of Elec. Engrng., *ibid.*, 1919-30; Prof. and Asst. Dean of Engrng., *ibid.*, 1930-38; Prof. and Dean of Engrng., *ibid.*, 1938—; Chmn., Elec. Engrng., *ibid.*, 1942—. Mem.: Amer. Inst. of Elec. Engrg.; Amer. Soc. Testing Materials; Amer. Welding Soc.; A.A.A.M.; A.A.U.P.; Natl. Soc. Professional Engrs.; Amer. Soc. for Engrng. Edn.; Amer. Arb. Assn.; Soc. for Professional Engrs.; Tau Beta; Sigma Xi; Phi Kappa Phi. Contbr. to: Trans. Amer. Inst. Elec. Engrs.; Trans. Amer. Welding Soc.; Trans. Amer. Soc. Testing Materials. Special Int.: Effects of Electricity on the Human Body.

KOVALENKO, Michael S., retired, 97 Old King's Hwys., Darien, Conn. ASTRONOMY.

KOVARIK, Alois Francis, Prof. of Physics, Sloan Physics Lab., Yale Univ., New Haven, Conn. RADIOACTIVITY AND NUCLEAR PHYSICS.

KOWALKE, Otto Louis, Prof. of Chem. Engrng., Univ. of Wis., Madison, Wis. CHEMICAL ENGINEERING.

KOZAK, Andrew V., Chmn. of Math., Engr. Guidance, Concord Coll., Athens, W. Va., and Dir. Kalgometrics Rsch. Project, Beaver H. S., Bluefield, W. Va. MATHEMATICS. b. July 9, 1910. Coraopolis, Pa. s. Andrew Louis and Frances (Blazey) K. Edn.: Susquehanna Univ., 1932, B.S.; W. Va. Univ., 1934, M.S. Ed.D., Pa. State Coll., 1952. m. Virginia Orton of Matoaka, W. Va., Apr. 7, 1945. c.: Margaret Carolyn; Richard H. Exp.: Math., W. Va. Univ., 1932; Greenbrier Co., W. Va., 1933-36; Math., Sci., and Band, Concord Coll., Hd. of Instrument Music and



Assoc. Prof., Mathematics, 1936-39; Cornell Univ., Mathematics, 1939-40; Colo. A. and M. Coll., Director of Ednl. Rsch., 1946; Pa. State Coll., Ednl. Statistics, 1947-48; Concord Coll., Chmn. of Math. Dept., 1946-53; Dir. Kalgometrics Rsch. Project, Beaver H. S., Bluefield, W. Va., 1951—. Hon. Pos.: Chmn. W. Va. A.H.E. Sabbatical Leave Com., 1948-52; Pres., W. Va. Coll. Tchrs. of Math., 1949, 50, 53; Mem., Curriculum Evaluation Studies; Treas., W. Va. Bandmasters Assn., 1938; Pres., Concord A.A.U.P. Coun. A.H.E., W. Va. Mem.: A.A.A.S.; A.A.U.P.; W. Va. Acad. of Sci.; Sigma Pi Sigma; Phi Delta Kappa; Psi Chi; N.S.S.E.; Bond and Key, Susquehanna Univ.; Rotary; Masonic Lodge. Contbr. to: Math. and Ednl. Studies; Natl. Council Tchrs. of Math.; Amer. Math. Soc.; N.E.A. Ed.D. Dissertation: KALGOMETRICS: An Experiment in the Teaching of Plane Geometry, Trigonometry, Analytic Geometry, Differential Calculus and Integral Calculus to "Selected" Tenth Grade Pupils in the High Schl. War Record: Comdr., U.S.N.R.,

1942-46, Naval Aviation; Commanding Officer, Volunteer Res. Unit, 5-11. Travel: Mexico; South Pacific; Canada. Gen. Int.: Mem. Bluefield Symphony Orchestra; Church Choirs. Hobbies: Music; Cooking; Travel. Listed in: Natl. Sci. Roster; A.M.S.

KRAATZ, Walter Charles, Prof. and Hd., Dept. of Biol., Univ. of Akron, Akron, Ohio. ZOOLOGY.

KRACK, Elmer J., Geophysics Rsch. Engr., Gulf Rsch. and Development Co., P. O. Drawer 2038, Pittsburgh, Pa. GEOPHYSICS.

KRAMER, Benjamin, Prof. of Clinical Pediatrics, Long Island Coll. Med., Brooklyn, N. Y. PEDIATRICS.

KRAMER, Grace A., 319 E. 25th St., Baltimore, Md. EDUCATION.

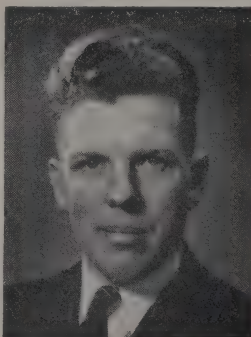
KRAMER, Paul Jackson, Prof. of Botany, Duke Univ., Durham, N. C. PLANT PHYSIOLOGY.

KRAMPTZ, Lester O., Prof., Dept. of Microbiol., Schl. of Med., Western Reserve Univ., 2109 Adelbert Rd., Cleveland, Ohio. MICROBIOLOGY.

KRANER, Hobart M., Rsch. Dept., Bethlehem Steel Co., Bethlehem, Pa. CERAMICS.

KRANTZ, Bertil Allan, Soil Scientist, Bureau Plant Indus., Soils and Agri. Engrng., Dept. Agron., N. C. State Coll., Raleigh, N. C. SOIL SCIENCE.

KRANTZ, Bertil Allan, Sr. Soil Scientist, Bureau of Plant Indus., Soils, and Agri. Engrng., 335 "K" St. Brawley, Calif. SOIL FERTILITY AND PLANT NUTRITION. b. Mears, Mich., Feb. 12, 1914. s. Gustav A. and Ellen (Sundstrom) K. Edn.: B.S., Mich. State Coll., 1938; M.S., Purdue Univ., 1940; Ph.D., *ibid.*, 1943. m. Nelle Morris, June 29, 1941. c.: Ellen; Carolyn; Kenneth. Exp.: Asst. Soil Scientist, Bureau of Plant Indus., Soils, and Agril. Engrng., 1943-45; Assoc. Soil Scientist, *ibid.*, 1945-47; Soil Scientist, *ibid.*, 1947-48; Rsch. Prof. of Agron., N. C. State Coll., 1948-



50; Sr. Soil Scientist, Bureau of Plant Indus., Soils, and Agri. Engrng., 1950—. Hon. Pos.: Chmn., Fertilizer Com., Soil Sci. Soc. of Amer. Mem.: Sigma Xi; Amer. Soc. Agron.; Alpha Zeta; Farm House; Rotary. Contbr. to: Soil Sci.; Agron. Jour.; Soil Sci. Soc. of Amer. Proc. Gen. Int.: The Application of the Corn Fertilization and Culture Rsch. in N. C. Lead to Rapid Increase in Corn Yields of the State. Special Int.: Soil Fertility, Plant Nutrition; Irrigation and Water Requirements of Plants; Salt Tolerance of Plants.

KRANTZ, Fred A., Prof. of Horticulture, Univ. of Minn., St. Paul, Minn. GENETICS. b. Iowa, Nov. 10, 1890. s. P. J. and Christine (Wachendorf) K. Edn.: B.S., Univ. of Minn., 1918; M.S., *ibid.*, 1921; Ph.D., *ibid.*, 1924. m. Katherine Leah, Sept., 1919. c.: Katherine; Fred; Mary; Margaret; Alice; Ann; Josephine. Exp.: Instr., Univ. of Minn., 1919-23; Asst. Prof., *ibid.*, 1924-34; Assoc. Prof., *ibid.*, 1935-36; Prof., *ibid.*, 1937—. Hon. Pos.: Pres., Potato Assn. of Amer.; Chmn., Technical Com. for Natl. Potato Introduction, and Preservation Project, 1952. Mem.: Amer. Soc. for Horticultural Sci.; Sigma Xi; A.A.U.P.; Alpha Zeta; Sigma Gamma Delta. Author: Potato Breeding Methods, I, II, III. Contbr. to: Amer. Soc. for Horticultural Sci.; Amer. Potato Jour.; Jour. Agri. Rsch.; Zeitschrift für Pflanzenzüchtung. War Record. Ist. Lt., U. S. A., 1918. Gen. Int.: Introduced seven varieties of potatoes; Contributions to the Sci. of breeding and genetics. Special Int.: Potato Production and Improvement.

KRANTZ, John Christian, Jr., Prof. of Pharmacol., Med. Schl., Univ. of Med., 29 S. Greene St., Baltimore, Md. PHARMACOLOGY.

KRANTZ, Kermit Edward, Consultant in Obstetrics, Div. of Maternal and Child Welfare, State Dept. of Health; Instr., Coll. of Med., Univ. of Vt., Mary Fletcher Hosp., Burlington, Vt. **OBSTETRICS, GYNECOLOGY, ANATOMY.** b. Oak Park, Ill., June 4, 1923. s. Andrew Stanley and Beatrice (C.) K. Edn.: B.S., Northwestern Univ., 1945; M.S., ibid., 1947; Bach. of Med., ibid., 1947; M.D., ibid., 1948. m. Doris Cole on Sept. 9, 1946. c.: Pamela Jean; Sarah Elizabeth. Exp.: Tutorial Fellowship, Zool., Northwestern Univ., 1943; Asst., Dept. Zool., ibid., 1943; Curator, Museum of Anatomy and Developmental Anatomy, Northwestern Univ. Med. Schl., 1944-47; Grad. Student, Anatomy, ibid., 1944-47; Asst., Dept. of Anatomy, ibid., 1946-47; Asst., Dept. of Obstetrics and Gynecology, Cornell Univ. Med. Coll., 1948-50; Bowen-Brooks Fellowship, N. Y. Acad. of Med., 1948-49; ibid., 1949-50; Rsch. Fellowship, Dazian Foundation for Med. Rsch., N. Y., N. Y., 1948-50; Fellow, Obstetrics and Gynecology, Univ. of Vt. Coll. of Med., 1950-51; Instr., ibid., 1951-53; Asst. Prof., ibid., 1953—; Consultant, Obstetrics and Gynecology, Division of Child and Maternal Health and Welfare, State Dept. of Health, Vt., 1951—, Mem.: Sigma Xi; Amer. Acad. of Obstetrics and Gynecology. Foundation Prize Amer. Assn. Obstetrics, Gynecology and Abd. Surgs., 1950; Foundation Prize So. Atl. Assn. Obs. and Gyne., 1950. Contrb. to: Trans. Amer. Assn. Obs. and Gyne. and Abd. Surg.; Amer. Jour. Obs. and Gyne.; Surg. Gyne. and Obs. Special Int.: Gross and Microscopic Anatomy and Physiology of Human Placenta; Gross and Microscopic Anatomy and Physiology of Female Urethra and Vagina; Anatomy of Female Pelvis and Perineum.

KRASIK, Sydney, Westinghouse Atomic Power Div., Pittsburgh, Pa. **PHYSICS.**

KRASNOW, Frances, Dir., Universal Rsch. Labs., Ten Ave. C, Newark 5, N. J. **BASIC SCIENCE APPLICATION TO MEDICAL-DENTAL PROBLEMS; EMPHASIS ON CHEMICAL PHYSIOLOGY.** b. N. Y., N. Y. d. Raphael and Sara Rifka (Lubarsky) K. Edn.: B.S., Barnard Coll., 1917; A.M., Columbia Univ., 1917; Ph.D., ibid., 1922. m. Marcus Thau, December, 25, 1930. c.: Hudelle, K. Exp.: Mem. of Tehng. and Rsch. Staff, Dept. of Biochem., Columbia Univ., 1918-32; Consultant, N. Y. State Labor Dept., N. Y., N. Y., 1929—; Consultant, Dept. of Dermatology and Syphilology—



Post Grad. Schl. and Hosp., 1928-40; Staff Mem., Caries Rsch. Commonwealth Fund, Columbia Univ., 1930-32; Hd., Dept. of Basic Sciences and Asst. Dir. of Schl. for Dental Hygiene, Guggenheim Dental Clinic, 1932-44; Dir. of Dept. of Rsch., ibid., 1944-52; Dir., Universal Rsch. Labs., Newark, N. J., 1952—. Hon. Pos.: Editor, Internatl. Assn. for Dental Rsch., N. Y. Section, 1934-36, 1940-44; Vice-Pres., ibid., 1945-47; Pres., ibid., 1947-49; Editor, ibid., 1949—; Special Consultant in the Field of Nutrition for the Greater N. Y. Bureau on Dental Information 1940; Secy., A.A.A.S. Section on Dentistry, 1949, 100th Ann. Local Com.; etc. Mem.: Phi Beta Kappa; Amer. Chem. Soc.; A.A.A.S.; N. Y. Acad. Med.; A.M.A.; Sigma Xi; Soc. of Amer. Bacteriologists; Soc. for Exptl. Biol. and Med.; N. Y. Acad. Sciences; Internatl. Assn. for Dental Rsch.; Amer. Inst. Chemist; Amer. Assn. Dental Editors; Amer. Assn. Clinical Chemists; Sigma Delta Epsilon. Contrb. to: Amer. Chem. Soc. Abstracts; Jour. Dental Rsch.; etc. Special Int.: Hemolysins; Agglutinins; Root Canal Bacteriol.; Yeast and Streptococcus Metabolism; Sterilization; Disinfectants; Synthetic Media; Vitamins; Blood Chem. of Syphilis and Skin Diseases; Cholesterol; Phospholipid; Caries; Saliva Chem.; Place of Nutrition in Dental Problems; Longevity; Correlation between Metabolic Inorganic-Organic Levels in Blood, Saliva, Urine and Tooth Conditions; Application of Basic Sciences to Dental-Medical Projects.

KRATHWOHL, William Charles, Dir. of Tests, Inst. for Psychol. Services, Ill. Inst. of Technol., Chicago 16, Ill. **MATHEMATICS AND PSYCHOLOGY.** b. Oct. 10, 1882, Buffalo, N. Y. s. Charles G. and Minnie (Strutzriem) K. Edn.: A.B., Harvard Coll., 1907; M.A., Columbia Univ., 1910; Ph.D., Univ. of Chicago, 1913. m. 1st, Sarah M. Reading (dec.) c.: David R. m. 2nd, Marie Reimold, June 3, 1922. Exp.: Instructor, Barnard Coll., Columbia Univ., 1907-11; Prof. of Math., Ripon Coll., 1913-14; Asst. Prof., Assoc. Prof., Prof. and Prof. Emeritus, Ill. Inst. of Tech., Chicago 16, Ill., 1914—. Mem.: Amer. Psychol. Assn.; Midwestern Psychol. Assn.; Ill. Psychol. Assn.; Amer. Math. Soc.; Math. Assn. of Amer.; Amer. Soc. of Engrng. Edn.; A.A.A.S.; Natl. Voel. Guid. Assn.; Phi Delta Kappa; Sigma Xi. Contrb. to: Jour. of Ednl. Rsch.; Jour. of Ednl. Psychol.; Jour. of Applied Psychol.; Jour. of Engrng. Edn. Special Int.: Test Construction, statistics and theory of work habits.

KRAUS, Charles August, Brown Univ., Providence 12, R. I.

KRAUS, E. J., Ore. State Coll., Corvallis, Ore. **HORTICULTURE.**

KRAUS, Edward H., Prof. Emer. Crystallography and Mineralogy, Dean Emer. Coll. of Literature, Sci. and Arts, Univ. of Mich., 1155 Arlington Blvd., Ann Arbor, Mich. **MINERALOGY.**

KRAUS, John Daniel, Assoc. Prof. Elec. Engrng., Ohio State Univ., Columbus, Ohio. **ANTENNAS AND RADIATION.**

KRAUSE, Ernst Henry, Assoc. Dir. of Rsch. and Supt., Radiation Div., Naval Rsch. Lab., 3001 Crest Ave., Cheverly, Md. **NUCLEAR PHYSICS.** b. Milwaukee, Wis., May 2, 1913. s. Ernst and Martha (Strege) K. Edn.: B.S., Univ. of Wis., 1934; M.S., ibid., 1935; Ph.D., ibid., 1938. m. Constance Fraser in June, 1939. c.: Margaret; Katherine; Carol; Susan. Exp.: Physicist, Naval Rsch. Lab., Washington, D. C., 1938-43; Hd., Communication Security Sect., ibid., 1943-45; Hd. Guided Missile Sub-div., ibid., 1945-46; Hd., Rocket Sonde Rsch., ibid., 1946-48; Hd., Nuclear Physics



Special Rsch., ibid., 1948-49; Hd., Accelerator Branch, Nucleonics Div., ibid., 1949-51; Supt., Radiation Div., ibid., 1951—; Assoc. Dir. of Rsch., ibid., 1953—. Hon. Pos.: Consult., Atomic Energy Comm., 1948. Mem.: Amer. Physical Soc.; Tau Beta Pi; Sigma Xi. Contrb. to: Physical Rev.; Proc. of the Amer. Philosophical Soc.; Smithsonian Report; Jour. of the Optical Soc. of Amer. Special Int.: Nuclear Physics; Cosmic Rays; Guided Missiles; Rockets; Atmospheric Physics; Electronics.

KRAUS, Shirley Ruth Dushkind, Pharmacologist, Cancer Rsch. and Metabolism Unit, Veterans Admin. Hosp., 2650 Wisconsin Ave., Washington 6, D. C. **PHYSIOLOGY; ENDOCRINOLOGY.** b. N. Y., N. Y., Dec. 24, 1919. d. Michael H. and Hannah (Gordon) Dushkind. Edn.: B.A., Hunter Coll., 1940; M.A., Cornell Univ., 1942; Ph.D., Univ. of Ill., 1946. m. Jerome Kraus, Sept. 14, 1946. c.: Terry Jean. Exp.: Rsch. Asst., Dept. Exptl. Biol., Amer. Museum of Natural Hist., N. Y., N. Y., 1940-41; Hematology Technician, Jewish Memorial Hosp., N. Y., N. Y., 1941; Tehng. Asst. in Chem.



and Biol. Depts., Adelphi Coll., Garden City, N. Y.,

1942-43; Instr. in Chem. and Biol. Dept., Adelphi Coll., Schl. of Nursing, Garden City, N. Y., 1943; Tehng. Asst. in Zool. Physiol. Dept., Univ. of Ill., Urbana, Ill., 1943-46; Instr., Univ. H. S., Coll. of Edn., *ibid.*, 1946-47; Special Rsch. Asst. in Chem., Biochem. Dept., *ibid.*, 1947; Instr., Dept. Health Edn., Brooklyn Coll., Brooklyn, N. Y., 1947-48; Physiologist, Gastroenterology Lab., Mt. Sinai Hosp., N. Y., N. Y., 1947-48; Biochemist, Cancer Rsch. Foundation, Harlem Hosp., N. Y., N. Y., 1948-50; Lectr., Physiol. Dept., N. Y. Univ. Coll. of Dentistry, N. Y., N. Y., 1950-51; Pharmacologist, Cancer Rsch. and Metabolism Unit, Veterans Admin. Hosp., Washington, D. C., 1951—. Mem.: A.A.A.S.; Sigma Xi; Sigma Delta Epsilon; Iota Sigma Pi; Phi Sigma. Contrb. to: Anatomical Record; Cancer Rsch.; Federation Proc.; Proc. Soc. Exptl. Biol. and Med.; Harlem Hosp. Bull. Special Int.: Physiol. of Reproduction; Sex Difference in Toxicity of Aminopterin.

KRAUSE, Aage T., retired, 1426 Rosewood Ave., Lakewood, Cleveland, Ohio. **INORGANIC CHEMISTRY.**

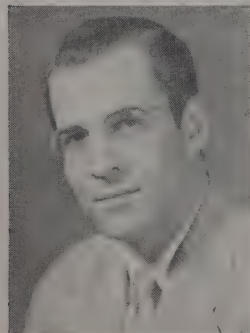
KRAUSS, Frederick George, Consulting Agriculturist, 2437 Parker Pl., Honolulu, Hawaii. **AGRONOMY AND GENETICS.**



PRINCIPALLY OF TROPICAL SOILS AND CROPS. b. San Francisco, Calif., May 6, 1870. s. Frederick Herman and Johanna Kinderwater (Thebus) K. Hon. Deg.: Dr. of Sci., Univ. of Hawaii, 1921. m. Elizabeth Hilmer on Oct. 20, 1897. c. Dorothea; Beatrice; Frederick H.; Noel L. H. Exp.: In Chg. Plant Breeding, Sunset Seed and Plant Co., Calif., 1894-98; In Chg. Agron. Field Exp., Calif., 1898-1901; Consulting Agriculturist and Instr. of

Agri., Kamehameha Schls., Hawaii, 1901-05; Agronomist, Expt. Station, Hawaii, 1905-10; Prof. of Agri., Coll. of Hawaii, 1910-14; In Chg., Hawaii Agri. Substation, Haiku, and Proprietor, New Era Farms, 1914-21; Prof. Agron. and Genetics, Hawaii, 1921-29; Dir., Agri. Extension Service in Cooperation with U. S. Dept. of Agri., 1929-36; Emer. Prof. of Agri., Univ. of Hawaii, 1936—; Consulting Agriculturist, 1936—. Mem.: Fellow, A.A.A.S.; Amer. Soc. of Agron.; Soc. of Agri. Engrs.

KRAYBILL, Edward Kready, Asst. Prof. of Elec. Engrng., Coll. of Engrng., Duke Univ., Durham, N. C. **ELECTRICAL ENGINEERING AND ILLUMINATION.** b. Lancaster, Pa., June 3, 1917. s. Amos L. and Mabel (Kready) K. Edn.: B.S., Pa. State Coll., 1939; M.S., Univ. of Mich., 1948; E.E., Pa. State Coll., 1951. m. Helen Underwood, Dec. 23, 1939. c.: Susan Emily. Exp.: Instr. in Elec. Engrng., Duke Univ., Durham, N. C., 1939-46; Asst. Prof., *ibid.*, 1946—. Mem.: Amer. Inst. of Elec. Engrs.; Illuminating Engrng. Soc.; Soc. of Sigma Xi; Amer. Soc. for



Engrng. Edn.; Eta Kappa Nu. Author: Elec. Circuits for Engrs., 1951; Elec. Engrng. Lab. Expts., with C. R. Vail, 1944; Elec. Circuits Lab. Expts., with Vail, 1946; Elec. Mach. Lab. Expts., with Vail, 1950. Contrb. to: Illuminating Engrng.; The Engrs. Mag. Special Int.: Illumination.

KRAYBILL, Henry Reist, Dir. of Rsch. and Edn., Amer. Meat Inst. Foundation, 939 E. 57th St., Chicago 37, Ill. **BIOCHEMISTRY.** b. Mount Joy, Pa., May 1, 1891. s. Samuel S. and Mary (Reist)

K. Exp.: B.S., Pa. State Coll., 1913; M.S., Univ. of Chicago, 1915; Ph.D., *ibid.*, 1917. m. Ruth Grove, June, 1916. c.: Henry Lawrence; Richard Reist; Donald Philip. Exp.: Asst. Chemist, Pa. State Coll., Agril. Expt. Sta., 1913-15; Instr., Biochem., *ibid.*, 1915-17; Asst. Physiologist, U. S. Dept. Agri., 1917-19; Prof. of Agr. Chem. and Hd. Dept., Univ. of N. H., 1919-24; Biochemist, Boyce Thompson Inst., 1924-26; Prof. of Agr. Chem. and Hd. of Dept., Purdue Univ., Lafayette, Ind., 1926-43; Dir. of Dept. of Scientific Rsch., Amer. Meat Inst., 1941-47; Dir. of Rsch. and Edn., Amer. Meat Inst. Foundation, Chicago, Ill., 1947—. Mem.: Fellow, A.A.A.S.; Amer. Inst. of Chemists; Amer. Chem. Soc.; Amer. Soc. Biol. Chemists; Amer. Inst. of Nutrition; Amer. Oil Chemists Soc. Contrb. to: Jour. Amer. Chem. Soc.; Jour. Biological Chem.; Jour. of Nutrition; Food Rsch.; etc. Special Int.: Biochem. and Nutrition; Food Tech.; Chem. of Fats; Plant Nutrition; Antioxidants.

KREEZER, George Lawrence, Asst. Prof. of Psychol., Cornell Univ., Ithaca, N. Y. **BIOPHYSICS.**

KREGER, Clarence W., Prof. of Chem. and Asst. Dean, Coll. of Arts and Sci., Miami Univ., Oxford, Ohio. **CHEMISTRY.**

KREIDER, David Albert, Assoc. Prof. Emer. of Physics, Yale Univ., New Haven, Conn.; 41 Urban St., Stamford, Conn. **PHYSICS.**

KREIDER, Henry Royer, Assoc. Rsch. Dir., William S. Merrell Co., Reading, Ohio. **SPECTROGRAPHY.** b. Dec. 31, 1911, Baltimore, Md. s. Henry R. and Mary Elizabeth (Moyer) K. Edn.: B.S., Univ. of Toledo, 1933; M.A., Ohio State, 1935; Ph.D., *ibid.*, 1936. m. Virginia Ruggles, June 17, 1936. c.: Kent; Joan. Exp.: Chemist, Amer. Med. Assn., 1936-42; Chemist, Mead Johnson and Co., 1942-45; Chf. Control Chemist, Hd. Pharm. Div., Exec. Asst. and Asst. Rsch. Dir., William S. Merrell Co., 1945—. Mem.: Sigma Xi; Phi Lambda Upsilon; A.C.S.; A.A.A.S.; Optical Soc. Contrb. to: Jour. of Amer. Med. Assn.; Jour. Amer. Chem. Soc.; Sci.; Drug Trade News; Drug and Allied Ind. Special Int.: Drug Development; Spectrophotometry; Product Control.

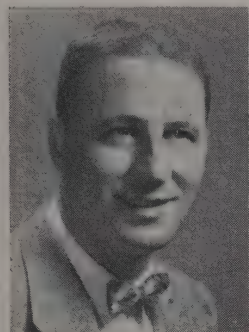
KREIDER, Orlando Clark, Asst. Prof. of Math., Ia. State Coll., Ames, 209 North Hyland Ave. **MATHEMATICS; STATISTICS AND PHYSICS.** b. April 5, 1906, Lineville, Iowa. s. John Gilbert and Clara Mae (Clark) K. Edn.: B.A., Simpson College, 1928; M.S., (Math.), Iowa State Coll., 1930; M.S. (Voc. Edn.), *ibid.*, 1941; Ph.D. (Voc. Edn.), *ibid.*, 1949. m. Julia I. Ericsson, Galesburg, Ill., Aug. 6, 1934. d. Mr. and Mrs. John William Ericsson. Exp.: Grad. Asst., Iowa State Coll., Ames, Iowa, 1928-30; Math. and Physics Instr., Ellsworth Jr. Coll., Iowa Falls, Iowa, 1930-41; Math. Instr. and Dean of Ellsworth Jr. Coll., 1941-42; Instr., Columbia Midshipmen's Schl., 1943; Asst. Prof., Nav. Sci. and Tactics, Rensselaer Polytechnic Inst., 1943-45; Educational Service Officer, Philippines, 1945-46; Asst. Prof. of Math., Iowa State Coll., 1946—. Hon. Pos.: Pres. of Beta Kappa Chapter of Phi Delta Kappa; Chmn. Math. Sec. of Iowa State Tchrs Assn.; Chmn. Math. Sec. Iowa Acad. of Sci.; Sr. Councilor for Iowa Jr. Acad. of Sci.; Past Pres. of Iowa Falls Rotary Club; Pres. of Ames Toastmasters; Chairman Sci. Teaching Section of Iowa Acad. of Sci. Mem.: Amer. Math. Assn.; Amer. Statistical Assn.; Natl. Council of Tchrs. of Math.; Amer. Soc. for Engineering Edn.; Pi Mu Epsilon; Phi Delta Kappa; Lambda Chi Alpha; Toastmasters Internat.; Lions International; C. O., Naval Rsch. Unit, 9-5, 1949—; War Record; Convoy Duty, Atlantic, Tchng., Philippines, Comdr., U.S.N., 1942-46. Travel: U. S.; Mexico; Canada; Central Amer.; Cuba; Philippines. Hobbies: Coin Collecting; Fishing.

KREIDL, Ekkehard, Technical Aide, Chem. Group, Arthur D. Little, Inc., 228 Commonwealth Ave., Boston 16, Mass. **CHEMISTRY.** b. Vienna, Austria, Jan. 15, 1910. s. Dr. I. and Hildegard (Krenn) K. Edn.: Ph.D., Univ. of Vienna, 1935. m. Anne L. O'Keefe, 1948. Exp.: Staff, E. I. du Pont de Nemours, 1938; Pa. State Coll., 1939; Staff, Kreidl Chemico-Phys. Co., 1940-42; Staff, Arthur D. Little, Inc., 1942—. Mem.: Amer. Chem. Soc.; Amer. Ceramic Soc.; Rheol. Soc.; Soc. Glass Tech. War Record: U. S. Army, 1943-45. Special Int.: Ordnance; Ceramics; Inorganic Chem.

KREIDL, Norbert J., 40 Milford Rd., Rochester 10, N. Y. CERAMICS.

KREMERS, Roland Edward, Dir., Basic Rsch., Central Lab., General Foods Corp., 1125 Hudson St., Hoboken, N. J. ORGANIC CHEMISTRY.

KRESHOVER, Seymour Jacob, Prof. of Oral Pathol. and Dir. of Dental Rsch., Medical Coll. of Va., Richmond, Va. PATHOLOGY AND HISTOLOGY.



b. N. Y., N. Y., June 22, 1912. s. Jacob Siegfried and Rose (Herzenstein) K. Edn.: B.A., N. Y. Univ., 1934; D.D.S., Univ. of Pa., 1938; Ph.D., Yale Univ., 1942; M.D., N. Y. Univ., 1949. m. Jacqueline Baxter, Dec. 21, 1946. c.: Karen Lawrence; Douglas Wynn. Exp.: Univ. Fellow and Asst. Instr., Univ. of Ill. Schl. of Dentistry, 1938-39; Carnegie Fellow in Pathology and Clinical Med., Yale Univ., 1939-41; Calhoun Scholar in

Pathol., *ibid.*, 1941-42; Tchng. Fellow in Histology, N. Y. Univ., 1946; Prof. of Oral Pathol. and Dir. of Dental Rsch., Medical Coll. of Va., 1949—. Hon. Pos.: Consultant to U. S. Public Health Service; Committee (Dentistry) Natl. Rsch. Council. Mem.: Amer. Dental Assn.; A.M.A.; A.A.A.S.; Internatl. Assn. for Dental Rsch.; Amer. Acad. Oral Pathol.; Eta Sigma Sigma; Omicron Kappa Upsilon. Contrb. to: Jour. Amer. Dental Assn.; Jour. Dental Rsch.; Amer. Jour. Orthodontics and Oral Surgery; Jour. Va. State Dental Assn.; Va. Jour. Sci. War Record; Major, U. S. Army Dental Corps, 1942-46; Citation for especially meritorious service, 1945. Special Int.: Dental Histology and Embryology; Dental Pathol. (Developmental Abnormalities; Pulp Pathol.; Periodontal Disease); Prenatal Factors in Congenital Defects.

KRESS, Otto, Inst. of Paper Chem., Appleton, Wis. PULP AND PAPER TECHNOLOGY.

KRECHMER, Norman, Asst. Prof. of Biochem. in Pediatrics, Cornell Univ. and N. Y. Hosp. Med. Center, N. Y., N. Y. BIOCHEMISTRY AND PEDIATRICS. b. N. Y., N. Y., Jan. 20, 1923. s. Emanuel and Sue (Gross) K. Edn.: B.S., Cornell Univ., 1944; M.S., Univ. of Minn., 1945; Ph.D., *ibid.*, 1947; M.D., N. Y. State Coll. of Med., 1952. m. Muriel Reiter, Sept. 10, 1942. c.: Pamela Sue; Paul Jay. Exp.: Tchng. Asst., Univ. of Minn., 1944-45; Jr. Scientist, *ibid.*, 1945-47; Asst. Prof. of Biochemistry, Univ. of Vt., 1947-48; Fellow and Rsch. Assoc., N. Y. State Coll. of Med., 1948-52; Commonwealth Fellow in Med., 1952-53; Interne, Montefiore Hosp., 1952-53; Asst. Prof. of Biochem. in Pediatrics, Cornell Univ. and N. Y. Hosp. Med. Cent., 1953—. Mem.: Amer. Chem. Soc.; A.A.A.S.; Sigma Xi; Gamma Alpha. Contrb. to: Jour. Amer. Chem. Soc.; Arch. Biochem. and Biophys.; Proc. Soc. Exptl. Biol. and Med.; Anal. Chem. War Record; U.S.A.A.F., 1942-43. Special Int.: Cytochem.; Renal Physiol.; Lipide and Protein Metabolism.

KRETSCHMER, Herman Louis, Prof. of Genitourinary Surgery, Coll. of Med., Univ. of Ill., Chicago, Ill. UROLOGY.

KREWSON, Charles Flemings, Sr. Rsch. Chemist, 1830 Woodland Rd., Abington, Pa. BIOCHEMISTRY. b. Philadelphia, Pa., May 17, 1905. s. William D. and Emma Edney (Lewis) K. Edn.: B.S., Pa. State Coll., 1927; M.S., Univ. of Ky., 1932; Ph.D., Univ. of Wis., 1940. m. Hazel Mae Hakes, Apr. 9, 1928. c.: Marilyn Sheldon; Charles F., III and Stephen Karl. Exp.: Instr. of Gen. Chem., Univ. of Ky., Lexington, Ky., 1927-41; Rsch. Asst., Univ. of Wis., Madison, Wis., 1938-39; Asst. Rsch. Chemist, Tobacco Section, Analytical and Physical Chem. Div., Eastern Regional Rsch. Lab., Bur. of Agril. Chem. and Engrng., U. S. Dept. of Agril., Philadelphia Pa., 1941—; Sr. Rsch. Chemist, *ibid.*, 1951—. Mem.: Tau Kappa Epsilon; Sigma Xi; Phi Sigma; Phi Lambda Upsilon; Amer. Chem. Soc.;

Amer. Pharmaceutical Assn.; Philadelphia Organic Chemists' Club. Contrb. to: Sci.; Bur. Agril. and Indus. Chem.; Jour. A.C.S.; Jour. of Amer. Pharm. Assn., etc. Special Int.: Vegetable Oils; Organic Pharm. Chem.; Isolation of Plant Constituents; Flavonoids; Problems Related to New Drug, Rutin.

KRIEGER, Charles J., Rsch. Engr., Consolidated Vultee Aircraft Corp., 4117 Park Pl., San Diego, Calif. PHYSICS.

KRIMMEL, Maxamillian A., Mgr., Dept. Plastics, Hammermill Paper Co., 258 W. Sixth St., Erie, Pa. CHEMISTRY.

KRING, Charles U., Consulting Engr., Charles U. Krings Associates, 251 Kearny St., San Francisco, 8, Calif. CIVIL AND



STRUCTURAL ENGINEERING. b. Belle Rive, Ill., Aug. 31, 1910. s. Charles H. and Carolyn M. (Schoenmetzler) K. Edn.: B.S., Univ. of Ill., 1932; M.S., *ibid.*, 1939; Ph.D., *ibid.*, 1948. m. Marguerite Kay, Aug. 25, 1945. c.: Meredith Kay; Judith Leslie; Gary Kevin. Exp.: Field Engr., Amer. Bridge Co., Construction of San Francisco-Oakland Bay Bridge, 1934-35; Engrng. Inspector, Construction of Golden Gate Bridge, San Francisco, Calif., 1936-37;

Construction Supt., Ben Hur Construction Co., St. Louis, Mo., 1937-38; Instr. in Civil Engrng., Univ. of Ill., Urbana, Ill., 1938-39; Rsch. in Design of Structures to Resist Bombing, Switzerland, France and Spain, Office of Chf. of Engrs., War Dept., 1940-41; Engr., Parsons, Brinkerhoff, Hall and Macdonald, Consulting Engrs., N. Y., 1941-42; Chf. Structural Engr. on design of Airbase, Bermuda Architect-Engrs., 1942-43; Rsch. Staff, Office of Scientific Rsch. and Development, Princeton Univ., Princeton, N. J., 1943; Consultant, Operational Analysis Section, Hq., 8th Air Force, England, 1943-45; Bombing Rsch. Analyst, U. S. Strategic Bombing Survey, London and Tokyo, 1945-46; Consulting Engr., Charles U. Krings Associates, and Consultant to the War Dept., Dept. of the Air Force, and Atomic Energy Commn., 1946—. Mem.: Amer. Soc. Civil Engrs.; Internatl. Assn. for Bridge and Structural Engrng.; Structural Engrs. Assn. of Northern Calif.; Tau Beta Pi; Sigma Xi; Chi Epsilon; Alpha Kappa Lambda; Sausalito Little Theater; Sausalito Citizens Council. Author: Selection of Weapons and Estimation of Force Requirements for Aerial Bombardment, 1947. Contrb. to: Trans. Amer. Soc. Civil Engrs.; Engrng. News Record. War Record: Civilian Consultant, Hq. 8th Air Force, rank of Col., 1943-45; Awarded Medal of Freedom by War Department., 1945. Special Int.: Structural Analysis and Design; Vulnerability of Structures to High Explosive, Incendiary and Atomic Bombs; Target Analysis, Bomb and Fuze Selection and Force Requirements for Aerial Bombing.

KROBER, Orland A., Chemist, U. S. Regional Soybean Lab., Univ. of Ill., Urbana, Ill. ANALYTICAL CHEMISTRY; PROTEINS. b. Piedmont, Okla., Sept. 26, 1908. s. R. C. and Nina (Dixon) K. Edn.: B.S., Greenville Coll., 1931; M.A., Univ. of Kans., 1938. m. Virgie Smith, Aug. 31, 1940. c.: Alfred Marvin. Exp.: Lab. Dir., Collegiate Industries, Greenville, Ill., 1934-37; Chemical Lab. Instructor, Univ. of Kans., Lawrence, Kans., 1937-38; Head of Chemistry Dept., Central Coll., McPherson, Kans., 1938-41; Chemist, U. S. Soybean Laboratory, Univ. of Ill., Urbana, Ill., 1941—. Mem.: Amer. Chemical Soc. Contrb. to: Trans. Amer. Cereal Chemists; Jour. Amer. Oil Chemists Soc.; Jour. Plant Physiol. Special Int.: Proteins and Amino Acids in Soybeans; Chem. Analysis of Soybeans.

KROEBER, Alfred L., Columbia Univ., N. Y. 27, N. Y.

KROGDAHL, Wasley Sven, Instr., Dearborn Observatory, Northwestern Univ., Evanston, Ill. THEORETICAL ASTROPHYSICS.

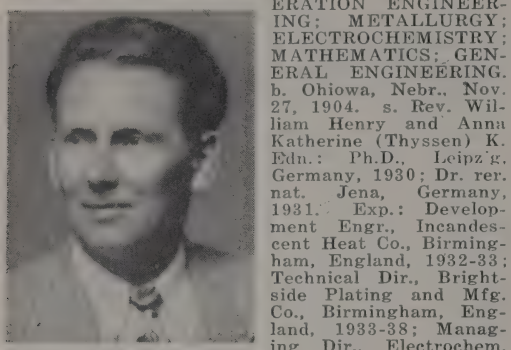
KROGH, Harold W., Assoc. Surgery, Med. Schl., George Washington Univ., Washington, D. C. ORAL SURGERY.

KROGMAN, Wilton Marion, 307 Ivy Rock Lane, Havertown, Pa. PHYSICAL ANTHROPOLOGY.

KRON, Gerald Edward, Asst. Astronomer, Univ. of Calif., Lick Observatory, Mt. Hamilton, Calif. ASTROPHYSICS.

KRONFELD, Peter Clemens, Prof. of Ophthalmology, Ill. Eye and Ear Infirmary, Univ. of Ill., Chicago, Ill. OPHTHALMOLOGY.

KRONSBELN, John, Prof. of Engrng. and Hd. of Dept., Evansville Coll., Evansville, Ind. REFRIGERATION ENGINEERING; METALLURGY; ELECTROCHEMISTRY; MATHEMATICS; GENERAL ENGINEERING.



b. Ohio, W. Va., Nov. 27, 1904. s. Rev. William Henry and Anna Katherine (Thyssen) K. Edn.: Ph.D., Leipzig, Germany, 1930; Dr. rer. nat. Jena, Germany, 1931. Exp.: Development Engr., Incandescent Heat Co., Birmingham, England, 1932-33; Technical Dir., Brightside Plating and Mfg. Co., Birmingham, England, 1933-38; Managing Dir., Electrochem. Engrng. Co., London, England, 1938-44; Dir. of Rsch. and Development, Hoosier Cardinal Corp., Evansville, Ind., 1944-48; Consultant, Ill. Tool Works, Chicago, Ill., 1945-50; Prof. and Hd. of Dept. of Engrng., Evansville Coll., Evansville, Ind., 1948—; Chf. Engr., Chicago Midway Laboratories, Univ. of Chicago, Chicago, Ill., 1951-52; Staff Physicist, Protestant Deaconess Hosp., Evansville, Ind., 1952—. Hon. Pos.: Was Awarded Grant from "Rsch. Corp." of New York, 1949; Directorate and Fellowship from Research on Current and Metal Distribution in Electrodeposition by Amer. Electroplaters' Soc., 1948. Mem.: Amer. Mathematics Soc.; Mathematics Assn. of Amer.; London Math. Soc.; Societe Mathematique de France, Paris, France; The Electrochem. Soc.; The Faraday Soc., England; Amer. Phys. Soc.; Amer. Inst. of Phys.; Amer. Soc. of Refrigerating Engrs.; Amer. Soc. for Engrng. Edn.; A.A.U.P.; Natl. Geographic Soc.; Ind. Acad. of Sci.; Masons; Phi Beta Chi; Sigma Pi Sigma; Acacia. Contrb. to: Proc. London Math. Soc. (England); Duke Math. Jour. Proc. Ind. Acad. of Sci.; Proc. Internatl. Congress of Mathematicians, 1950; Jour. London Math. Soc.; Jour. Electrochem. Soc.; Jour. E.T.S. (England); Plating. Gen. Int.: Designed and Supervised Construction of Dress Memorial Isotopes Lab. for Cancer Rsch., Protestant Deaconess Hosp., Evansville, Ind. Special Int.: Gen. Engrng.; Electrochem.; Heat Treatment of Metals; Radioactive Isotopes; Pure and Applied Math.

KROP, Stephen, Deputy Chf., Physiol. Div., Chem. Corps Medical Labs., Army Chemical Center, Md.



Prof., *ibid.*, 1946; Chf., Pharmacol., Sect. Med. Div.,

Army Chemical Center, Md., 1946-48; Hd., Pharmacodynamics Section, Squibb Inst., 1948-49; Dir., Pharmacol. Div., Warner Inst., 1949-51; Asst. Dir., Chem.-Biol. Coordination Center, Natl. Rsch. Council, 1951-52; Deputy Chf., Physiol. Div., Chem. Corps Medical Labs., Army Chem. Center, Md., 1952—. Mem.: A.A.A.S.; Amer. Chem. Soc.; Soc. Exptl. Biol. and Med.; Sigma Xi; Harvey Soc.; Amer. Soc. for Pharmacol. and Exptl. Therapeutics; Amer. Physiol. Soc.; Amer. Industrial Hygiene Assn. Contrb. to: Amer. Jour. Physiol.; Jour. Amer. Pharmaceutical Assn.; Sci.; Jour. Pharmacol. and Exptl. Therapeutics; Arch. Internationale Pharmacodynamique and Therapie; Proc. Soc. Exptl. Biol. and Med.; etc. Special Int.: Pharmacology of Central Nervous System; Heart and Circulation; Gastrointestinal and Urinary Systems; Enzymes and Enzyme Inhibitors; Toxicology; Analgesics; Sedatives; Anesthetics; Antispasmodics; Antiacids; Consultant in Pharmacology and Toxicology.

KROPP, Benjamin Nathan, Asst. Prof. Embryology, Med. Schl., Queen's Univ., Kingston, Ont., Can. ANATOMY.

KROTKOV, G., Prof. of Biol., Queen's Univ., Kingston, Ont., Can. PLANT PHYSIOLOGY.



b. Moscow, Russia, May 9, 1901. s. Paul V. and Xenia (Uspenskaia) K. Edn.: Agri. Eng., Prague Agri. Coll., Czechoslovakia, 1925; M.A., Univ. of Toronto, 1931; Ph.D., *ibid.*, 1934. m. Valentina Bervy, Apr. 27, 1927. c.: Robert Vladimir; Mary Valentina Sophia. Exp.: Demonstrator in Botany, Univ. of Toronto, 1927-31; Demonstrator in Biochem., Univ. of Toronto, 1930-31; Lectr. in Biol., Queen's Univ., 1931; Prof. of Biol., *ibid.*, 1947—. Mem.: Fellow, Royal Soc. of

Can.; Amer. Botanical Soc.; Amer. Soc. of Plant Physiologists; A.A.A.S.; Contrb. to: Plant Physiol.; Amer. Jour. Botany; Canadian Jour. Botany; Sci. Special Int.: Carbohydrate Metabolism in Plants; Biosynthesis of Radioactive Organic Substances.

KROUT, Maurice H., Dir., Chicago Psychological Inst., 410 S. Michigan Ave., Chicago 5, Ill. PSYCHOLOGY. b. June 15, 1898. s. Joseph A. and Sabina (Harris) K. Edn.: B.S., Lewis Inst., 1921; M.A., Univ. of Chicago, 1924; Ph.D., *ibid.*, 1951. m. Dr. Sara Dulin, July 3, 1921. c.: Dr. Johanna Tabin. Exp.: Tehng. Asst., Univ. of Ill., 1927-29; Instr. in Psychol. and Student Counselor, Chicago City Colleges, 1929-53; Chf. Psychologist, Armed Forces Induction Stations, Milwaukee and Chicago, 1942-44; Chf., POW Re-education Project, N. Y., Del., and N. Y. States, Governors Island, N. Y., 1944-45; Clinical Psychologist in Chg., Ashford General Hosp., White Sulphur Springs, W. Va., 1945-46; Editorial Consultant in Psychol. and Psychiatry, Amer. People's Encyclopedia, 1946-48; Dir., Chicago Psychol. Inst., Chicago, Ill., 1946—. Hon. Pos.: Chmn., Section of Psychol. Exhibits, N. Y. World's Fair, Soc. for Psychol. Study of Soc. Issues, 1939; Chmn., Section of Soc. Psychol., Midwestern Sociol. Soc., 1939; Chmn., Section on Social Psychol., Midwestern Sociol. Soc., 1939; Chmn., Section on Psychol. and Philos., Ill. Assn. Jr. Coll., 1941; Secy.-Treas., Chicago Soc. for Personality Study, 1946-47; Pres., Chicago Soc. for Personality Study, 1947-48; Vice-Pres. and Chmn., Section on Psychol., Regional Meeting, Amer. Assn. of Mental Deficiency, 1951; Chmn., Section on Projective Techniques, Midwestern Psychol. Assn., 1952. Mem.: Fellow, Amer. Psychol. Assn.; Fellow, British Psychol. Soc.; Fellow, Amer. Assn. on Mental Deficiency; Amer. Personnel and Guidance Assn.; Soc. for Clinical and Exptl. Hypnosis; Soc. for Projective Techniques and Rorschach Inst.; Midwestern Psychol. Assn.; Ill. Psychol. Assn.; Ill. Soc. for Personality Study; Chicago Psychol. Club; Amer. Legion; etc. Author: The Psychology of Children's Lies, 1932; Major Aspects of Personality, 1933; Introduction to Social Psychology, 1942.

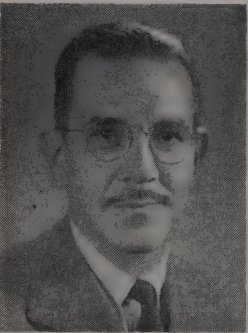
Contrib. to: Amer. Jour. Psychiatry; Psychol. Rev.; Jour. Abnormal and Social Psychol.; Jour. General Psychol.; Jour. Genetic Psychol.; Jour. Speech Disorders; Jour. Exptl. Psychol.; Jour. Clinical Psychol.; Jour. Mental Deficiency; Sociometry; Scientific Monthly. War Record: Served in World War I; Served as Lt., Capt., Major, in World War II. Gen. Int.: Qualified Psychol. Examiner, State of Ill., 1946—; Mem., Co-Operating Faculty, Com. on Preparation of Tchrs., Univ. of Chicago, 1947—; Awarded Rsch. Grants by Natl. Rsch. Council in 1938 and by Soc. Sci. Rsch. Council, 1950. Special Int.: Experimental work with unconscious gestures; Effect of Ordinal Position on Personality Development; Effect of Early Development on Political Attitudes; Speech Disorders and Emotional Tensions; Changes in Social Perception; Diagnosis and Treatment of Aphasia; Relation of Developmental Stages to Adult Personality Structure; Patterns of Anxiety Management Tested by Instrumental Procedure; Quantification of Clinical Material; Rorschach Test Before and After Psychotherapy; Symbolic and Projective Tests; Specific Psychotherapy, etc.

KRUEGER, Albert Paul, Prof. of Bacteriol. and Lectr. in Med., Univ. of Calif., Berkeley 4, Calif.



BACTERIOLOGY AND EXPERIMENTAL PATHOLOGY. b. Butte, Mont., Mar. 17, 1902. s. James and Lillian (Ornsten) K. Edn.: A.B., Stanford Univ., 1925; M.D., ibid., 1928. m. Rose Alberta Margolis, Sept. 30, 1922. c.: James S.; Elsie L. Exp.: Asst., Bacteriol. and Expt. Pathol., Stanford Univ., Stanford, Calif., 1927-28; Acting Instr., ibid., 1928-29; Instr. and Asst. Prof., ibid., 1929; Assoc. in General Physiol., Rockefeller Inst., 1929-31; Assoc. Prof. of Bacteriol., Univ. of Calif., Berkeley, Calif., 1931-38; Prof., ibid., 1938—; Chmn., Dept. of Bacteriol., ibid., 1946-52; Lectr. in Med., ibid., 1932—; Scientific Dir., Naval Biol. Lab., Oakland Naval Supply Center, 1950—. Mem.: Fellow, Calif. Acad. Sci.; A.M.A.; Amer. Public Health Assn.; Amer. Soc. Exptl. Pathol.; Soc. Exptl. Biol. and Med.; Calif. Acad. Med.; Assn. Military Surgeons; Phi Beta Kappa; Alpha Omega Alpha; Sigma Xi; Alpha Kappa Kappa. Contrib. to: Jour. General Physiol.; Proc. Soc. Exptl. Biol. and Med.; Jour. Bacteriol.; Physiol. Rev. War Record: Capt., U.S.N.R., 1940-46 Award: Legion of Merit. Special Int.: Med. Bacteriol.; Bacteriophage; Air Borne Infections.

KRUEGER, John William, Consultant, 7 Ridge Terrace, W. Caldwell, New Jersey. **CHEMISTRY.** b. Summit Hill, Pa., Feb. 18, 1911. s. John C. F. and Minnie Viola (Katerman) K. Edn.: B.S., Bucknell Univ., 1932; M.S., ibid., 1933; Ph.D., Univ. of Va., 1938. m. Mary Elizabeth Latham on Aug. 2, 1941. c.: Carol; John; Robin; Elizabeth; Charles. Exp.: Rsch. Fellow, Univ. of Va., 1933-38; Rsch. Asst., Pa. State Coll., 1939-40; Chf. Rsch. Chemist and Chemist, Edwal Laboratories, 1940-46; Technical Dir., Charles Bruning Co., Inc., Teterboro, N. J., 1946-53; Consultant, 1953—. Mem.: Sigma Xi; Amer. Chem. Soc. Contrib. to: Jour. Organic Chem.; Jour. Amer. Chem. Soc. Special Int.: Chem. of Alkaloids, Sex Hormones, TNT, Mustard Oils, Photographic Processes.



KRUESI, Paul John, Manufacturer, 1101 Provident Bldg., Chattanooga 2, Tenn. b. Menlo Park, N. J., Feb. 3, 1878. s. John and Emily Margaret K. Edn.:

Union Coll., 1896-1898. Hon. Deg.: Dr. Sci., Union Coll., 1935. m. Myra Kennedy Smartt, July 26, 1906 (died Nov. 1, 1941). 2nd m. Mrs. Margaret Thomas Patten, Apr. 16, 1943. c.: Myra; Margaret; Rowena; Paul John, Jr., Eleanor. Exp.: Associated with General Electric Co., Schenectady, N. Y., 1896-97; Edison Labs., Orange, N. J., 1898; Statistical Dept. of Chicago Edison, 1898-1899; Asst. to Sales Mgr. of former General Incandescent Arc Light Co. (later absorbed by General Electric Co.) N. Y., 1899-1902; Secy.-Treas. and General Mgr., Amer. Lava Corp., Chattanooga, Tenn., 1902-18; Pres., ibid., 1918-49; Chmn., ibid., 1949—; organized Southern Ferro Alloys Co., 1917; Pres., ibid., 1917-47; Pres., East Tenn. Iron and Coal Co., 1929-51; Chmn., ibid., 1951—; Dir. of Hamilton Natl. Bank, Provident Life and Accident Ins. Co., Southern Chem. Cotton Co., Chattanooga, Nashville, Chattanooga and St. Louis Ry. Hon. Pos.: Appointed Acting Asst. Secy., U. S. Dept. of Commerce, 1922; Past Pres., Chattanooga C. of C.; former Dir., C. of C. of the U. S. Mem.: Amer. Inst. of Elec. Engrs.; Amer. Iron and Steel Inst.; Electrochem. Soc., (Elected Hon. Mem., 1944); Fellow, A.A.A.S.; Amer. Branch Newcomen Soc. England; Edison Pioneers.

KRUKOVSKY, Vladimir N., Assoc. Prof. of Dairy Indus., Stocking Hall, Cornell Univ., Ithaca, N. Y.



DAIRY CHEMISTRY. b. Odessa, Russia, Oct. 8, 1901. s. Nikita and Theodosia (Avdusin) K. Edn.: M.S., Cornell Univ., 1935; Ph.D., ibid., 1936. m. Josefa Kosova 1929. c.: Nicholas. Exp.: Instr., Asst. Prof., Assoc. Prof., Dept. of Dairy Indus., Cornell Univ., Ithaca, N. Y., 1935—. Mem.: Amer. Chem. Soc.; A.A.A.S.; Amer. Dairy Sci. Assn.; Phi Kappa Phi; Sigma Xi. Contrib. to: Jour. of Dairy Sci.; Sci.; The Milk Dealer, etc. Special Int.: Antioxidant Properties of Milk and

Fat Containing Food Products as Influenced by the Type and Quality of Roughages and Supplements fed to Animals. Milk enzymes and vitamins.

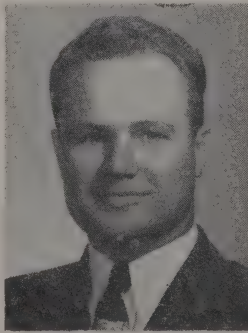
KRUMB, Henry, Consulting Mining Engr., 14 Wall St., N. Y., N. Y. **MINING.**

KRUMBELIN, William Christian, Prof. of Geol., Northwestern Univ., Evanston, Ill. **SEDIMENTARY PETROLOGY.**

KRUMBHAAR, Edward Bell, Prof. of Pathol., Med. Schl., Univ. of Pa., Philadelphia, Pa. **PATHOLOGY.**

KRUSE, Harry Dayton, Milbank Memorial Fund, 40 Wall St., N. Y., N. Y. **NUTRITION.**

KRUSE, Olan Ernest, Prof. of Physics and Head of Department, Stephen F. Austin State Coll., Nacogdoches, Tex.



PHYSICS IN PARTICULAR, ELECTRONICS AND CIRCUIT THEORY. b. Coupland, Tex., Sept. 6, 1921. s. Max Edward and Irma Pauline (Miller) K. Edn.: B.S., Tex. Coll. of Arts and Industries, 1942; M.A., Univ. of Tex., 1949; Ph.D., ibid., 1951. m. Lucille Thomas, Sept. 4, 1942. c.: John Edward; James Lawrence. Exp.: Jr. Radio Engr., Signal Corps Radar Labs., Camp Evans, Belmar, N. J., 1942-43; Instr., Signal Corps Radio, Tex.

A. and I., Kingsville, Tex., 1943; Instr., Navy Officer's Pre-Radar Schl., Harvard Univ. (in Navy

at this time), 1943-44; Instr., Navy Officer's Pre-Radar Schl., Bowdoin Coll., 1944-45; Instr., Math. Dept., Tex. Coll. of Arts and Industries, 1946-47; Tchng. Fellow, Applied Math. Dept., Univ. of Tex., 1948-51; Staff, Physics Dept., Stephen F. Austin State Coll., Nacogdoches, Tex., 1951—. Mem.: Amer. Inst. Physics; A.A.P.T.; Inst. Radio Engrs.; Sigma Xi; Tex. Acad. Sci. Contrb. to: Proc. Inst. Radio Engrs.; Audio Engrng. War Record: Ensign, Lt. (j.g.) and Lt., U.S.N.R., 1943-46. Special Int.: Pulse Modulation (Variable Slope in Particular) and Circuit Analysis.

KRUSE, Paul J., Prof. Ednl. Psychol., Cornell Univ., Ithaca, N. Y., PSYCHOLOGY.

KRUSE, Theophile Karl Theodore, Prof. of Physiol. and Pharmacol., Schl. of Med., Univ. of Pittsburgh, Pittsburgh, Pa. PHYSIOLOGY AND PHARMACOLOGY.

KRYNINE, P. D., Pa. State Coll., State College, Pa. GEOLOGY.

KUBACKI, W. Howard, Prof., Full and Removable Partial Dentures and Hd. Dept., Dir. of Dental Clinics, and Lectr. in Post-graduate Studies, Univ. of Ill., Coll. of Dentistry, 808 S. Wood St., Chicago 12, Ill. b. Chicago, Ill., Jan. 10, 1895. s. Frank and Barbara (Prass) K. Edn.: D.D.S., Univ. of Ill., Coll. of Dentistry, 1917. m. Esther Higgins (dec.), Sept. 6, 1918. c.: Lyle Howard (dec.). Exp.: Mem. of Faculty, Univ. of Ill., Coll. of Dentistry, 1919—; Prof. of Prosthetic Dentistry, ibid., 1931—; Hd. Dept. of Full and Removable Partial Dentures, ibid., 1946—; Dir. of Dental Clinics, ibid., 1947—; Lectr. in Post-graduate Studies, ibid., 1947—. Hon. Pos.: Consultant, Hines Hosp.; Consultant in Prosthesis, Univ. of Ill. Rsch. and Ednl. Hosp., 1937—. Mem.: Amer. Dental Soc.; Ill. Dental Soc.; Chicago Dental Soc.; Fellow, Amer. Coll. of Dents.; Amer. Denture Soc.; Omicron Kappa Upsilon; Delta Sigma Delta. War Record: First Lt., World War I. Special Int.: Prosthetic Dentistry.

KUBICEK, W. G., Asst. Prof. of Physiol., Div. Physical Med., Univ. of Minn. Hosps., Minneapolis, Minn. PHYSIOLOGY.

KUBIE, Lawrence S., Assoc. in Neurol., Coll. of Physicians and Surgeons, Columbia Univ., 7 E. 81st St., N. Y., N. Y. NEUROLOGY, PSYCHIATRY.

KUBIN, Rosa, Assoc. Prof., 19 Appleton St., Waltham 54, Mass. BIOCHEMISTRY AND CLINICAL PATHOLOGY. b. Dec. 15, 1906, St. Poelten, Austria. d. Richard and Clara Loewy Lustig. Edn.: St. Poelten Unter and Ober-Gymnasium (Classical Coll.) Matura, June, 1925; Summa Cum Laude, Univ. of Vienna, II Chemisches Inst., Ph.D., July 13, 1931; Postgrad. Dr. Jolles' Clinical Lab., Hematology. m. Ludwig Kubin, M.D., of Waltham, Mass., Dec. 22, 1931. Exp.: Oesterreichische Chemische Werke, Rsch. Chem., 1931-35; Syngala, Inc., Pharm. Co., ibid., 1935-38; Eli Lilly Fellow, Univ. of Ore. Med. Schl., Portland, Ore., 1938-39; Univ. of Ore. Med. Schl., Portland, Ore., Rsch. Asst., 1939-41; Middlesex Univ., Waltham, Mass., Asst. Prof., Biochem., Clinical Pathol., 1941-47; Univ. of Mass. at F. Devens, Mass., 1947-49; Asst. Prof. in Chem.; New England Coll. of Pharmacy, 1951—; Assoc. Prof. in Biochemistry. Member: Amer. Chem. Soc.; New England Assn. of Chem. Tchrs.; A.A.U.P.; Amer. Assn. for Advancement of Sci. Author: Coauthor of Chronic Effects of Various Barbiturates in Dogs; Effects of Anterior Pituitarylike Substance on Carbohydr. Metab.; Placental Transmission of Blood Iodine Quantitative Determination of Bile Pigment in Urine; Collection of specimen for Labor, examination; Lymphatic leukemia with myeloid blood picture, Modified technic for redcell determination in goat's blood; Convulsions in puppies caused by congenital microcytic anemia; Normal blood and urine values in mink; Lead poisoning in dogs. Title of Ph.D. Dissertation: Einwirkung of Chlorsulfonsäure auf Authrachinon and Benzophenon. Travel: Switzerland; France; Italy; Czechoslovakia. Listed in: A.M.S.

KUDER, George Frederic, Test and Measure Specialist, Office Secy. of War, Washington, D. C. PSYCHOLOGY.

KUDERNA, Jerome, Prof. of Edn., Schl. of Edn., Ala. Poly. Inst., 157 Cary Dr., Auburn, Ala. SCIENCE EDUCATION.

KUDO, Richard Roksabro, Prof. of Zool., Univ. of Ill., 322 Natural History Bldg., Urbana, Ill. PROTOZOOLOGY.

KUEVER, Rudolph Andrew, Dean and Prof., State Univ. of Iowa Coll. of Pharmacy, Iowa City, Iowa. PHARMACEUTICAL CHEMISTRY.

KUGELMASS, I. Newton, Dir., Heckscher Inst. for Child Health, N. Y., N. Y. PEDIATRICS. b. N. Y., N. Y., June 28, 1896. s. Maurice and Sarah (Spirer) K. Edn.: B.S., Coll. City. of N. Y., 1916; M.A., Columbia Univ., 1917; Ph.D., Johns Hopkins, 1921; Docteur Special en Sci., Univ. of Brussels, 1922; M.D., Yale Univ., 1925. m. Ella H. Fishberg on Aug. 18, 1934. Exp.: Instr. in Phys. Chem., Coll. of the City of N. Y., 1917-18; Instr. in Chem., Columbia Univ., 1918-19; Prof. of Chem., Howard Coll., Birmingham, Ala., 1919-21; Fellow in Phys. Chem., Johns Hopkins Univ., 1921-22; Rsch. Assoc. in Physiol., Univ. of Brussels, 1922-23; Rsch. Assoc. in Pediatrics, Yale Univ., 1923-25; Lectr., Bd. of Edn., N. Y. C., 1916-17; Instr. in Chem., ibid., 1917-18; Prof. of Chem. and Consultant in Nutrition, Howard Coll., Birmingham, Ala., 1918-20; Rsch. Assoc. in Pediatrics, Yale Univ. Med. Schl., 1922-25; Assoc. Pediatrician, Fifth Ave. Hosp., N. Y. C., 1927-35; Pediatric French Hosp., 1930-35; Dir., Heckscher Inst. for Child Health, 1932—; Assoc. Physician, Riverside Hosp., 1930-35; Consultant Pediatricist, Monmouth, N. J., Memorial, 1940—; Consultant Pediatricist, Northwoods, Saranac Lake, Lynn Memorial, 1935—; Consultant Pediatricist, Broad St. Hosp., 1935-45; Consultant Pediatricist, Pan-Amer. Clinics, 1935-45; Chf. Pediatrician, N. Y. C. Children's Hosp., 1935-45; Chf. of Children's Clinic for Immunology, French Hosp., 1935-45. Hon. Pos.: Consultant Nutritionist, Dept. of Health and Dept. of Hosp., N. Y. C.; Nutritionist, N. Y. Section, U. S. Food Admin., 1917-18. Mem.: A.M.A.; Amer. Assn. Engrs.; A.A.A.S.; Amer. Acad. Applied Nutrition; Amer. Acad. Dental Med.; Soc. Rsch. in Child Development; Amer. Chem. Soc.; N. Y. Acad. of Sci.; Harvey Soc.; Amer. Assn. on Mental Deficiency; Amer. Pub. Health Assn.; Natl. Tuberculosis Assn.; Amer. Therapeutic Soc.; N. Y. Acad. of Dentistry; Amer. Med. Assn. of Vienna; Amer. Tech. Assn.; Deutsche Medizinische of Gesellschaft; Assn. Amer. Tchrs. of Diseases of Children; Alpha Mu Sigma; etc. Author: Clinical Nutrition in Infancy and Childhood, 1930; The Story of Infancy, 1930; Newer Nutrition in Pediatric Practice, 1939; Growing Superior Children, 1935; Superior Children Through Modern Nutrition, 1941; Clinical Pediatrics, 1942; etc. Contrb. to: Amer. Jour. of Diseases of Childhood; Jour. A.M.A.; Jour. Pediatrics; Amer. Jour. Digestive Diseases and Nutrition; Med. Rev. of Revs.; Parents' Mag.; Jour. Biol. Chem.; Biochem. Jour. (London); Amer. Jour. Med. Sci.; Our Children; Amer. Jour. Mental Deficiency. Gen. Int.: Discovered Vit. P Structure; Mechanism of Blood Coagulation; Low Temperature Reactions. Special Int.: Child Nutrition; Chem. Pediatrics; Blood Coagulation; Buffer Mechanisms; Mental Deficiency.

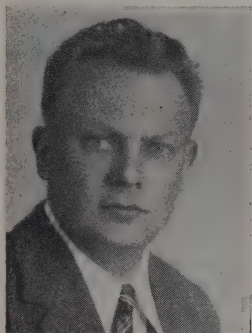
KUHLEN, Raymond Gerhardt, Assoc. Prof. of Ednl. Psychol., Schl. of Edn., Syracuse Univ., Syracuse, N. Y. PSYCHOLOGY, HUMAN DEVELOPMENT.

KUHN, Wayne Edward, Mgr., Tech. and Rsch. Div., The Tex. Co., 135 E. 42nd St., N. Y. 17, N. Y. PETROLEUM AND PETROCHEMISTRY. b. Oshkosh, Wis., Oct. 25, 1903. s. Edward John and Emma G. (Christensen) K. Edn.: B.A., Reed Coll., 1925; Ph.D., Cornell Univ., 1930. m. Agnes Lakie on Oct. 21, 1929. c.: William E. Exp.: Chemist., The Tex. Co., Bayonne, N. J. and Port Arthur, Tex., 1929; Chem. Engr., Fraction Dept., 1929-31; Dir., ibid., 1931-33; Asst. Chf. Chemist in Chg. of Rsch. and Development Work, 1933-37; Asst. to Dir. of Rsch., 1937-38; Mgr., Tech. and Rsch. Div., ibid., 1938—. Mem.: A.A.A.S.; Amer. Forestry Assn.; Amer. Geographical Soc.; Amer. Chem. Soc.; Amer. Inst. of Chemists; Amer. Inst. of Physics; Amer. Petroleum Inst.; Amer. Rocket Soc.; Amer. Soc. for Testing Materials; Armed Forces Chem. Assn.; Chem. Soc. (London); Inst. of Aeronautical Sci.;

Inst. of Petroleum (London); Jefferson Chem. Co., Bd. of Dir.; Natl. Aeronautical Assn.; Natl. Geographic Soc.; Soc. of Automotive Engrs.; Soc. of Chem. Industry; Assn. of Res. Directors, Com. Chem. Development Assn., C. R. C., Natl. Assn. of Mfgs. Contrb. to: Oil and Gas Jour.; Petroleum Proc.; Aero Digest; Aviation Week; Jour. Commerce; Ind. Eng. Chem.

KUHNS, Ralph H., M.D., 1642 E. 56th St., Chicago 37, Ill. **PSYCHIATRY.** b. Nov. 12, 1889, Ohio. s. Maurice S. and Rosalia (Strasburg) K. Edn.: B.Sc., Univ. of Chicago, 1911; M.D., Rush Med. Coll., 1913. Exp.: Interne, Michael Reese Hosp., Chicago, 1913-15; Amer. Red Cross Phys. in Europe, 1916-17; Lt. and Capt., Med. Corps, U. S. Army, 1917-19; Faculty Mem., Rush Med. Coll., Chicago, 1919-21; Chf. of O.P.D., Univ. of Calif., 1922-25; *ibid.*, Children's Hosp., Chicago, 1925-28; Asst. Dir., St. Luke's Hosp., Chicago, 1929-31; Asst. Dir., N. P. Inst., State of Ill., Elgin, 1931-34; Faculty Mem., Univ. of Ill., 1934-41; Chf. of N. P., Armed Forces Induction Center, Los Angeles, Calif., 1942-46; N. P. Specialist, V. A. *ibid.*, 1946-48; M.D., V. A. Dist. Office, Chicago, Ill., 1950—. Mem.: A.M.A.; Amer. Psychiatric Assn.; A.A.A.S. Special Int.: Psychiatry.

KUIPER, Gerard Peter, Prof., of Astronomy, Yerkes Obs., William Bay, Wis. **ASTRONOMY.** b. Haren-



carpsel, The Netherlands, Dec. 7, 1905. s. Gerard and Anna (de Vries) K. Edn.: B.Sc., Univ. of Leyden, The Netherlands, 1927; Ph.D., *ibid.*, 1933. m. Sarah Parker Fuller, June 20, 1936. c.: Paul; Lucy. Exp.: Rsch. Asst. in Astronomy, Univ. of Leyden, The Netherlands, 1928-33; Mem. Dutch Eclipse Expedition to Sumatra, 1929; Rsch. Fellow, Lick Observatory, Univ. of Calif., 1933-35; Lectr., Harvard, Cambridge, Mass., 1935-36; Asst.

Prof. of Astronomy, Univ. of Chicago, Chicago, Ill., 1936-37; Assoc. Prof. of Astronomy, *ibid.*, 1937-43; Prof., *ibid.*, 1943—; Located at Yerkes Obs., Williams Bay, Wis., 1936—; and McDonald Obs., Ft. Davis, Tex., 1939—. Mem.: U. S. Natl. Acad. of Sci.; Internat. Astronomical Union; Amer. Astronomical Soc.; Astronomical Soc. of the Pacific; Royal Astronomical Soc.; Netherlands Soc. of Scis. Contrb. to: The Astrophys. Jour.; Proc. of Natl. Acad. of Sci. War Record: Cons., Operational Analysis Sect., 8th Air Force, England, 1944; Alsos Mission, Europe, 1945. Special Int.: Double Stars, White Dwarfs, Origin of the Solar System; Planetary Atmospheres.

KULCINSKI, Louis E., Prof. and Hd. of Dept. of Hygiene, Univ. of S. C., Columbia, S. C. **BIOLOGICAL SCIENCE.** b. July 21, 1899, La Crosse, Wis. s. Michael and Mary (Weista) K. Edn.: Student Tchrs. Coll., La Crosse, Wis., 1916-18; B.S., 1927, M.S., 1929, Ill.; Ph.D., Univ. Mich., 1943. m. Bernice LaVerne Rohrer Gregory of Springfield, Ill., June 23, 1934. d. John W. and Blanch Rohrer. Exp.: Ath. Dir., State Nor. Schl., Superior, Wis., 1918-20; Supvr., Phys. Edn., Health and Rec., E. Chicago, 1920-22; Athletic Dir., Pillsbury Acad., Owatonna, Minn., 1922-25; Instr., Phys. Welfare Dept., Univ. of Ill., 1925-29; Office of Supt. of Pub. Instrn., State of Ill., 1929-36; Dept. of Edn., Chmn. of Dept. of Health and Phys. Edn., State Tchrs. Coll., Hyannis, Mass., 1939-43; Hd. of Major Dept. of Health and Phys. Edn., Tex. Coll. of A. and I., Kingsville, Tex., 1943-46; Prof. and Hd. Dept. Hygiene, Univ. S. C., Columbia, S. C., 1946—. Hon. Pos.: State of Ill., Represent. Mem. of Assembly, A.P.E.A., 1929-36; Sec.-Treas., Ill. State Phys. Edn. Assn., 1929-36; Ednl. Com. and Chmn., Recreation Com., Ill. State Big Brothers Assn., 1929-36; Amer. Public Health Assn., S. C. State Chmn. on Planning in Health Edn.; Sou. States Work Conf., mem. of S. C. Comm. on Tchr. Training in Health Edn. Mem.: S. C. Assn. of Health, Phys. Edn. and

Recreation; S. C. Pub. Health Assn.; Amer. Public Health Assn.; Soc. of State Directors of Health and Phys. Edn.; A.P.E.A., Fellow; A.A.U.P.; Phi Delta Kappa; Sigma Delta Sigma; Sigma Delta Psi; Phi Epsilon Kappa; Delta Theta Epsilon. Rsch.: Spec. Inter-Amer. Affairs Project; Chmn., Health and Nutrition Com., U. S. Office of Edn., 1944. Contrb. to: Ednl. Jours.; Rsch. Quar., Amer. Phys. Edn. Assn.; "Youth Conservation," South Carolina Clubwoman. Ph.D. Dissertation: The Relation of Intelligence to the Learning of Fundamental Muscular Skills. Travel: U. S.; Mex.; Can. Hobbies: Recreation Concerts and Opera. Listed in: Who's Who in Amer.; etc.

KULP, Walter Leroy, Prof and Hd., Dept. of Bacteriol., Univ. of Conn., Storrs, Conn. **BACTERIOLOGY.**

KUMLER, Warren Donald, Prof. of Chem., Univ. of Calif., Coll. of Pharmacy, Med. Center, San Francisco 22, Calif.



PHYSICAL AND ORGANIC CHEMISTRY. b. Seven Mile, Ohio, Feb. 18, 1905. s. Charles Augustus and Maude (Yingling) K. Edn.: B.S., Antioch Coll., 1929; M.S., *ibid.*, 1930; Ph.D., Univ. of Calif., 1934. m. Alice McClintock, July 28, 1927. c.: Archie Ann; Joan Mary. Exp.: Instr., Deep Springs, 1929; Dean, *ibid.*, 1930-32; Instr., Coll. of Pharmacy, Univ. of Calif., 1935; Asst. Prof., *ibid.*, 1938; Assoc. Prof., *ibid.*, 1944; Prof., *ibid.*,

1950—. Mem.: A.C.S.; A.A.A.S.; Amer. Pharm. Assn.; N. Y. Acad. of Sci.; Sigma Xi; Rho Chi; Phi Delta Chi. Contrb. to: Jour. Amer. Chem. Soc.; Jour. Amer. Pharm. Assn. Special Int.: Phys. and Organic Chem.; Dipole Moments; Absorption Spectra; Dissociation Constants; Pharmaceutical Chem.

KUMRO, Donald M., Sci. Tchr., East High Schl., 830 Northampton St., Buffalo, N. Y. **ORGANIC CHEMISTRY.**

KUN, Ernest, Dept. of Med., Div. Infectious Disease Schl. of Med., Tulane Univ., 1430 Tulane Ave., New Orleans, La. **PHARMACOLOGY.**

KUNERTH, William, Assoc. Prof. of Physics, Iowa State Coll., Ames, Iowa. **PHYSICS.**

KUNITZ, Moses, Assoc. Mem., Rockefeller Inst. for Med. Rsch., Princeton, N. J. **PLANT PATHOLOGY.**

KUNKEL, Beverly Waugh, Prof. of Biol., Lafayette Coll., Easton, Pa. **EMBRYOLOGY.**

KUNKEL, Louis Otto, Mem. Emeritus, Rockefeller Inst. for Med. Rsch., 66th St. and York Ave., N. Y. 21, N. Y. **PLANT PATHOLOGY.** b. Audrian Co., Mo., May 7, 1884. s. Henry and Katie Price (Spencer) K. Edn.: B.S., Univ. of Mo., 1909; A.B., *ibid.*, 1910; M.S., *ibid.*, 1911; Ph.D., Columbia Univ., 1914. m. Johanna Caroline Wortmann, Sept. 4, 1915. c.: Henry George; Otto Wortmann; Paul Spencer; Walter Ralph. Exp.: Pathologist, U. S. D. A., 1914-20; Assoc. Pathologist, Hawaiian Sugar Planters Exptl. Station, 1920-23; Pathologist, Boyce Thompson Inst. for Plant Rsch., 1923-32; Mem., Rockefeller Inst. for Med. Rsch., 1932-49; Mem. Emeritus, *ibid.*, 1949—. Mem.: Amer. Phytopathol. Soc.; Botanical Soc. Amer.; Amer. Soc. Naturalists; Amer. Philos. Soc.; Natl. Acad. Sci.; Phi Beta Kappa; Sigma Xi; Alpha Zeta; Phi Delta Kappa. Contrb. to: Bull. Torrey Bot. Club; Amer. Jour. Bot.; Jour. Agri. Rsch.; etc. Special Int.: Virus Diseases.

KUNSMAN, Charles Henry, Hd., Physiochemical and Analytical Div., Western Regional Rsch. Lab., U. S. Bureau Agri. Chem. Engrng., Albany, Calif. **AGRICULTURAL PHYSICS AND CHEMISTRY.**

KUNTZ, Albert, Prof. and Dir., Dept. of Micro-anatomy, St. Louis Univ. Schl. of Med., 1402 S. Grand Blvd., St. Louis, Mo. **NEUROLOGY.**

KUNZ, Adolph Henry, Prof. and Hd., Dept. of Chem., Univ. of Ore., Eugene, Ore. CHEMISTRY.

KURA, John G., Asst. Supvr., Battelle Memorial Inst., Columbus 1, Ohio. NONFERROUS METALLURGY. b. Pittsburgh, Pa., May 24, 1915. s. Charles and Anna (Johnson) K. Edn.: B.S., Carnegie Inst. of Tech., 1938. m. Patricia Ann, Mar. 6, 1943. c.: Sharon Lee; James; John Randall. Exp.: Staff, Metallurgical Corps, Carnegie, Ill. Steel Corp., Dugueone, Pa., 1938-41; Rsch. Engr. and Asst. Supvr., Battelle Mem. Inst., Columbus, Ohio, 1941—. Mem.: Amer. Soc. for Metals; Amer. Inst. of Mining and Metallurgical Engrs.; Amer. Foundrymen's Soc.; Theta Tau; Sigma Xi. Contbr. to: Trans. of Amer. Soc. for Metals; Trans. of Amer. Foundrymen's Soc.; Amer. Foundryman; Iron Age; Metal Progress; Trans. of Amer. Inst. of Mining and Metallurgical Engrs. Special Int.: Foundry Practice for Copper-Base Alloys; Principles of Fluid Flow in Casting; Development of Specialized Techniques for Melting and Casting Beryllium and Titanium.

KURTZ, W. O., retired, 152 Greenbay Rd., Winnetka, Ill. ENGINEERING.

KURZ, Herman, Prof. of Botany and Hd., Dept. of Botany and Bacteriol., Fla. State Univ., Tallahassee, Fla. PLANT ECOLOGY.

KURZROK, Raphael, Attending Obstetrician, Morrisania City Hosp., N. Y., N. Y. OBSTETRICS, GYNECOLOGY.

KUSCHKE, Carl Gustav Paul, retired, 1662 Shatto St., Los Angeles, Calif. MATHEMATICS.

KUSTER, Kimber Cleaver, Instr. in Biol., State Tehrs. Coll., Bloomsburg, Pa. ENTOMOLOGY.

KUTAK, Robert Ingersoll, Prof. and Hd., Dept. of Sociol., Univ. of Louisville, Louisville 8, Ky. SOCIOLOGY. b. Nov. 11, 1899, Chicago, Ill. s. Frank Jerry and Anna (Hruby) K. Edn.: Univ. of Neb., 1919-21; Western Reserve Univ., A.B., 1923; Columbia Univ., A.M., 1925, Ph.D., 1933. m. Rose-

mary Norris of Cincinnati, Ohio, June 30, 1931. d. Dr. and Mrs. Samuel Cobb Norris. c.: Elizabeth Louella. Exp.: Rsch. Asst., Bd. of Ed., Cleveland, Ohio, 1923-27; Hd., Social Sci. Dept., John Adams H. S., Cleveland, Ohio, 1927-28; Instr. in Soc. Sci., Lawrence Smith Schl., N. Y. City, 1928-30; Asst., Dept. of Soc., Columbia Univ., 1930-31; Asst. Prof. of Soc., Univ. of Louisville, 1931-35; Assoc. Prof., 1935-38, ibid.; Prof., Hd., Dept. of Sociol., 1938—, ibid. Hon. Pos.: Pres., Ky. Conf. of Soc. Welfare, 1937; Vice-Chmn., Coun. of Soc. Agencies, Louisville, Ky., 1941-45; Mem. Comm. on Tch. of Sociol., So. Sociol. Soc., 1944-46. Mem.: Amer. Gevontological Soc.; 2nd Vice-Pres., Southern Sociological Soc., 1950-51; Amer. Sociol. Soc.; So. Sociological Soc.; Acad. of Political and Social Sci.; A.A.U.P.; A.A.A.S.; Natl. Coun. on Family Relations; Ky. Conf. of Soc. Welfare; For. Policy Assoc.; Lambda Chi Alpha; Alpha Kappa Psi; Masonic Lodge. Author: Manual of Cleveland, 1927; The Story of a Bohemian Amer. Village, 1933. Co-author: *Principles of Police Work with Minority Groups*, 1950. Ph.D. Dissertation: The Story of a Bohemian Amer. Village. War Record: Private First Class, 16th Inf., First Div., 1917-19, Purple Heart, Cantigny, France, 1918. Travel: Europe. Hobbies: Bridge; Golf; Swimming. Listed in: Directory of Amer. Scholars; Who's Who in Ky.; Who's Who in Amer.; Who's Who in the South and Southwest.

KUTCHIN, Harriet Lehmann, Maplewood, Green Lake, Wis. COMPARATIVE ANATOMY.

KUTZ, Sally Emily, Chmn. and Prof., Dept. of Hygiene, Brooklyn Coll., Brooklyn, N. Y. HYGIENE.

KUZELL, Charles R., Box 872, Douglas, Ariz. METALLURGY.

KUZNETS, Simon, Natl. Bureau Econ. Rsch., 1819 Broadway, N. Y., N. Y. SOCIAL AND ECONOMIC SCIENCES.

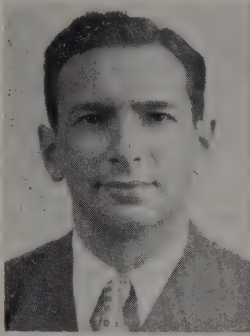
KYLE, Curtis H., retired, 14 W. Lenox St., Chevy Chase, Md.

LAAKE, Ernest William, Entomologist, Chf. Field Sta., Bureau Entomol. and Plant Quarantine, U. S. D. A., Box 232, Kerrville, Tex. **MEDICAL ENTOMOLOGY.**

LACEY, William N., 1201 E. California St., Pasadena 4, Calif. **CHEMICAL ENGINEERING.**

LACHMAN, Arthur, c/o J. S. Colyer, 39 Mayhew Ave., Larchmont, N. Y.

LACHMANN, Alfred, Sr. Chemist, Stein, Hall and Co., Inc., L. I. City, N. Y. **DAIRY SCIENCE AND FOOD CHEMISTRY, PRESENTLY INTERESTED IN VEGETABLE GUMS AND EMULSIFIERS IN FOOD.** b. Gelsenkirchen, Apr. 14, 1915. s. Sam and Erna (Segal) L. Edn.: Diplome d'ingenieur-chimiste and Dr. es Sci., Univ. of Geneva, 1940; 1942. m. Alice Prebaudier, Apr. 6, 1946. Exp.: Rsch. Labs. of Fed. of Migros Cooperatives, Zurich, Switzerland, 1942-46; Ajax Products, N. Y. C., 1946-47; Asst. Specialist, Dairy Industry Div., Univ. of Calif., Davis, Calif., 1947-51; Sr. Chem., Stein, Hall and Co., Inc., Long Island City, N. Y., 1951—. Mem.: Amer. Chem. Soc.; Amer. Dairy Sci. Assn.; Inst. of Food Tech.; Amer. Assn. of Cereal Chemists; Swiss Chem. Assn.; Sigma Xi; Alliance Franchise. Contrb. to: Indus. and Engrng. Chem.; Helvetica Chimica Acta. Special Int.: Effect of Vegetable Gums on Food Products; Interest in Chem. Additives and Intermediate Products Used in the Food Industry, Soap and Detergents, and Pharmaceutical Industry.

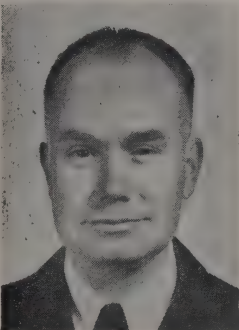


LACHMUND, Harry Gray, Box 422, Carmel, Calif. **PLANT PATHOLOGY, GENETICS.**

LACK, Frederick Reginald, Vice-Pres., Western Electric Co., Inc., 120 Broadway, N. Y., N. Y. **ENGINEERING.**

LACKEY, Charles F., Pathologist P-2 Office Sugar Plant Investigations, U. S. D. A., P. O. Box 31, Riverside, Calif. **PATHOLOGY.**

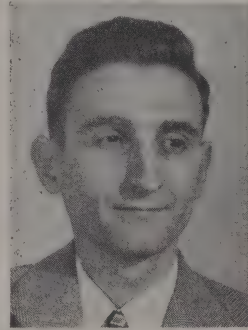
LACKMAN, David Buell, Scientist, U. S. Pub Health Service, Hamilton, Mont. **MEDICAL BACTERIOLOGY.** b. Plymouth, Conn., Dec. 29, 1911. s. Edward R. and Rena D. (Buell) L. Edn.: B.S., Univ. of Conn., 1933; Ph.D., Univ. of Pa., 1937. m. Bernita Dowd, June 10, 1947. c.: Gloria G.; Laurena S. Exp.: Instr. in Bacteriology, Univ. of Pa., Schl. of Med., 1937-40; Assoc. in Public Health, Univ. of Pa., Schl. of Med., 1940-42; Officer, Sanitary Corps, Army of the U. S., 1942-46. Sr. Scientist, Rocky Mt. Lab., U. S. Pub. Health Serv., Hamilton, Mont., 1946—. Fellow: Amer. Pub. Health Assn. Mem.: Amer. Soc. Professional Biologists; Soc. of Amer. Bacteriol. Contrb. to: Jour. Immunology; Jour. Bacteriol.; Jour. Amer. Pub. Health Assn. Gen. Int.: Antigenic structure of hemol. Streptococci, Serology of Nucleic acid, serology of rickettsiae. Listed in: Amer. Men. of Sci., W. W. in the West.



LADD, Harry S., Principal Geologist, U. S. Geol. Survey, Washington 25, D. C. **INVERTEBRATE PALEONTOLOGY; PALEOECOLOGY; GEOLOGY OF PACIFIC ISLANDS.** b. St. Louis, Mo., Jan. 1, 1899. s. Charles P. and Alice (Bemis) L. Edn.:

A.B., Wash. Univ., 1922; M.S., Univ. of Iowa, 1924; Ph.D., ibid., 1925. m. Jane Mahler, Sept. 4, 1934. c.: Nicholas Bemis; David Allen. Exp.: Bishop Museum Fellow, 1925, 1928; Asst. Prof. of Geol., Univ. of Va., 1926-29; Paleontologist, Venezuela Gulf Oil Co., 1929-31; Rsch. Assoc., Univ. of Rochester, 1933-35; Assoc. Geologist, Natl. Park Service, 1935-36; Geologist, ibid., 1938-40; Assoc. Geologist, U. S. Geol. Survey, 1940-41; Geologist, ibid., 1941-43; Sr. Geologist, ibid., 1943-45; Prin. Geologist, ibid., 1945—. Mem.: Geol. Soc. Amer.; Paleontological Soc. Amer.; Amer. Assn. Petrol. Geologists; Amer. Geophys. Union; A.A.A.S.; Geol. Soc. Wash.; Sigma Chi; Sigma Xi; Phi Sigma. Contrb. to: Jour. Geol.; Amer. Jour. Sci.; Bull. Amer. Assn. Petroleum Geologists; Sci. War Record; U. S. Army, 1918. Special Int.: Pacific Islands; Geol.; Origin of Coral Reefs.

LACOSTE, Rene John, Rsch. Asst., Div. of Chem. Amer. Dental Assn., 5476 Ellis Ave., Chicago, Ill.

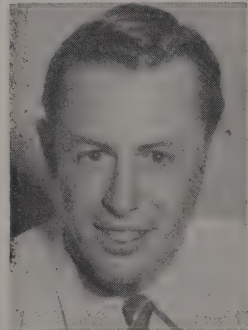


RESEARCH IN ANALYTICAL CHEMISTRY. b. N. Y. C., Feb. 19, 1927. s. Adrian and Germaine (Devillers) L. Edn.: B.S., Rensselaer Poly. Inst., 1950; M.S., Univ. of Chicago, 1953. Exp.: Rsch. Asst., Amer. Dental Assn., Chicago, Illinois, 1950—. Mem.: Amer. Chemical Soc.; Sigma Xi. Contrb. to: Analytical Chem. Special Int.: Spectrophotometric Methods of Analysis; Organics Analytical Reagents; Analysis of Pharmaceutical Materials.

LADD, William Sargent, Ojai, Ventura County, Calif. **MEDICINE.**

LADERMAN, Jack, Mathematician, Logistics Br. Office of Naval Rsch., 1705 Andrews Ave., Bronx 53, N. Y. **MATHEMATICAL STATISTICS.** b. N. Y., N. Y., Jan. 6, 1914. s. Joseph and Fannie (Freeman) L. Edn.: B.S., Coll. of the City of N. Y., 1934; M.A., Columbia Univ., 1935; Ph.D., ibid., 1953. m. Marion Frances Shupnik, June 8, 1947. c.: Julian David. Exp.: Statistician, Federal Communications Commn., 1937; Analyst, Bureau of Rsch. and Statistics, N. Y. State Dept. of Labor, 1938; Mathematician, Math. Tables Project, Work Projects Admin., 1939-40; Statistician, Chem. Warfare Service, War Dept., 1940-46; Mathematician, Computation Lab., Natl. Bureau of Standards, 1946-49; Rsch. Scientist, Columbia Univ., 1949-51; Mathematician, Logistics Branch, Office of Naval Rsch., 1951—. Mem.: Amer. Math. Soc.; Inst. of Math. Statistics; Amer. Statistical Assn.; A.A.A.S.; Biometric Soc.; Sigma Xi. Contrb. to: Annals Math. Statistics; Jour. Math. and Phys.; Jour. Amer. Statistical Assn.; Math. Tables and other Aids to Computation. Special Int.: Math. Computation; Math. Statistics; Probability; Logistics.

LaFORGE, Raymond Augustus, Sr. Rsch. Chemist, E. Bilhuber, Inc., Orange, N. J. **ORGANIC CHEMISTRY.** b. Westfield, Mass., Dec. 1, 1921. s. Wilfred John and Mary Jane (Ronan) L. Edn.: B.S., Univ. of Notre Dame, 1942; M.S., ibid., 1944; Ph.D., ibid., 1949. m. Kathryn Marie Lawrence, July 6, 1946. c.: Raymond Wilfred; Robert Lawrence; Kathleen May. Exp.: Eli Lilly Rsch. Fellow, Univ. of Notre Dame, S. Bend, Ind., 1946-48; Sr. Rsch. Chemist, E. Bilhuber, Inc., Orange, N. J., 1948—. Mem.: Amer. Chem. Soc.; Amer. Pharmaceutical Assn.; Rsch. and Development Sect. of the Amer. Drug Mfgs. Assn. Contrb. to:



Jour. of Amer. Chem. Soc.; Jour. of Organic Chem.; Jour. of Amer. Pharmaceutical Assn. Special Int.: Sedative Drugs; Aliphatic Amines and Amino Alcohols of Therapeutic Interest; Chem. of Tetrazoles.

LADNER, A. Collins, Asst. Prof. of Math. and Engrng., Denison Univ., P. O. Box 253, Granville, Ohio. **MATHEMATICS**.

LAHR, Ernest Lest, Secy., Coll. of Dentistry, 209 E. 23rd St., N. Y., N. Y. **ENDOCRINOLOGY**.

LAIDLER, Keith, Catholic Univ. of Amer., Washington 17, D. C. **CHEMISTRY**.

LAIRD, Donald Anderson, Writer and Lectr., "Homewood," Lebanon, Ind. **APPLIED PSYCHOLOGY**.

LAKE, William Walter, Prof. and Chmn., Dept. of Chem., Tex. Coll. of Mines, El Paso, Tex. **CHEMISTRY**.

LAKELA, Olga, Prof. of Botany and Hd., Dept. of Biol., Duluth Branch, Univ. of Minn., Duluth, Minn. **TAXONOMY OF FLOWERING PLANTS**.

LA LANDE, William Alfred, Jr., Dir., Whitemarsh Rsch. Labs., Pa. Salt Mfg. Co., Wyndmoor, Pa. **CHEMISTRY**.

LALONDE, Rev. Louis-Marie, Prof. and Hd., Dept. of Botany, Institut d'Oka, La Trappe, Que., Can. **BOTANY**.

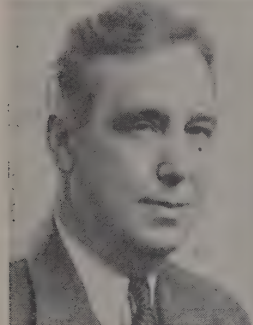
LaMASTER, Joseph Paul, Prof. and Hd., Dairy Dept., Clemson Agri. Coll., Clemson, S. C. **DAIRY PRODUCTION, GENETICS**.

LAMB, Arthur Becket, Erving Prof. of Chem. and Dir. Chem. Labs., Harvard Univ., 12 Oxford St., Cambridge, Mass. **CHEMISTRY**.

LAMB, Cecil Alexander, Assoc. Agronomist, Ohio Agri. Expt. Sta., Wooster, Ohio. **AGRONOMY**.

LAMB, George Goodrich, Prof. of Chem. Engrng., Northwestern Univ., Evanston, Ill. **CHEMICAL ENGINEERING**.

b. Grand Rapids, Mich., Apr. 26, 1906. s. John Campbell and Helen (Goodrich) L. Edn.: B.S., Univ. of Mich., 1927; M.S., *ibid.*, 1928; Ph.D., N. Y. Univ., 1935. m. Esther Bolitho, Sept. 10, 1930. c.: Douglas Parry; William Bolitho. Exp.: Chem. Engr. Atlantic Refining Co., Philadelphia, Pa., 1928-30; Instr. in Chem. Engrng., N. Y. Univ., N. Y., 1930-35; Rsch. Chem. Engr., Standard Oil Co., Whiting, Ind., 1935-41; Hd. Fuels and Lubricants,



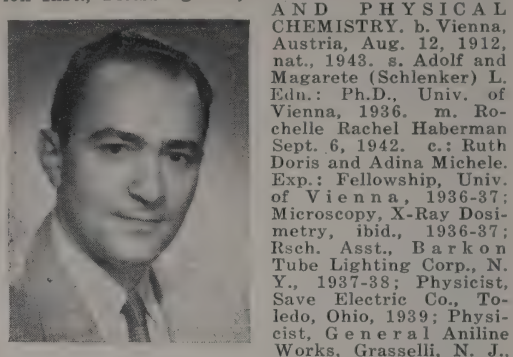
Power Plants Div., Bur. of Aeronautics, Navy Dept., Wash., D. C., 1941-46; Prof. Chem. Engrng., Northwestern Univ., Evanston, Ill., 1946—. Hon. Pos.: Chmn., State of Ill. Professional Engrs. Examining Comm., 1948—. Mem.: Amer. Inst. Chem. Engrs.; A.S.E.E.; A.C.S.; A.S.M.E.; Iota Alpha; Alpha Chi Sigma; Sigma Xi; Tau Beta Pi; Phi Kappa Phi; Phi Lambda Upsilon. Contrb. to: Indus. and Engrng. Chem.; Chem. Engrng. Progress; Jour. of Engrng. Edn. War Record; Lt. through Capt., U.S.N.R., 1941-46. Special Int.: Rsch. in Kinetics of Combustion of Fuels in Internal Combustion Engrs.; Vapor Pressure-Temperature Relationships of Hydrocarbons; Petroleum Refining Tech.; Performance Tests for Fuels and Lubricating Oils.

LAMBERT, E. B., U. S. Dept. of Agri., Plant Indus. Sta., Beltsville, Md. **MUSHROOM RESEARCH**.

LAMBERT, Walter Davis, Box 687, Canaan, Conn.

LAMBERT, William Vincent, Asst. Rsch. Administrator, U. S. D. A., 4929 Western Ave., N. W. Washington, D. C. **ANIMAL GENETICS**.

LAMBERT, Joseph Maximilian, Rsch. Fellow, Mellon Inst., Pittsburgh 13, Pa. **APPLIED PHYSICS**



AND PHYSICAL CHEMISTRY. b. Vienna, Austria, Aug. 12, 1912, nat., 1943. s. Adolf and Magarete (Schlenker) L. Edn.: Ph.D., Univ. of Vienna, 1936. m. Rochelle Rachel Haberman Sept. 6, 1942. c.: Ruth Doris and Adina Michele. Exp.: Fellowship, Univ. of Vienna, 1936-37; Microscopy, X-Ray Dosimetry, *ibid.*, 1936-37; Rsch. Asst., Barkon Tube Lighting Corp., N. Y., 1937-38; Physicist, Save Electric Co., Toledo, Ohio, 1939; Physicist, General Aniline Works, Grasselli, N. J., 1940-43; Rsch. Physicist, General Aniline and Film Corp., Cent. Rsch. Lab., Easton, Pa., 1943-48; Group Leader, Applied Physics Sec., *ibid.*, 1948-52; Rsch. Assoc., *ibid.*, 1952-53. Fellow, A.A.A.S. Mem.: Amer. Phys. Soc.; Amer. Chem. Soc.; Phys. Club of Lehigh Valley. Contrb. to: High Plymer Physics. Jour. of Colloid Sci.; Jour. of Amer. Oil Chem. Soc.; Ind. Engrng. Chem.; Jour. of Applied Physics; Rev. of Sci. Instrn.; Jour. of Chem. Phys.; Sci.; Jour. of Optical Soc. of Amer. Special Int.: Phys. Rsch. Applied to Indus. Problems; Surface Physics; Phys. Chem. of Dyestuffs and Pigments; Application of Radioisotopes; Numerical Colorimetry; Applied Electronics and Specialized Instrumentation.

LAMBOU, Madeline Gomila, Chemist, Southern Regional Rsch. Lab., 2100 Robert E. Lee Blvd., New Orleans 19, La. **SEED**



AND ROOT METABOLISM. b. New Orleans, La., July 29, 1908. d. John G. and Christine (Marti) Gomila. Edn.: A.B., Newcomb Coll., 1928; M.S., Tulane Univ., 1929. m. Paul O. Lambou, July 31, 1937. c.: Richard Paul. Exp.: Asst. City Chemist, New Orleans, La., 1929-42; Asst. Scientific Aide, U.S.D.A., Southern Regional Rsch. Lab., *ibid.*, 1942-43; Jr. Chemist, *ibid.*, 1943-45; Chemist, *ibid.*, 1945—. Mem.: Amer. Chem. Soc.; Amer. Soc. of Plant Physiol.; Amer. Oil Chemists' Soc.; Sigma Xi; Natl. Leag. of Amer. Pen Women; Tulane Univ. Alumni. Contrb. to: Oil and Soap; Amer. Oil Chemists' Soc. Jour.; Sci.; Plant Physiol.; Cotton Gin and Oil Mill Press; Oil Mill Gazetteer. Special Int.: Grignard Intermediates; Cannabis Sativa; Thiocyanogen Numbers; Seed Storage, Viability, Metabolism and Inhibitors of Biol. Activity.

La MER, Victor Kuhn, Prof. of Chem., Columbia Univ., N. Y. 27, N. Y. **PHYSICAL CHEMISTRY; COLLOID SCIENCE**.



b. Leavenworth, Kansas, June 15, 1895. s. Joseph Secundule and Anna Pauline (Kuhn) La M. Edn.: A.B., Univ. of Kans., 1915; Ph.D., Columbia Univ., 1921; Postdoctoral Cambridge, England, Copenhagen (1922-23). m. Ethel Agatha McGreevy, June 31, 1918. c.: Luella Belle; Anna Pauline. Exp.: Chemist and H. S. Chem. Tchr., 1915-16; Rsch. Chemist, Carnegie Inst. of Wash., 1916-17; Asst. in Chem., Columbia Univ., 1919-20; Instr., *ibid.*, 1920-24; Asst. Prof., *ibid.*, 1924-28; Assoc. Prof., *ibid.*, 1928-

35; Prof., *ibid.*, 1935—; Honorary Prof. (Gold Medal Award) San Marcus Univ. (Lima, Peru). Mem.: Natl. Acad. Sci.; Fellow, N. Y. Acad. Sci., Pres., 1949; Amer. Chem. Soc.; Amer. Phys. Soc.; Faraday Soc.; Sigma Xi; Phi Lambda Upsilon; Phi Chi; Epsilon Chi; Editor-in-Chief, Jour. Colloid Sci. Special Int.: Colloid Sci.; Phys. Chem.; Thermodynamics and Kinetics.

LAMEY, Carl Arthur, Prof. of Geol., Ohio State Univ., Columbus, Ohio. GEOLOGY.

LAMIMAN, John Franklin, Instr. Agri. Inspection, Calif. State Poly. Coll., SanDimas, Calif. ENTOMOLOGY.

LAMKEY, Ernest M. R., Hd., Dept. Biol. Sciences, Ill. State Normal Univ., Normal, Ill. PLANT PHYSIOLOGY.

LA MONTE, Francesca Raymond, Assoc. Curator, Dept. of Fishes, Amer. Museum Natural History, 77th St. and Central Park W., N. Y., N. Y. ICHTHYOLOGY.

LAMOREUX, Welford Forest, Geneticist and Dir. of Rsch., Kimber Poultry Breeding Farm, R. F. D. Box 518, Niles, Calif. ANIMAL BREEDING.

LaMOTTE, Charles, Prof. of Biol., Tex. A. and M. Coll., College Station, P. O. Box 4783, Tex. PLANT MORPHOLOGY.

LAMPE, Isadore, Assoc. Prof., Univ. Hosp., 1318 E. Ann St., Ann Arbor, Mich. ROENTGENOLOGY.

LAMPE, Lois, Asst. Prof. of Botany, Ohio State Univ., Columbus, Ohio. BOTANY.

LAMPERT, Lincoln Maximilian, Sr. Chemist, Calif. Dept. of Agri., P. O. Box 1266, Sacramento, Calif. DAIRY CHEMISTRY. b. N. Y., N. Y., Feb. 12, 1897. s. Louis and Mary (Kafka) L. Edn.: A.B., Univ. of Calif. at Berkeley, 1922. Exp.: Rsch. Chemist, Asst. Dir. of Rsch., Golden State Co., Ltd., 1926-36; Sr. Chemist, Calif. Dept. of Agri., 1936—. Hon. Pos.: Chmn., Secy., Local Sections, Amer. Chem. Soc.; Com. Mem., Amer. Dairy Sci. Assn.; Mem.: Amer. Chem. Soc.; Amer. Dairy Sci. Assn.; Amer. Inst. of Chemists; A.A.A.S.; Mason; Commonwealth Club. Author: Milk and Dairy Products, 1947. Contrb. to: Indus. and Engrng. Chem.; Analytical Chem.; Jour. Dairy Sci.; Milk and Food Tech.; Sci. Special Int.: Dairy Chem.; Biol. Chem.

LAMSON, Genieve, Assoc. Prof. and Chmn., Dept. of Geography, Vassar Coll., Poughkeepsie, N. Y. GEOGRAPHY.

LAMSON, Paul D., Prof. of Pharmacol., Schl. of Med., Vanderbilt Univ., Nashville, Tenn. PHARMACY.

LANCASTER, Walter Brackett, 520 Commonwealth Ave., Boston, Mass. OPHTHALMOLOGY.

LANCEFIELD, Donald E., Prof. of Biol., Queens Coll., Flushing, N. Y. GENETICS.

LANCEFIELD, Rebecca Craighill, Assoc. Mem., Rockefeller Inst. for Med. Rsch., 66th St. and York Ave., N. Y., N. Y. BACTERIOLOGY.

LAND, Alfred M., Prof. of Physics, Mendenhall Lab., Ohio State Univ., Columbus, Ohio. PHYSICS.

LAND, E. H., Pres., Poleroid Corp., Cambridge 39, Mass. OPTICS.

LANDAUER, Walter, Prof. of Genetics, Univ. of Conn., Storrs, Conn. PHYSIOLOGICAL GENETICS.

LANDEN, Ernest W., Staff Physicist, Rsch. Dept., Caterpillar Tractor Co., Peoria, Ill. BIOPHYSICS, COMBUSTION.

LANDES, Kenneth K., Prof. and Chmn., Dept. of Geol., 2051 Natural Sci. Bldg., Univ. of Mich., Ann Arbor, Mich. ECONOMIC GEOLOGY.

LANDIS, Birely J., Entomologist, Bureau Entomol. and Plant Quarantine, U. S. D. A., Union Gap, Wash. ENTOMOLOGY.

LANDIS, Carney, Prin. Rsch. Psychologist and Prof., Psychol. and Psychiatric Inst. and Hosp., Columbia Univ., 722 W. 168th St., N. Y., N. Y. PSYCHOLOGY.

LANDMAN, Jacob Henry, Tax Specialist, Natl. Industrial Conf. Bd., 247 Park Ave., N. Y., N. Y. TAXES.

LANDOLT, Percy Edward, Chem. Engr., Rm. 809, 36 W. 44th St., N. Y. 36, N. Y. CHEMICAL ENGINEER, ELECTRO-CHEMISTRY, METALLURGY, PATENT ADMINISTRATION. b. Brooklyn, N. Y., Oct. 21, 1891. s. Henry John and Emma (Tenger) L. Ch.E., Schl. of Mines, Columbia Univ., 1912. m. Marie Allison, Jan. 20, 1919. c.: Allison Booth; Joan; Mary Ruth (dec.); John. Exp.: Rsch. Engr., Rsch. Corp., 1912-17; 1st Lt. to Capt., Ordnance Dept., U. S. Army, 1917-19; Major, Ordnance, R. C., *ibid.*, 1919-39; Manager, Research Corp., 1919-24; Eastern Mgr., Western Precipitation Corp., 1924-32; Consulting Chemical Engr., 1933—; Pres., Z-Metals, Inc., 1938-47; Pres., Lithalays Corporation, 1940-46; Vice-Pres. and Consultant, Lithium Corp. of Amer., Inc., 1946—; Chmn. of Bd. and Consultant, Amer. Metallic Chem. Corp., 1951—. Mem.: Amer. Chem. Soc.; Fellow, A.A.A.S.; Fellow, Amer. Inst. Chemists; A.I.Ch.E.; Amer. Inst. Mining and Metallurgical Engrs.; Electrochem. Soc.; Amer. Soc. Metals; Tau Beta Pi; Sigma Xi. Contrb. to: Engrng. Mining Jour.; Jour. Indus. and Engrng. Chem.; etc. War Record: 1st Lt. to Capt., Ord. Dept., U. S. Army, 1917-19. Special Int.: Electrical Precipitation, Lithium Chem. and Metallurgy, Military Problems (Classified).



LANDON, L. R., Dept. of Geol., Univ. of Wis., Madison, Wis. ECHINODERMA.

LANDSBERG, Helmut Erich, Chf., Section Indus. Climatology, U. S. Weather Bureau, Washington, D. C. METEOROLOGY AND GEOPHYSICS.

LANE, Alfred Church, Prof. Emer., Tufts Coll., Medford, Mass.; 22 Arlington St., Cambridge, Mass. GEOLOGY, GEOPHYSICS.

LANE, Charles Edward, Physiologist, Borden Co., 350 Madison Ave., N. Y., N. Y. PHYSIOLOGY.

LANE, Ernest Preston, Prof. of Math., Eckhart Hall, Univ. of Chicago, Chicago, Ill. MATHEMATICS.

LANE, Frederick William, Prin. Chemist and Asst. Chf., Protective Div., Chemical Warfare Service, Technical Command, Edgewood Arsenal, Md. CHEMISTRY.

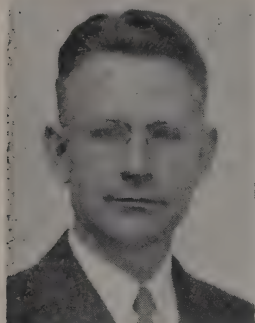
LANE, Merton Chesleigh, Entomologist, U. S. D. A., Bureau Entomol. and Plant Quarantine, Washington, D. C. ENTOMOLOGY.

LANE-ROBERTS, Cedric S. STERILITY.

LANG, Anton, Asst. Prof. of Botany, Univ. of Calif., Los Angeles, Calif. PLANT PHYSIOLOGY. b. Petersburg, Russia, 1913. s. George and Vera (Davidoff) L. Edn.: Dr. Nat. Sci., Univ. of Berlin, 1939. m. Lydia Kamendrowsky, 1946. c. Peter. Exp.: Scientific Asst., Kaiser-Wilhelm-Inst. für Biologie, Berlin-Dahlem and Tübingen, Germany, 1939-49; Res. Assoc., McGill Univ., Montreal, Canada, 1949; Visiting Prof., Agric. and Mech. Coll. of Tex., Coll. Sta., Tex., 1950; Res. Fellow and Senior Res. Fellow, Calif. Inst. of Tech., Pasadena, Calif., 1950-52; Asst. Prof. of Botany,

Univ. of Calif., Los Angeles, Calif., 1952—. Mem.: A.A.A.S.; Botanical Soc. of Amer.; Genetics Soc. of Amer.; Deutsche Botanische Gesellschaft; Soc. of the Sigma Xi. Special Int.: Growth and Dev. of Plants.

LANFORD, Oscar Erasmus, Dean, N. Y. State Coll. for Tchrs., Albany, N. Y. **CHEMISTRY, PHYSICAL AND INORGANIC.** b. Louisiana Co., Va., Dec. 19, 1914. s. Oscar Erasmus and Ruth E. (Miller) L. Edn.: B.S., V.M.I., 1934; M.A., Columbia Univ., 1937; Ph.D., *ibid.*, 1939. m. Caroline Clapp Sherman, Aug. 18, 1937. c.: Oscar E., III; Caroline Aldrich; Henry Clapp Sherman; William Armistead; Virginia. Exp.: Rsch. Chem., Gold Dust Corp., 1934-35; Asst. in Chem., Columbia Univ., 1935-37; Instr. in Chem., *ibid.*, 1937-40; Chmn., Dept. of Chem. and Prof. of Chem., N. Y.



State Coll. for Tchrs., Albany, N. Y., 1940-52; Dean, *ibid.*, 1952—. Hon. Pos.: Chmn., East. N. Y. Sect., Amer. Chem. Soc., 1947-49; Mem., Regent Com. on Revision of the N. Y. State Chem. Syllabus, 1951-53. Mem.: Sigma Xi; A.A.A.S.; N.E.A. Contrb. to: Jour. Amer. Chem. Soc.; Jour. Physical Chem. Special Int.: Inorganic and Physical Chem., Solutions, Complex Ions, Electrochem., Isotope Concentration; Tch. Edn., Coll. Admin.

LANG, Robert James, Prof. of Physics, Univ. of Alberta, Edmonton, Alberta, Can. **PHYSICS.**

LANG, W. T. B., Geologist, U. S. Geol. Survey, Washington, D. C. **GEOLOGY.**

LANGE, Mathilde Margarethe, Prof. of Zool. and Hd., Dept. of Biol., Wheaton Coll., Norton, Mass. **GROWTH.**

LANGER, Rudolph Ernest, Prof. and Chmn., Dept. of Math., Univ. of Wis., Madison, Wis. **MATHEMATICS ANALYSIS.**

LANGER, Rudolph Meyer, Comdr., U. S. N. R., Bureau Ships, Washington, D. C.; 502 Sallen Ave., Pasadena, Calif. **ATOMIC PHYSICS.**

LANGER, Theodore William, Rsch. Chemist, Linde Air Products Co., Tonawanda, N. Y. **PHYSICAL CHEMISTRY.** b. N. Y. City, Aug. 12, 1906. s. Joseph and Laura (Kohn) L. Edn.: A.B., Johns Hopkins Univ., 1928; Ph.D., Yale Univ., 1931. m. Shirley Alpert, June 6, 1931. c.: Tamar Joy; Barbara Ruth. Exp.: Asst., Yale Univ., New Haven, Conn., 1928-30; Fellow, *ibid.*, 1930-31; Chemist, The Tex. Co., 1931-41; Project Leader, *ibid.*, 1942-46; Rsch. Chemist, Linde Air Products Co., Tonawanda, N. Y., 1947—. Mem.: Amer. Chem. Soc.; Amer. Inst. of Chemists; Amer. Soc.



of Lubrication Engrs.; Sigma Xi. Contrb. to: Jour. of Amer. Chem. Soc.; Mech. Engrng. Special Int.: Lubrication; Electrolytic Solutions; Crystallization; Correlation of Phys. and Chem. Properties; Hydraulic Fluids.

LANGFELD, Herbert Sidney, Stuart Prof. of Psychol., Chmn. Dept. and Dir., Psychol. Lab., Eno Hall, Princeton Univ., Princeton, N. J. **PSYCHOLOGY.**

LANGFORD, Grace, retired, River St., Plymouth, Mass. **PHYSICS.**

LANGHAAR, Henry Louis, Prof. of Theoretical and Appl. Mech., Dept. of Theor. and Applied Mech., Univ. of Ill., Urbana, Ill. **ELASTICITY, PLATES AND SHELLS, ELASTIC STABILITY, DIMENSIONAL ANALYSIS.** b. October 14, 1909, Bristol, Conn. s. Louis and Elizabeth (Williamson) L. Edn.: B.S. in M.E., Lehigh Univ., 1931; M.S., *ibid.*, 1933; Ph.D., Math., *ibid.*, 1940. m. Isabelle Babcock of Wichita, Kans., May 25, 1937. d. Cyrus A. and Emma A. Law Babcock. c.: Bonnie B.; Sally L.; Kayri. Exp.: Test Engr., Ingersoll-Rand Co., 1933-36; Seismographer, Carter Oil Co., 1936-37; Grad. Student, Lehigh Univ., 1937-40; Instr. in Math., Purdue Univ., 1940-41; Structures Resch. Engr., Consolidated-Vultee, Aircraft Corp., 1941-47; Assoc. Prof. of Theor. and Applied Mechanics, Univ. of Ill., 1947-49; Prof., *ibid.*, 1949—. Mem.: A.S.M.E.; A.A.A.S.; Sigma Xi. Author: Dimensional Analysis and Theory of Models. Contrb. to: J. Franklin Inst.; J. Aero. Sci.; J. Applied Mechanics. Ph.D. Dissertation: Steady Flow in the Transition Length of a Straight Tube. Listed in: A.M.S. Special Int.: Aircraft Structures.

LANGHAM, Cecil Chester, Associate Editor, Chemical Abstracts, 1524 Doone Road, Columbus 12, Ohio. **ORGANIC CHEMISTRY.** b.



July 9, 1903, Elsie, Mich. s. Ernest A. and Lillie A. (Sours) L. Edn.: B.S., Mich. State Coll., 1932; M.S., *ibid.*, 1934; Ph.D., *ibid.*, 1946; Grad. Schl., Univ. of Wis., summers, 1939-40. m. Iretha Caroline Reed of Owosso, Mich., Dec. 22, 1934. d. Alanson S. and Sarah E. Reed. c. Mary Jane. Exp.: Grad. Asst. Analytical Chem., Mich. St. Coll., 1932-34; Instr. Chem., *ibid.*, 1934-47; Asst. Prof., 1947; Chem. Abstracts, 1947-50; Assoc. Ed., 1950—. Mem.: A.C.S.; A.A.A.S.; Sigma Xi; Alpha Chi Sigma; Mason. Contrb. to: Jour. of Org. Chem. Ph.D. Dissertation: The Reaction of Ethylene Oxide with Various Alkylmagnesium Chloride Solutions. Travel: N. Amer. Hobbies: Music; Reading; Gardening. Listed in: A.M.S. Grignard Reaction.

LANGHAM, Derald George, Dir., Genetics Venezolana, Apartado 4536, Maracay, Venezuela. **GENETICS AND PLANT BREEDING.** b. Polk, Iowa, May 27, 1913. s. Herman and Amelia (Steinke) L. Edn.: B.S., Iowa State Coll., 1936; Ph.D., Cornell Univ., 1939. m. Margery Beryle Major on June 18, 1939. c.: Jeri Major; Derald Ray; Lisa Mae; Tina Maje. Exp.: Secy., Maize Genetics Corp., Ithaca, 1936-39; Asst. Prof. of Genetics, Facultad de Agronomia, Caracas, 1939-40; Prof. of Genetics, *ibid.*, 1940-46; Hd., Dept. of Genetics, Instituto Exptl. de Agricultura, Caracas, Venezuela, 1939-49; Hd., Dept. of Genetics and Agron., Instituto Nacional Agricultura, Maracay, Venezuela, 1949—; Technical Advisor, Amer. Internatl. Assn., Caracas, Venezuela, 1950-51; Dir., Genetica Venezolana, Maracay, Venezuela, 1951—. Mem.: Sigma Xi; Phi Kappa Phi; Gamma Sigma Delta. Author: El Maiz en Venezuela y su Mejoramiento, 1945; El Ajonjolí (Sesamum indicum L.) su Cultivo, explotación y Mejoramiento, 1945. Contrb. to: Jour. of Heredity; Sci.; Jour. of Botany.



LANGHORNE, Maurice Curtis, Prof. and Chmn., Dept. of Psychol. and Asst. Registr., Emory Univ., Emory Univ., Ga. **PSYCHOLOGY.**

LANGILLE, Herbert Bamford, Assoc. Prof. Emer. Mech. Engrng., Univ. of Calif., 2418 Dana St., Berkeley, Calif. **ENGINEERING.**

LANGLEY, Maurice N., Hd. Land Use and Settlement Branch, Bureau of Reclamation, Lower Colo. River Dist., 490 16th St., Yuma, Ariz. **LAND CLASSIFICATION, SETTLEMENT AND UTILIZATION.** b. July 6, 1913, Dorchester, Nebr. s. N. A. and Amy G. (Henson) L. Edn.: B.S., Colo. A. and M. Coll., 1939. m. Ruby Frederiksen, June 18, 1939. c. Susan I.; Gilbert W. and Richard J. Exp.: Farm Supvr., Agri. Adj. Admin., Akron, Colo., 1933-34; Soil Surveyor, Colo. A. and M. Coll., Ft. Collins, Colo., 1938-39; Soil Sci., Soil Conservation Service, Lubbock, Tex., 1940-42; Exec. Officer, Combat Information Center, Jamestown, R. I., 1944; Officer-in-Chg., Transportable Night Fighter Trng. Unit, Wellfleet, Mass., 1945; Chf., Land Classification Div., Bureau of Reclamation, Lower Colo. River Dist., Yuma, Ariz., 1945-48; Hd., *ibid.*, 1948—. Mem.: Amer. Soc. of Agron.; Soil Sci. Soc. of Amer. War Record: U. S. Navy, 4 Yrs., 3 Stars on Asiatic Pacific ribbon. Gen. Int.: First to Apply Lab. Methods of Measuring Moisture Retention to Full Scale Field Land Classification. Special Int.: Soil Physics; Land Classification and Econ.

LANGLEY, Wilson D., Prof. of Biochem., Univ. of Buffalo Med. Schl., Buffalo, N. Y. **BIOCHEMISTRY.**

LANGLOIS, Thomas Huxley, Dir., F. T. Stone Inst. of Hydrobiology, Prof. of Hydrobiology and Zool., Ohio State Univ., Put-in-Bay, Ohio. **ZOOLOGY.** b. Detroit, Mich., Feb. 19, 1898. s. Arsene Ferdinand and Tiney Marie (Mosher) L. Edn.: B.S., Univ. of Mich., 1924; M.S., *ibid.*, 1925; Ph.D., Ohio State Univ., 1935. m. Marina Louise Holmes on Apr. 19, 1924. c.: Elmore Marina; Esther Ferdina; Florence Dhillve; Sarah Zoe; Caroline Lizette. Exp.: Fisheries Biologist, Mich. Dept. Conservation, 1924-30; Chief, Fish Section, Ohio Div. of Conservation, 1930-



46; Asst. Dir., F. T. Stone Lab. and Asst. Prof. Animal Husbandry, Ohio State Univ., 1936-37; Dir., F. T. Stone Lab. and Prof. Zool., *ibid.*, 1937-50; Dir., F. T. Stone Inst. of Hydrobiology and Prof. of Hydrobiology and Zool., *ibid.*, 1950—. Hon. Pos.: Pres., Amer. Fish Soc., 1940; V. P. Wildlife Soc., 1941; Bd. of Dir., Toledo Zool. Soc., 1940; Bd. of Trustees, Ohio State Univ. Rsch. Foundation, 1940. Mem.: Amer. Soc. Zool.; Amer. Fish. Soc.; Sigma Xi; Fellow, Ohio Acad. of Sci.; Fellow, A.A.A.S.; Natl. Rsch. Council; Natl. Comm. Conservation Edn. Author: A Study of Smallmouth Bass in Rearing Ponds, 1936; South Bass Island and Islanders, with Marina H. Langlois, 1948; The Biol. Station of the Ohio State Univ., 1949. Contrb. to: Trans. Amer. Fish. Soc.; Trans. Amer. Game Conference: Ohio Conservation Bull.; Inland Seas; Toledo Blade Pictorial Mag. War Record: U.S.N.R., 1918-21. Special Int.: Social Behavior of Fish and People; Hydrobiology; Ecology of W. End of Lake Erie and Its Islands; Leadership at Centers of Rsch.; Island Sociology.

LANGMUIR, Charles Ruggles, 49 Mulberry Rd., New Rochelle, N. Y. **EDUCATION.**

LANGMUIR, Irving, General Electric Co., Schenectady 5, N. Y.

LANGNER, Helen Parthenay, Psychiatrist to Outpatients, N. Y. Hosp., 525 E. 68th., N. Y., N. Y. **PSYCHIATRY.**

LANGSTROTH, Clifford Barnes, retired, Rt. 1, Danbury, Conn. **ENGINEERING.**

LANGLYKKE, Asger Funder, Dir. of Rsch., The Squibb Inst. for Med. Rsch., Georges Rd., New Brunswick, N. J. **MICROBIOLOGY AND CHEMICAL ENGINEERING.** b. Pleasant Prairie, Wis., July 17, 1909. s. Peter I. and Anna (Funder) L. Edn.: B.S., Univ. of Wis., 1931; M.S., *ibid.*, 1934; Ph.D., *ibid.*, 1936. m. Margaret H. Page, Dec. 16, 1939. c.: Peter Page; Kristin Margaret; Gerald Page; Cynthia Jane. Exp.: Rsch. Assoc., Univ. of Wis., Madison, Wis., 1936-37; Rsch. Chemist, Hiram Walker and Sons, Inc., Peoria, Ill., 1937-40; Supt., Butyl Alcohol



Plant, Asociacion Azucarera Cooperativa Lafayette, Arroyo, Puerto Rico, 1940-43; Section Hd. and Acting Div. Hd., U. S. Dept. of Agri., Northern Regional Rsch. Lab., Peoria, Ill., 1943; Chf., Pilot Plants, Chem. Warfare Service, Frederick, Md., 1943-44; Chf. Technical Officer, Vigo Plant, Terre Haute, Ind., 1944-45; Div. Hd., U. S. Dept. of Agri., Northern Regional Rsch. Lab., Peoria, Ill., 1945-47; Dir., Microbiol. Development, E. R. Squibb and Sons, New Brunswick, N. J., 1947-49; Dir. of Rsch., The Squibb Inst. for Med. Rsch., E. R. Squibb and Sons, New Brunswick, N. J., 1949—. Hon. Pos.: Councilor, Amer. Chem. Soc., 1946-47; Councilor, *ibid.*, 1951—; Div. Chmn., *ibid.*, 1951—. Mem.: A.A.A.S.; Amer. Chem. Soc.; Amer. Inst. of Chem. Engrs.; Amer. Pub. Health Assn.; Biochem. Soc., London; N. Y. Acad. Sciences; Soc. Amer. Bacteriologists. Contrb. to: Jour. Bacteriol.; Industrial and Engrng. Chem.; Arch. of Biochem. War Record: Civilian with Chem. Warfare Service, 1943-45. Gen. Int.: Consultant to Rsch. and Development Bd.; Collaborator, U. S. Dept. of Agri. Special Int.: Utilization of Distillery Residues, Butanol Fermentation, Production of Antibiotics and other Pharmaceuticals.

LANGSTROTH, George Otty, Prof. of Physics and Hd. Dept., Univ. of Alberta, Edmonton, Alta., Can. **SPECTROSCOPY.**

LANGWILL, Kathryn Elizabeth, Prof. of Nutrition in Coll. of Home Econ., The Chatham, 20th and Walnut Sts., Phila. 3, Pa. **CHEMISTRY OF FOOD AND NUTRITION.** b. Wolcott, N. Y., Jan. 17, 1905. d. Peter and Ann (Picken) L. Edn.: B.S., Simmons Coll., 1925; M.S., Tehrs. Coll., Columbia Univ., 1940; Ph.D., *ibid.*, 1944. Exp.: Jr. Chemist, Food and Drug Div., Dept. of Pub. Hlth. of Mass., 1925-30; Chem., Applied Sugar Lab., 1930-34; Supvng. Chem., Stroud Jordan Labs., 1934-41; O.S.R.D. Project, Columbia Univ., 1941; Nutrition Found., Rsch.



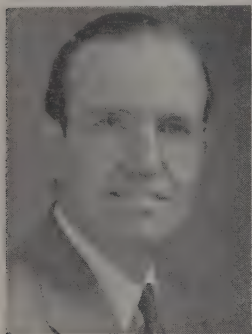
Fellowship, *ibid.*, 1942-44; Technical Ed., Mfg. Confectioner, 1943; Tch. of Nutrition, Drexel Inst. of Tech., Asst. Prof., 1944-46; Assoc. Prof., *ibid.*, 1946-47; Prof., *ibid.*, 1948—. Hd. of Foods and Nutrition Dept., Coll. of Home Econ., 1950—; Lectr. in Nutrition, Univ. of Pa., Dental Schl., 1948—. Mem.: A.A.A.S.; Amer. Chem. Soc.; Amer. Dietetic Assn.; Amer. Home Econ. Assn.; Sigma Xi; Phi Lambda Theta; Phi Kappa Phi; A.A.U.W. Author: Chocolate Evaluation, Co-author, 1934; Confectionery Analysis and Composition, Co-author, 1946. Contrb. to: Food Tech.; Confectioners Jour.; The Mfg. Confectioner; Cocom and Chocolate. Ph.D. Dissertation: The Effect of Anoxia on the Ascorbic Acid, pH, and Titratable Acidity of the Urine of Rats Fed Various Diets. Hobbies: Swimming; Tennis. Listed in: A.M.S.; Who's Who in

the East. Special Int.: Confectionery and Food Colloids; Nutrition.

LANIER, Lyle Hicks, Prof. and Chmn., Dept. of Psychol., Vassar Coll., Poughkeepsie, N. Y. PSYCHOLOGY.

LANKELMA, Herman Peter, Prof. of Chem., Western Reserve Univ., Cleveland, Ohio. CHEMISTRY.

LANNING, Francis C., Asst. Prof. of Chem., Kans. State Coll., Manhattan, Kans. PHYSICAL, IN-



ORGANIC AND AGRICULTURAL BIOCHEMISTRY. b. Jan. 5, 1908, Denver Colo. s. Edward F. and Saidee B. (Chowning) L. Edn.: B.S., Univ. of Denver, 1930; M.S., *ibid.*, 1931; Ph.D., Univ. of Minn., 1936. m. Louise Hayward of Minneapolis, Minn., 1934. d. Dr. and Mrs. T. T. Hayward. c.: Barbara Helen; Ralph Edward. Exp.: Analytical Chem., Minn. State Highway Dept.; Instr. in Chem., Kans. State Coll.; Asst. Prof. Chem., *ibid.* Mem.: A.C.S.; Kans. Acad. of

Sci.; Phi Lambda Upsilon. Contrb. to: Sci. Jour. Ph.D. Dissertation: Chem. Reactions Produced by the Radiation of Aqueous Solutions with Alpha Particles from Radon. Hobby: Travel; Gardening. Special Int.: Organo-Silicon Compounds; Chemical Changes Produced in Aqueous Solution by Alpha Particles; and Agricultural Biochemistry.

LANSCHE, Arnold Marshall, Analytical Chemist, Sandia Corp., 5420 Alice Ave., N. E., Albuquerque, N. Mex. CHEMISTRY. b. Washington, D. C., May 9, 1916. s. Walter and Anne (Marshall) L. Edn.: B.S., Randolph-Macon Coll., 1942. m. Elizabeth Jean Slagle, May 7, 1949. Exp.: Staff, Spencer Chem. Co., 1943-44; Staff, Carbide and Carbon Chem. Corp., Oak Ridge, Tenn., 1944-49; Staff Member, Analytical Chemist, Sandia Corp., Albuquerque, N. Mex., 1949—. Mem.: Amer. Chem. Soc.; A.A.A.S.; Lambda Chi Alpha; Chi Beta Phi. Special Int.: Chem.

LANSING, A. I., Washington Univ. Schl. of Med., St. Louis, Mo. GERONTOLOGY.

LANTOS, Peter R., Rsch. Engr., DuPont Co., 204 Scarlett Ave., Kennett Square, Pa. SYNTHETIC FIBERS; CHEMICAL ENGINEERING. b. Budapest, Hungary, July 18, 1924. s. Ernest and Bertha (Wigner) L. Edn.: B.S., Cornell Univ., 1944; B.Ch.E., *ibid.*, 1945; Ph.D., *ibid.*, 1950. m. Janice Kirchner, Dec. 22, 1947. c.: Geoffrey Paul. Exp.: Undergrad. Asst., Cornell Univ., 1944; Army Chem. Warfare Service, 1944-45; Development Chemist, General Electric Co., 1946-47; Grad. Asst., Cornell Univ., 1947-50; Rsch. Engr., DuPont Co., Wilmington, Del., 1950—. Hon. Pos.: Bd. of Health, Kennett Square, Pa. Mem.: Amer. Chem. Soc.; Amer. Inst. of Chem. Engrs.; A.A.A.S.; Gamma Alpha; Lions Club. Contrb. to: Indus. and Engrng. Chem. War Record: Chem. Warfare Service and Air Force, 1945-46. Special Int.: Aromatic Substitutive Chlorination; Synthetic Fibers; Spinning Methods; Fiber Testing and Properties; Chem. Engrng. Equipment Cost Estimation.

LANTZ, Cyrus W., Prof. of Biol., Iowa State Tchrs. Coll., Cedar Falls, Iowa. BOTANY.

LANZA, Carmelo, Physics Rsch. Lab., Harvard Univ., Cambridge, Mass. PHYSICS.

LA PAZ, Lincoln, Hd., Dept. of Math. and Dir., Inst. of Meteoritics, Univ. of N. Mex., Albuquerque, N. Mex. MATHEMATICS.

LAPHAM, Macy Harvey, retired, 5515 Taft Ave., Oakland, Calif. SOIL SCIENCE.

LAPP, Grover W., Lapp Engineering Co., 68 W. Main St., LeRoy, N. Y. CERAMICS.

LAPP, Walter Swartz, Tchr. of Chem., Northeast H. S., Philadelphia, Pa.; 724 Derstine Ave., Lansdale, Pa. CHEMISTRY.

LAQUER, Fritz O., Rsch. Prof. of Biochem., Temple Univ. Schl. of Pharmacy, Philadelphia, Pa. BIOCHEMISTRY.

LAREW, Gillie Aldah, Prof. and Hd., Dept. of Math., Randolph-Macon Woman's Coll., Lynchburg, Va. MATHEMATICS.

LARGE, Thomas, retired, Laura Rd., R. F. D. 10, Spokane, Wash. NATURAL HISTORY.

LARIMORE, Joseph William, Assoc. Prof. Clinical Med., Wash. Univ. Med. Schl., St. Louis Mo. GASTRO-ENTEROLOGY.

LARK-HOROVITZ, Karl, Prof. and Hd., Dept. of Physics, Purdue Univ., Lafayette, Ind. PHYSICS.

LARRIMER, Walter Harrison, Staff Asst. Rsch. Admin., U. S. Forest Service, 3304 Rittenhouse St., Washington, D. C. FORESTRY, BIOLOGY.

LARSEN, Esper Signius, Jr., Geologist, U. S. Geol. Survey, 3930 Connecticut Ave., N. W., Washington 8, D. C. DETERMINING AGE OF IGNEOUS ROCKS; MICROSCOPIC DETERMINATION OF MINERALS; SYSTEMATIC DISTRIBUTION OF TRACE ELEMENTS; BATHOLITHS; PETROGRAPHIC PROVINCES; GEOLOGY OF VOLCANIC ROCKS. b. Astoria, Ore., Mar. 14, 1879. s. Esper Signius and Louisa (Pauly) L. Edn.: B.S., Univ. of Calif., 1906; Ph.D., *ibid.*, 1918. m. Eva Audrey Smith Nov. 21, 1910. c.: Clark S. (dec.). Esper S., III. Exp.: Asst. Petrographer, Geophys. Lab., 1907-09; Asst. Geologist, U. S. Geol. Survey, 1909-14; Acting Assoc. Prof., Univ. of Calif., 1914-15; Geologist, U. S. Geol. Survey, 1914—; In Chg. of Section of Petrology, *ibid.*, 1919-23; Prof. of Petrography Harvard Univ., 1923-49; Emer. Prof., *ibid.*, 1949—. Hon. Pos.: Pres., Mineralogical Soc., 1928; Chmn. Section on Vulcanism of Geophys. Union, 1941; Roebling Medal of Mineralogical Soc. of Amer., 1939. Mem.: Natl. Acad. Sci.; A.A.A.S.; Fellow, Amer. Acad. Sci.; Inst. Mining and Metallurgical Engrng.; Fellow, Geol. Soc. Amer.; Fellow, Min. Soc.; Fellow, Soc. Econ. Geologists; Fellow, Min. Soc. Great Britain; Geol. Soc. London; Geophys. Union. Contrb. to: Amer. Mineralogist; Geol. Soc. Amer.; Jour. Geol. Special Int.: Determining Age of Igneous Rocks; Microscopic Determination of Minerals; Systematic Distribution of Trace Elements; Batholiths; Petrographic Provinces; Geol. of Volcanic Rocks.



LARSEN, Harold Daniel, Prof. of Math., Univ. of N. Mex., Albuquerque, N. Mex. MATHEMATICAL STATISTICS.

LARSEN, Thorstein, Asst. Prof. Elec. Engrng., Johns Hopkins Univ., Baltimore, Md. ELECTRICAL ENGINEERING.

LARSON, Carl August, Soil Scientist and Supt., Umatilla Field Sta., Box 965, Hermiston, Ore. SOIL SCIENCE. Buffalo, N. Y. DAIRY TECHNOLOGIST.

LARSON, H. W. E., Soil Scientist Lane Classification, Bureau Reclamation, 827 N. Fifth St., Bismarck, N. Dak. SOILS.

LARSON, Mary Elizabeth, Asst. Prof. of Zool., Univ. of Kans., Lawrence, Kans. PARASITOLOGY.

LARTIGAU, August Jerome, El Roblar Hotel, Ojai, Calif. MEDICAL SCIENCES.

LA RUE, Carl Downey, Prof. of Botany, Univ. of Mich., Ann Arbor, Mich. **EXPERIMENTAL PLANT MORPHOLOGY**.

LA RUE, Daniel Wolford, Hd., Dept. of Edn. and Tch. Ednl. Branches, State Tchrs. Coll., East Stroudsburg, Pa. **PHILOSOPHY, PSYCHOLOGY**.

LaRUE, George H., Dept. of Zool., Univ. of Mich., Ann Arbor, Mich. **PARASITOLOGY**.

LA RUE, George Roger, Prof. and Chmn., Dept. of Zool., Univ. of Mich., Ann Arbor, Mich. **ZOOLOGY**.

LASALLE, Leo Jos., Dean, Coll. of Engineering, Prof. of Engineering Mechanics, La. State Univ., Baton Rouge, La. **PHYSICS AND ENGINEERING**. b. Opelousas, La., September 8, 1886. s. Joseph and Therese (Goldman) L. Edn.: B.S., La. State Univ., 1908; M.S., Penn. State Coll., 1911; Ph.D., Univ. of Chicago, 1917. m. Aline J. Mistic of Opelousas, La., May 20, 1912. d. Pierre Mistic. c.: Doris; Joseph Pierre; Patricia. Exp.: 1908-09, Asst. in Physics, L.S.U.; 1909-11, Instr., Penn. State Coll.; 1911-12, Fellow, Univ. of Chicago; 1912-13, Asst. Prof. of Physics, Univ. of the Philippines; 1913-17, Assoc. Prof., Penn. State Coll.; 1917-18, Prof. and Acting Hd. Dept. of Physics, Penn. State Coll.; 1918-20, Engr. Physicist and Hd. of Optical Mfg. Dept., Recording and Computing Machines, Dayton, Ohio; 1920-24, Prof. of Mech. Engrng., L.S.U.; 1924-31, Prof. of Engrng., Mech., L.S.U.; 1931—, Dir., Engr. Expt. Sta., 1931-48; and Dean, Coll. of Engrng., L.S.U., 1931—. Hon. Pos.: Past Grand Knight, Knights of Columbus; Gov., La., Miss., W. Tenn. Kiwanis District; Chmn., New Orleans Sect., A.S.M.E.; Sr. Scientific Officer, U. S. State Dept., London Embassy, 1949. Mem.: Kappa Sigma; Sigma Xi; Amer. Soc. of Mech. Engrs.; Phi Kappa Phi; Phi Eta Sigma; Omicron Delta Kappa; Newcomen Soc.; Tau Beta Pi; Kiwanis; Knights of Columbus; Boy Scouts of Amer.; Baton Rouge City Planning Comm.; Airport Comm., E. Baton Rouge Parish. Contrb. to: Jour. of the Franklin Inst.; Physics Rev.; Jour. of the Sugar Planters Assn. Ph.D. Dissertation: On the Motion of a Sphere of Oil through CO₂ and a determination of the coefficient of viscosity of that gas by the oil drop method. Travel: Philippines; London; Europe. Listed in: Who's Who in Amer.; Who's Who in Engrng.; A.M.S.; International Blue Book, 1943 Ed.

LASHLEY, Karl Spencer, Rsch. Prof. of Neuropsychol., Harvard Univ., Dir., Yerkes Lab. of Primate Biol., Orange Park, Fla. **PSYCHOLOGY AND BRAIN PHYSIOLOGY**. b. Davis, W. Va., June 7, 1890. s. Charles Gilpen and Margaret Blanche (Spencer) L. Edn.: A.B., W. Va. Univ., 1910; M.S., Univ. of Pittsburgh, 1911; Ph.D., Johns Hopkins Univ., 1914. Hon. Deg.: Sc.D., Univ. of Pittsburgh, 1936; Sc.D., Univ. of Chicago, 1941; Sc.D., Western Reserve Univ., 1951; LL.D., Johns Hopkins, 1953; M.A., Harvard Univ., 1942. m. Edith Ann Baker, 1918. Exp.: Tehng. Fellow, Univ. of Pittsburgh, Pittsburgh, Pa., 1911-13; Univ. Fellow, Johns Hopkins Univ., Baltimore, Md., 1913; Bruce Fellow, 1914; Johnston Scholar, 1915-16; Instr. of Psychol., Univ. of Minn., Minneapolis Minn., 1917-18; Investigator, Interdepartmental Hygiene Board, 1919; Asst. Prof. of Psychology, Univ. of Minn., Minneapolis, Minn., 1920; Assoc. Prof., *ibid.*, 1921; Prof., *ibid.*, 1924-26; Psychology, Behavior Research Fund, Chicago, 1927-29; Prof. of Psychol., Univ. of Chicago, Chicago, Ill., 1929-35; Prof. of Psychol., Harvard Univ., Cambridge, Mass., 1936; Rsch. Prof. of Neuropsychol., *ibid.*, 1937—; Dir., Yerkes Labs., 1942—. Hon. Pos.: Lectr., Univ. of London, 1932; Hughlings Jackson Lectr., Montreal Neurol. Inst., 1937; Vanuxem Lectr., Princeton Univ., 1951; Mem., N.R.C. Comm. for Rsch. Problems of Sec.; Comm. on Sensory Devices, for the Blind. Mem.: Natl. Acad. of Sci.; Amer. Philos. Soc.; Amer. Acad. of Arts and Sci.; Amer. Psychol. Assn.; Eastern Branch; Soc. of Exptl. Psychol.; Fla. Psychol. Assn.; Soc. of Amer. Natl.; Amer. Soc. of Zool.; Amer. Physiol. Soc.; Amer. Soc. of Human Genetics; Harvey Soc.; N. Y. Acad. of Sci.; Amer. Neurol. Soc.; Assn. of Study of Animal Behavior; Royal Soc. of London; British Psychol. Assn. Author: Brain Mechanisms and Intelligence, 1929. Contrb. to: Numerous Jours. of Psychol., Physiol.

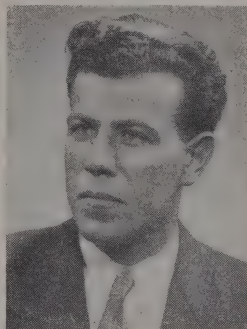
and Anatomy. Special Int.: Expt. Studies of Cerebral Function, of Learning and Instincts in Animals.

LASHOF, Theodore William, Instr., Reed Coll., Portland, Ore. **TEACHING**.

LASLETT, Herbert R., Prof. of Ednl. Psychol., Ore. State Coll., Corvallis, Ore. **EDUCATION, PSYCHOLOGY**.

LASLETT, Lawrence Jackson, Asst. Prof. of Physics, Iowa State Coll., Ames, Iowa. **PHYSICS**.

LASSLO, Andrew, Rsch. Chemist, St. Louis Rsch. Dept., Monsanto Chem. Co., 1700 S. Second St., St.



Louis 4, Mo. **ORGANIC AND PHARMACEUTICAL CHEMISTRY**. b. Mukacevo, Czechoslovakia, Aug. 24, 1922. s. Vojtech and Terezia (Hajnova) L. Edn.: M.S., Univ. of Ill., 1948; Ph.D., *ibid.*, 1952. Exp.: Grad. Asst., Univ. of Ill., Chicago, Ill., 1947-51; Fellow, *ibid.*, 1951-52; Rsch. Chemist, St. Louis Rsch. Dept., Monsanto Chem. Co., St. Louis, Mo., 1952—. Mem.: Amer. Chem. Soc.; Amer. Pharmaceutical Assn.; Sigma Xi; Rho Chi. Contrb. to: Jour. Amer. Chem. Soc.; Jour. Amer. Pharmaceut. Assn.; Sci. Ed.; Proc. Soc. for Exptl. Biol. and Med.

LATHAN, Vida Annette, retired, 1644 Morse Ave., Chicago, Ill. **PATHOLOGY, HISTOLOGY**.

LATHROP, Frank Damron, Assoc. Otolaryngologist, Lahey Clinic, 605 Commonwealth Ave., Boston 15, Mass. **OTOLARYNGOLOGY**. b. Portland, Ore., Apr. 2, 1905. s. Frank A. and Grace R. (Smith) L. Edn.: A.B., Univ. of Mich., 1929; M.D., Univ. of Mich. Med. Schl., 1934. c.: Stephen F.; Susan D.; Sharon B. Exp.: Assoc. Otolaryngologist, Lahey Clinic, Boston, Mass., 1939—; Otolaryngologist, New England Deaconess Hosp., 1940—; Otolaryngologist, New England Baptist Hosp., 1940—. Hon. Pos.: Armed Forces Com., Amer. Acad. Ophthalmology and Otolaryngology. Mem.: A.M.A.; Amer. Acad. Ophthalmol. and Otolaryngol.; Mass. Med. Soc.; Norfolk District Med. Soc.; A.A.A.S.; Royal Soc. Med. (England); Phi Beta Pi. Contrb. to: Jour. A.M.A.; Arch. Otolaryngology; etc. War Record: Lt. Col., M. C., U. S. Army, 1942-46; Awarded Bronze Star. Special Int.: Deafness; Facial Paralysis; Tumors of Head and Neck.

LATHROP, Frank Heidtman, Entomologist, Univ. of Maine Agri. Expt. Sta., Orono, Maine. **ENTOMOLOGY**.

LATIMER, Homer Barker, Prof. of Anatomy, Univ. of Kans. Med. Schl., Lawrence, Kans. **GROWTH ANATOMY**.

LATIMER, Lorenzo Phelps, Asst. Prof. of Horticulture and Asst. Horticulturist, Agri. Expt. Sta., Univ. of N. H., Durham, N. H. **HORTICULTURE**.

LATIMER, Wendell Mitchell, Prof. of Chem., Univ. of Calif. and Radiation Lab., Gilman Hall, Univ. of Calif., Berkeley 4, Calif. **THERMODYNAMICS; INORGANIC CHEMISTRY**. b. Garnett, Kans., Apr. 22, 1893. s. Walter and Emma (Mitchell) L. Edn.: A.B., Univ. of Kans., 1915; Ph.D., Univ. of Calif., 1919. m. Glatho Hatfield, June 16, 1926. c.: Eleanor; Robert. Exp.: Lectr., Univ. of Calif., 1918; Instr., *ibid.*, Berkeley, Calif., 1919-21; Asst. Prof., *ibid.*, 1921-23; Assoc. Prof., *ibid.*, 1924-31; Prof., *ibid.*, 1931—; Asst. Dean, Coll. of Letters and Sci., *ibid.*, 1933-34; Dean, Coll. of Chem., *ibid.*, 1941-50; Assoc. Dir., Radiation Lab., *ibid.*, 1949—. Mem.: Natl. Acad. Sci.; Amer. Chem. Soc.; Faraday Soc.; Electrochem. Soc.; A.A.A.S.; Acad. Political Sci.; Alpha Chi Sigma; Sigma Xi. Author: Oxidation Potentials, 1939, Revised Ed., 1952. Co-Author: A Course in General Chem., 1923;

Semi-Micro Edition, 1950; Reference Book Inorganic Chem., 1929. Contrb. to: Jour. Amer. Chem. Soc.; Chem. Rev.; Jour. Electrochem.; Sci.; Jour. Chem. Phys.

LATON, Anita Duncan, Assoc. Prof. of Health and Hygiene, San Jose State Coll., San Jose, Calif. EDUCATION.

LATSHAW, Walter Leroy, Dir. of Agri., U. S. Smelting Refining and Mining Co., P. O. Box 1980, Salt Lake City, Utah. CHEMISTRY.

LATTA, John Stephens, Prof. and Chmn., Dept. of Anatomy, Univ. of Nebr. Coll. of Med., Omaha, Nebr. HISTOLOGY, EMBRYOLOGY.

LAUBENFELS, Max W., Ore. State Coll., Corvallis, Ore. SPONGES.

LAUBENGAYER, Richard August, Assoc. Prof., Wabash Coll., Crawfordsville, Ind. PLANT ANATOMY.

LAUCKS, Irving Fink, Cormorant Bay, Deer Harbor, Wash. CHEMISTRY.

LAUDE, Hilmer Henry, Prof. of Agron., Kans. State Coll. and Agronomist, Kans. Agri. Expt. Sta., Manhattan, Kans. ECOLOGICAL PLANT PHYSIOLOGY.

LAUER, Univ. of Minn., Minneapolis, Minn. ORGANIC CHEMISTRY.

LAUER, A. R., Exec., Vice-Pres., Los Angeles Schl. of Optometry, Los Angeles, Calif. PSYCHOLOGY, EDUCATION.

LAUER, Edward Willard, Assistant Prof. of Anatomy, Department of Anatomy, Univ. of Mich., Ann Arbor, Mich. ANATOMY. b. Petersburg, Mich., November 27, 1902. s. Emanuel and Bertha (Morse) L. Edn.: B.S., Adrian Coll., 1923; A.M., Univ. of Mich., 1942; Ph.D., *ibid.*, 1944. m. Lucile Koehn of Adrian, Mich., June 19, 1926. d. Mr. and Mrs. John W. Koehn. c.: Sally Ann. Exp.: Tehr., Petersburg Pub. Schl., Petersburg, Mich., 1924-31; Monroe Co. Pub. Schl., Mich., 1933-41; Tehng. Fellow, Dept. of Anat., Univ. of Mich., 1941-43; Instr., *ibid.*, 1943-50; Asst. Prof., *ibid.* 1950—. Mem.: A.A.A.S.; Amer. Assn. of Anat.; Amer. Assn. Univ. Prof.; Mich. Acad. of Sci., Arts and Letters; Phi Sigma; Sigma Xi; Phi Kappa Phi; Sigma Alpha Epsilon; Masons. Contrb. to: Jour. of Comp. Anat. Ph.D. Dissertation: The Nuclear Pattern and Fiber Connections of Certain Basal Telencephalic Centers in the Macaque. Travel: U. S.; Can. Hobbies: Gardening; Stamp Collecting. Listed in: A.M.S.

LAUFFER, Max A., Dept. of Biophysics, Univ. of Pittsburgh, Pittsburgh, Pa. BIOPHYSICS.

LAUFFER, Paul Gideon Isaac, Chf. Chemist and Dir. of Rsch., George W. Luft Co., 34-12 36th Ave., Long Island City, N. Y. ORGANIC CHEMISTRY.

LAUG, Edwin P., Sr. Pharmacologist, Food and Drug Admin., Federal Security Agency, Washington, D. C. PHARMACOLOGY.

LAURENCE, Robert Abraham, Regional Geologist, U. S. Geol. Survey, Washington, D. C. GEOLOGY.

LAURITSEN, Charles Christian, Calif. Inst. of Tech., Pasadena, Calif.

LAVIN, George Israel, Chf. Spectroscopic Lab., Rockefeller Inst., N. Y., N. Y. SPECTROSCOPY.

LAWRENCE, Ernest Orlando, Dir., Radiation Lab., Univ. of Calif., Berkeley, Calif. PHYSICS. b. Canton, S. Dak., Aug. 8, 1901. s. Carl G. and Gunda (Jacobson) L. Edn.: B.A., Univ. of S. Dak., 1922; M.A., Univ. of Minn., 1923; Ph.D., Yale Univ., 1925. Hon. Deg.: LL.D., Univ. of Mich., 1938; LL.D., Univ. of Pa., 1942; LL.D., Univ. of Glasgow, 1951; Sc.D., Univ. of S. Dak., 1936; Sc.D. Stevens Int. of Tech., 1937; Sc.D., Yale Univ., 1937; Sc.D., Princeton Univ., 1937; Sc.D., Univ. of Chicago, 1941; Sc.D., Harvard

Univ., 1941; Sc.D., Rutgers Univ., 1941; Sc.D., McGill Univ., 1946; Sc.D., Univ. of British Columbia, 1947; Sc.D., Univ. of Southern Calif., 1949; Sc.D., Univ. of San Francisco, 1949. m. Mary K. Blumer, 1932. c. John Eric; Margaret Bradley; Mary Kimberly; Robert Don; Barbara Hundale; Susan. Exp.: Natl. Rsch. Council Fellow, 1925-27; Asst. Prof. of Physics, Yale Univ., 1927-28; Assoc. Prof. of Physics, Univ. of Calif., 1928-30; Prof. of Physics, *ibid.*, 1930—; Dir. of Radiation Lab., *ibid.*, 1936—; Bd. of Trustees, Carnegie Institution of Wash., 1944—. Hon. Pos.: Nobel Prize in Physics, 1939; Faraday Medal, 1952; Amer. Representative at Solvay Congress, Brussels, 1933. Mem.: Hon. Fellow, Physical Soc.; Hon. Fellow, Royal Soc. of Edinburgh; Fellow, Amer. Physical Soc.; Fellow, A.A.A.S.; Fellow, Amer. Acad. Arts and Sci.; Hon. Mem., Royal Irish Acad. of Sci.; Foreign Mem., Royal Swedish Acad. of Sci.; Natl. Acad. Sci.; Amer. Philos. Soc.; Phi Beta Kappa; Sigma Xi; Gamma Alpha; Hon. Mem., Bohemian Club. Special Int.: Experimental Physics.

LAWRENCE, H. M., Cornell Univ., Ithaca, N. Y. BOTANY.

LAWRENCE, John O., Asst. Pharmacologist, Commercial Solvents Corp., Terre Haute, Ind. PHARMACOLOGY.

LAWRENCE, John Seward, 10618 Lindbrook Dr., Los Angeles, Calif. INTERNAL MEDICINE.

LAWSHE, Charles Hubert, Jr., Assoc. Prof. of Psychol., Div. Edn. and Applied Psychol., Purdue Univ., Lafayette, Ind. PSYCHOLOGY.

LAWSON, Chester Alvin, Prof. and Hd., Dept. of Biol. Sci., Mich. State Coll., East Lansing, Mich. GENETICS.

LAWSON, Hampden C., Prof. and Chmn., Dept. of Physiol., Univ. of Louisville, Louisville, Ky. PHYSIOLOGY.

LAWSON, James Llewellyn, Rsch. Assoc., Rsch. Lab., General Electric Co., 1330 Garner Ave., Schenectady, N. Y. NUCLEAR PHYSICS.

LAY, Joachim E., Asst. Prof. of Mech. Engrng., Univ. of Detroit, 16526 Santa Rosa, Detroit, Mich. MECHANICAL ENGINEERING. b. Peking, China, Sept. 25, 1919. s. H. M. and K. F. Lay. Edn.: M.S., Univ. of Mich., 1947; B.S., *ibid.*, 1944; Candidat-Ingénieur, Univ. of Liege, Belgium. Exp.: Stress Engr., Willow Run Bomber Plant, Mich., 1942-45; Research Engr., Ford Motor Co., Mich., 1945-48; Instr., Mech. Engrng., Univ. of Detroit, 1948-52; Asst. Prof., *ibid.*, 1952—. Mem.: Amer. Soc. for Engrng. Edn.; Amer. Soc. of M.E.; Amer. Soc. of Heating and Ventilating Engrs.; Engr. Soc. of Detroit; Pi Tau Sigma; Sigma Rho Tau. Special Int.: Refrigeration, Air Conditioning, Thermodynamics.

LAY, John Tracy, Retired, Spruce Hill Ct., 4400 Spruce St., Philadelphia, Pa. PHYSICS.

LAYTON, William Isaac, Prof. of Mathematics and Head of Department, Stephen F. Austin State Coll., Nacogdoches, Tex. MATHEMATICS. b. Cameron, Mo., September 26, 1913. s. Joseph Evening and Mary (Leighton) L. Edn.: B.S., Univ. of S. C., 1934; M.S., *ibid.*, 1935; Ph.D., Geo. Peabody Coll., 1948. m. Eva James Wade of Nashville, Tenn., Mar. 28, 1941. d. Mr. and Mrs. Alex Corson Wade. Exp.: Asst. in Math., Univ. of S. C., 1934-35; Hd. of Math. Dept., Greer H. S., S. C., 1935-36; Asst. in Math., Univ. of Chicago, 1936-37; Instr. in Math., Rome H. S., 1937-39; Hd. of Math. Dept., Albany Sr. H. S., 1939-40; Tehng. Fellow in Math., Geo. Peabody Coll., 1940-41; Instr. in Math. and Engrng., Dir. of Aviation Cadet Trng. Program, Amarillo Jr. Coll., 1941-42; Hd. of Math. Dept., Amarillo Jr. Coll., 1942-46; Prof. of Math., Hd. of Dept., Austin Peay State Coll., 1946-48; Assoc. Prof. of Math., Ala. Poly. Inst., 1948-49; Dean of Instrn., State Tchrs. Coll., Frostburg, Md., 1949-50; Prof. of Math. and Hd. of Dept., Stephen F. Austin St. Coll., Nacogdoches, Tex., 1950—. Mem.: Phi Beta Kappa; Math. Assn. of Amer.; Natl. Coun. of Tchrs. of Math.; Amer. Math. Soc.; A.A.U.P.; Tex. Coll. Classroom Tchrs.

Assn.; Tex. Council of Math. Teachers; Tex. St. Tchrs. Assn.; N.E.A.; Phi Delta Kappa; Kappa Phi Kappa; Gamma Alpha. Author: An Analysis of Certification Requirements for Tchrs. of Math., 1949. Contrb. to: The Math. Tchr. Ph.D. Dissertation: See Above. Hobbies: Agri.; Music. Listed in: A.M.S. Special Int.: Geometry and The Teaching of Math.

LAZARSFELD, Paul F., Prof. of Sociology, Columbia Univ., N. Y., N. Y. SOCIOLOGY.

LAZARUS, Alfred S., Prof. of Public Health and Preventive Med., Schl. of Med., Univ. of Wash., Seattle 5, Wash. MICROBIOLOGY. b. Hamilton, Ont., Can., Oct. 5, 1907. s. A.B., Univ. of Calif., 1935; M.A., Univ. of Calif. Med. Center, 1937; Ph.D., *ibid.*, 1938. m. Dorothy Scott, May 15, 1937. Exp.: Fellow in Virus Diseases, Connaught Labs., Univ. of Toronto, Toronto, Can., 1938-39; Instr., Asst. Prof. of Bacteriol. and Public Health, Univ. of Colo. Med. Schl., Denver, Colo., 1939-41; U. S. Navy, 1941-45; Asst., Assoc. Prof. of Bacteriology and Rsch. Assoc., Hooper Foundation, Univ. of Calif. Med. Center, San Francisco, Calif., 1946-48; Assoc. Prof. of Public Health and Preventive Med., Lectr. in Microbiol., Univ. of Wash. Schl. of Med., Seattle, Wash., 1948—; Leave of Absence to serve with Point Four Program in Iran, as Trachoma Specialist, 1952-53. Mem.: A.A.A.S.; Soc. Amer. Bacteriologists; Soc. Exptl. Biol. and Med.; Amer. Pub. Health Assn.; Wash. State Pub. Health Assn.; A.A.U.P.; Sigma Xi; Phi Sigma. Co-author: Applied Medical Bacteriol., 1947. Contrb. to: Amer. Jour. Pub. Health; Proc. Soc. Exptl. Biol. and Med.; Jour. Bacteriol.; Jour. Immunology. War Record: U. S. Navy, 1941-45. Gen. Int.: Edith Claypole Memorial Rsch. Fellow, Univ. of Calif., 1936-38. Special Int.: Virus Diseases of Man, with Special Reference to Lab. Diagnosis and Rsch.; Pub. Health Lab. Procedures; Bacteriophage.

LEACH, Julian Gilbert, Prof. of Plant Pathol. and Hd., Dept. of Plant Pathol. and Bacteriol. W. Va. Univ., Morgantown, W. Va. PLANT PATHOLOGY.

LEACH, Lysle Douglas, Assoc. Prof. of Plant Pathol. and Assoc. Plant Pathologist, Univ. of Calif. Coll. of Agri., Davis, Calif. PLANT PATHOLOGY.

LEADINGHAM, Roy Samuel, Medical Consultant, Vocational Rehabilitation and Edn., U. S. Veterans Admin., Regional Office, 105 Pryor St., Atlanta, Ga. INTERNAL MEDICINE.

LEAKE, C. J. PHYSIOLOGY.

LEAKE, Chauncey D., Vice-Pres., Med. Schl., Univ. of Tex., Galveston, Tex. PHARMACOLOGY.

LEARY, Timothy, Medical Examiner, Suffolk County, and Lectr., Legal Med., Harvard Med. Schl., 44 Burroughs St., Jamaica Plain, Mass. PATHOLOGY.

LEAVENWORTH, Charles Stanley, Asst. Biochemist, Conn. Agri. Expt. Sta., Hamden, Conn. CHEMISTRY.

LeBARRON, Russell Kenneth, Silviculturist, Chg. Div. Silviculture, Northern Rocky Mountain Forest and Range Expt. Sta., Missoula, Mont. SILVICULTURE.

LeCOMPTÉ, Stuart Burnette, Jr., Chemist, Rsch. Div., Hartford-Empire Co., Hartford, Conn. PLANT, GLASS CHEMISTRY.

LEDERER, Francis L., SPEECH AND HEARING.

LEDINKO, Nada, Rsch. Asst., Yale Med. Schl., New Haven, Conn. VIROLOGY. b. Girard, Ohio, Dec. 16, 1924. s. John and Zora (Valencie) L. Edn.: B.S., Ohio St. Univ., 1946; M.S., Pa. St. Coll., 1949; Ph.D., Yale Univ., 1952. Exp.: Rsch. Asst. Yale Univ., New Haven, Conn., 1952-53; Natl. Foundation for Infantile Paralysis Fellow at Walter and Eliza Hall Inst., Melbourne, Australia, 1953—. Mem.: N. Y. Acad. of Sci.; Phi Beta Kappa; Phi Kappa Phi; Iota Sigma Xi; Sigma Xi; Tissue Culture Assn. Contrb. to: Jour. of Experimental Med.; Jour. of

Immunology; Proceedings of the Soc. for Experimental Biology and Medicine; Amer. Jour. of Hygiene; Jour. of Infectious Diseases. Special Int.: Application of Tissue Culture Techniques to the Study of Viruses.

LEE, Charles Oren, Prof. of Pharmacy, Purdue Univ., Lafayette, Ind. PHARMACY.

LEE, Clarence E., Vice-Pres. and Dir., c/o Beacon Milling Co., Inc., Cayuga, N. Y. POULTRY AND



ANIMAL NUTRITION AND MANAGEMENT. b. Deep River, Conn., Sept. 11, 1893. s. Edgar Conklin and Sarah Holmes (Crawford) L. Edn.: B.S., Univ. of Conn., 1916. m. Muriel Clark, Oct. 19, 1918. c. Daphne Ann; Diane. Exp.: Voc. Agri. Instr., Concord, Mass. H. S., 1916-17; Dir., War Gardening Campaign No. Middlesex Co., 1917; Hd. Dept. of Voc. Agri. High Schls., Worcester, Mass., 1918; Conn. State Guard, 1918-19; Voc. Agri. Inst. for State Bd. of Edn., New Milford, Conn., 1919-20; Instr., Cornell Univ., Ithaca, N. Y., 1920-23; Hd., Dept. of Poultry Husbandry, State Inst. of Agri. on Long Island, 1923; Lectr. in Chg., Poultry Short Course at Columbia Univ., N. Y. C., 1924-27; Poultry Specialist, Beacon Milling Co., Inc., Cayuga, N. Y., 1927-32; Dir. of Poultry Rsch., *ibid.*, 1932-37; Vice-Pres. and Dir., *ibid.*, 1937—. Mem.: A.A.A.S., fellow; World Poultry Sci. Assn.; The North Amer. Poultry Sci. Assn.; Amer. Soc. of Animal Prod.; Torch Internatl.; Auburn Club; The Eugene Field Soc.; Amer. Feed Manufacturers Assn.; N. Y. Acad. of Sci. Author: Practical Poultry Husbandry for the Near East, 1925; Profitable Poultry Mgt., 1928-52, Twenty Editions to date; Profitable Broiler Battery and Laying Cage Mgt., 1936-51, Six Editions to date. Contrb. to: Poultry Sci. Special Int.: Poultry and Small Animals, Nutrition and Mgt.

LEE, Claudius, Prof. of Elec. Engrng., Va. Poly. Inst., Box 157, Blacksburg, Va. ELECTRICAL



ENGINEERING AND HOROLOGY. b. May 30, 1872, Culpeper, Va. s. John and Florence M. (Jeffries) L. Edn.: B.S. in E.E., 1896, Va. Polytech. Inst.; M.E., *ibid.*, 1907. m. Rissie Otey of Bedford Co., Va., Oct. 14, 1902. d. Thos. Benton and Susan Rader O. Exp.: Lab. Mechanician, Va. Poly. Inst., 1893-96; Asst. in Elec. Engrng., *ibid.*, 1896-98; Asst. Prof. to Prof., *ibid.*, 1915—. Hon. Pos.: Chmn., Student Branch Conf., Dist. No. 4, Amer. Inst. of E. E.; Counselor, V. P. I. Student Branch of A.I.E.E., Fel.; A.I.E.E.; Amer. Phys. Soc.; Illuminating Engr. Soc.; Natl. Soc. of Prof. Engrng.; Soc. for the Promotion of Engrng. Edn.; Va. Acad. of Sci.; Va. Edn. Assn.; A.A.U.P.; Tau Beta Pi; Phi Kappa Phi; Eta Kappa Nu; Mason; O.E.S.; Amer. Legion; Red Cross. Author: Instruction Books, Ord. Dept., U. S. Army (Dealing with Motorization of Mobile Artillery, 1917-19). Contrb. to: Elect. World; Extension Engrng. Bulletin, V. P. I. War Record; Capt., Ordnance Dept., U. S. Army, 1917-19. Special Int.: Laboratory Testing Machinery and Instruments, Horological Devices, Developing Inventions.

LEE, Douglas K., Johns Hopkins Univ., Baltimore, Md. MEDICAL GEOGRAPHY.

LEE, Frederick W., McDonogh Rd., Owings Mills, Md. GEOPHYSICAL EXPLORATION.

LEE, D. Ralph, Prof., Chem. Dept., Tex. A. and M. Coll., Coll. Sta., Tex. ORGANIC CHEMISTRY. b.



Jackson, Tenn., July 31, 1913. s. Dean Randolph and Emma Lyla (McKelvy) L. Edn.: B.S., Memphis St. Coll., 1937; M.S., A. and M. Coll. of Texas, 1939. m. Delia Wear of Memphis, Tenn., Oct., 1940. d. R. F. Wear. Exp.: Tchng. Fellowship in Chem., Texas A. and M., 1937-39; Rsch. Crown Central Petroleum Corp., Houston, Tex., 1939-41; Instr. in Chem., Tex. A. and M. Coll., 1941-43; Asst. Chief Chemist, Crown Central Petroleum Corp., 1943-46; Chmn., Chem. Dept.,

Texas A. and M. Coll. Annex, 1946-48; Prof., Chem. Dept., Texas A. and M. Coll., College Station, Texas, 1948—. Hon. Pos.: Sec.-Treas., Amer. Assn. Univ. Profs., 1950; Vice-Pres. of A.A.U.P., 1951; Sec.-Treas., Coll. Classroom Tchrs. Assn., 1950; Mem. of Com. on Curriculum Study; Advisor for Beginning Sci. Students. Mem.: A.A.U.P.; Amer. Chem. Soc.; Amer. Assn. for Advancement of Sci. Contrb. to: Cotton and Cottonoil Press. M.S. Dissertation: Production of Furfural from Cottonseed Hulls. Gen. Int.: World War II: Engaged in Production of 100-octane aviation gasoline, and raw materials for Synthetic Rubber. Hobbies: Hunting; Music. Special Int.: Petroleum and petroleum gases; Cottonseed hulls.

LEE, Harley C., Vice-Pres. and Tech. Dir., Basic Refractories, Inc., 845 Hanna Bldg., Cleveland, Ohio. CHEMISTRY, ENGINEERING.

LEE, Harold Fletcher, Prof. of Edn., Grad. Div., Lincoln Univ., Jefferson City, Mo. PHILOSOPHY OF EDUCATION.

LEE, Oliver Justin, Dir., Dearborn Observatory, Northwestern Univ., Evanston, Ill. ASTROPHYSICS.

LEE, Roger I., Fellow, Harvard Coll., Cambridge, Mass. INTERNAL MEDICINE.

LEE, Royal, Pres. and Rsch. Dir., Lee Foundation Nutritional Rsch., Milwaukee, Wis. NUTRITION.

LEE, Sylvan Burton, Plant Mgr., E. R. Squibb & Sons Div. Mathieson Chem. Corp., New Brunswick, N. J. MICROBIOLOGY-BIOCHEMISTRY. b.



Holmen, Wis., Jan. 5, 1916. s. Ludwig Theodore and Delilah (Bratberg) L. Edn.: B.S., Univ. of Wis., 1938; M.S., ibid., 1939; Ph.D., ibid., 1942. m. Eunice Carleton, Dec. 2, 1943. c.: Carleton Lloyd. Exp.: Rsch. and Development, Microbiologist-Biochemist, Commercial Solvents Corp., Terre Haute, Ind., 1939-41; Hd., Microbiol. Rsch. Section, General Mills, Inc., Minneapolis, Minn., 1942-44; U. S. Naval Reserve Officer engaged in classified

Rsch. and Development Activities Connected with Bacteriological Warfare, Camp Detrick, Frederick, Md., 1944-46; Supt. of Fermentation, Merck & Co., Inc., Elkton, Va., 1946-49; Asst. Dir. of Microbiol. Rsch. and Development, Merck & Co., Inc., Rahway, N. J., 1949-50; Dir., Microbiol. Rsch. and Development, Commercial Solvents Corp., Terre Haute, Ind., 1950-51; Plant Mgr., E. R. Squibb & Sons, New Brunswick, N. J., 1951—. Mem.: Soc. for General Microbiol. (England); Soc. Amer. Bacteriologists; Amer. Chem. Soc.; A.A.A.S.; Alpha Chi Sigma; Alpha Zeta; Phi Sigma; Gamma Alpha; Sigma Xi; Rotary; Elks. Contrb. to: Jour. Bacteriol.; Bio-

chem. Jour.; Jour. Biol. Chem.; Proc. Soc. for Exptl. Biol. and Med.; Indus. and Engrng. Chem.; Jour. Plant Physiol. War Record: Lt. Jg., U.S.N.R., 1944-46. Special Int.: Industrial Fermentations; Antibiotic Production; Pharmaceutical Mfg.

LEEDS, Morris Evans, Chmn. Bd., Leeds and Northrup Co., 1025 Westview St., Mt. Airy, Philadelphia, Pa. PHYSICS, ELECTRICAL ENGINEERING.

LEERMAKERS, John A., Eastman Kodak Co., Kodak Pk., Rochester, N. Y. OPTICAL SENSITIZERS.

LEES, Lester, Assoc. Prof. of Aeronautical Engrng., Guggenheim Aero Lab., Calif. Inst. of Tech., Pasadena, Calif. ENGINEERING. b. Nov. 8, 1920, N. Y. C. s. Harry Lees and Dorothy (Innenger) L. Edn.: S.B., Mass. Inst. of Tech., 1940; Sc.M. in Aero. Engrng., ibid., 1941. m. Constance Louise Morton of South Milford, Mass., Aug. 30, 1941. d. Mr. and Mrs. Asa Jones. Exp.: Rsch. Asst. in Aero. Engrng. Dept., M. I. T., 1940-41; Aero. Engr., Aircraft Lab. U.S.A.A.F. Materiel Command, Wright Field, Dayton, Ohio, 1941-42; Rsch. Fellow in Aeronautics and Instr. in Math. and Aero., Calif. Inst. of Tech., 1942-44; Aero. Engr., Natl. Advisory Com. for Aeronautics, 1944-46; Asst. Prof. of Aero. Engrng., Princeton Univ., 1946-48; Assoc. Prof., ibid., 1948-53; Assoc. Prof. of Aeronautics, Guggenheim Aero. Lab., Calif. Inst. of Tech., Pasadena, Calif., 1953—. Author: N.A.C.A. Technical Notes, 1946. Contrb. to: Jour. of the Aeronautical Sci. War Record: Air Corps Enlisted Reserve, 1944-46. Hobbies: Music. Special Int.: Problems of Highspeed Flight; Aerodynamics, and Gasdynamic aspects of combustion.

LEFEBVRE, Camille Leon, Plant Pathologist, Plant Indus. Sta., U. S. D. A., Beltsville, Md. PLANT PATHOLOGY.

LEFEVER, Robert Allen, Rsch. Fellow, Mass. Inst. of Tech., Cambridge 39, Mass. INORGANIC CHEMISTRY. b. York, Pa.,



May 29, 1927. s. Chester Allen and Rose (Mummert) L. Edn.: B.S., Juniata Coll., 1950; Ph.D., Mass. Inst. of Tech., 1953. m. Juanita Mae Parks, Aug. 9, 1946. c.: Norma Jean; Janice Marie. Exp.: Tchng. Fellow, Mass. Inst. of Tech., Cambridge, Mass., 1950-51; Rsch. Asst., ibid., 1951-52; Rsch. Fellow, ibid., 1952—. Mem.: Amer. Chem. Soc.; Sigma Xi. Contrb. to: Inorganic Synthesis, Vol. IV. Special Int.: Inorganic Chem. of Silicon.

LEFKOWITZ, William, 33 W. 42nd St., N. Y., N. Y. DENTAL HISTOLOGY.

LEGGIN, Alexander, Asst. to Pres., Wyandotte Chem. Corp., 7905 Deepwell Dr., Bethesda 14, Md. CHEMISTRY. b. Hazelton, Pa., Dec. 29, 1914.



s. Basil Charles and Anne (Hardison) L. Edn.: B.S., Univ. of Pittsburgh, 1937; Fellow, Mellon Inst., 1937-39. m. Gloria Rogers, May 25, 1948. Exp.: Fellow, Mellon Inst., 1937-39; Rsch. Dir., Baltimore Brush Div., Pittsburgh Plate Glass Co., Baltimore, Md., 1939-41; World War II service, U. S. Army, 1941-46; Hd. of Washington News Bur., Amer. Chem. Soc. and Assoc. Editor of Chem. and Engrng. News and Indus. and Engrng. Chem., weekly column "Potomac

Postscripts," 1946-48; Asst. to Vice-Pres. for Rsch. and Development, Wyandotte Chem. Corp., Hotel Dupont Plaza, Washington, D. C., 1948-51; Asst. to Pres., *ibid.*, 1951—. Mem.: Amer. Chem. Soc.; A.A.A.S.; Chem. Engrs. Club of Wash.; Armed Forces Chem. Assn.; Mfg. Chemists Assn.; Natl. Security Indus. Assn.; Quartermaster Assn.; Amer. Ord. Assn.; Phi Lambda Upsilon; Omicron Delta Kappa; Phi Kappa; Scabbard and Blade; Natl. Press Club; Congressional Country Club; Army and Navy Country Club; Amer. Legion; Early Birds Breakfast Club. Contrb. to: Chem. and Engrng. News; Indus. and Engrng. Chem.; Armed Forces Chem. Jour. Special Int.: Plastics; Inorganic Chem.; Detergents.

LEFSCHETZ, Solomon, Fine Hall, 129 Broadmead St., Princeton, N. J.

LEGG, Victor E., Engr., Bell Telephone Labs., N. Y., N. Y. PHYSICS.

LEHENBAUER, Philip Augustus, Hd., Dept. of Biol. and Prof. of Botany, Univ. of Nev., Reno, Nev. PLANT PHYSIOLOGY.

LEHMAN, Arnold J., Chf., Div. Pharmacol., Food and Drug Admin., Federal Security Agency, 5175 S. Agri. Bldg., Washington, D. C. PHARMACOL-OGY.

LEHMAN, Edwin Partridge, Prof. of Surgery, Univ. of Va. Hospital, Charlottesville, Va. SURGERY. b. Germantown, Pa., June 9, 1888. s. Benjamin N. and Emily (Partridge) L. Edn.: B.A., Williams Coll., 1910; M.D., Harvard College, 1914. m. Margaret Maxwell, Oct. 1, 1921. c.: Richard; Lois Ann. Exp.: House Officer, Peter Bent Brigham Hospital, Boston, Mass. 1914-15; Asst. Resident Surgeon, Washington Univ. Schl. of Med., St. Louis, Mo., 1915-16, Resident Surgeon, *ibid.*, 1919-20, Asst. in Surgery, *ibid.*, 1916-20, Instr. in Surgery, *ibid.*, 1920-21; Instr. in Clinical Surgery, *ibid.*, 1921-26; Asst. Prof. of Surgery, *ibid.*, 1926-27; Assoc. Prof. of Clinical Surgery, *ibid.*, 1927-28; Prof. of Surgery, Univ. of Va., Charlottesville, Va., 1928—. Mem.: Southern Surgical Assn., (Pres.), 1948; Soc. of Univ. Surgs. (hon.); Sou. Surgical Assn.; Amer. Surgical Assn.; Internatl. Surgical Soc.; Amer. Coll. of Surgeons; Amer. Soc. for Surg. of Trauma; Pres. Amer. Cancer Soc., 1947-48; Phi Beta Kappa; Alpha Omega Alpha; Sigma Xi. Contrb. to: Annals of Surgery, Surgery Gynecology and Obstetrics, Surgery.

LEHMAN, Harvey Christian, Prof. of Psychol., Ohio Univ., Athens, Ohio. PSYCHOLOGY.

LEHMANN, Walter J., Tchng. Fellow, St. Louis Univ., St. Louis 12, Mo. PHYSICAL CHEMISTRY. b. Germany, Feb. 13, 1926. s. Justin and Suse (Jeremias) L. Edn.: A.B., Washington Univ., 1950. Exp.: Tchng. Fellow in Chem., St. Louis Univ., St. Louis, Mo., 1950—. Mem.: Amer. Chem. Soc.; Pi Mu Epsilon; Sigma Chi Sigma. War Record: Milit. Int. Service, U. S. Army, 1944-46. Special Int.: Raman Spectroscopy as Applied to Molecular Structure Studies.



LEHRMAN, Philip Raphael, Clinical Prof. of Neurol. and Psychiatry, Columbia Univ., N. Y., N. Y. PSYCHIATRY.

LEHRNER, Jay Samuel, 2120 Rockford Rd., Los Angeles, Calif.

LEHWALDER, David C., Technologist, 4114 Woodfin, Houston 25, Texas. PHYSICAL CHEMISTRY. b. Butte, Mont., Oct. 13, 1920. s. Arthur and Florence (Christen) L. Edn.: B.S., Mont. State Coll., 1942. m. Betty J. Moore, Aug. 21, 1942. c.: Lorelei. Exp.: Chemist, Shell Dev. Company,

Emeryville, Calif., 1942-52; Technologist, Shell Oil Company, Houston, Tex., 1952—. Mem.: Amer. Chemical Soc.; Alpha Chi Sigma; Phi Eta Sigma; Phi Kappa Phi. Special Int.: Theory of Solutions, Distillation, Liquid-Liquid Extraction.

LEICHSENRING, Jane Marie, Prof. of Nutrition, Univ. of Minn., Univ. Farm. St. Paul, Minn. NUTRITION.

LEIFSON, Sigmund Waldemar, Prof. and Hd., Dept. of Physics, Univ. of Nev., Reno, Nev. SPECTROSCOPY.

LEIGHTLY, John Barger, Prof. of Geography, Univ. of Calif., Berkeley, Calif. GEOGRAPHY.

LEIGHTON, Alexander Hamilton, Prof. of Sociology, Cornell Univ., Ithaca, N. Y. PSYCHIATRY, ANTHROPOLOGY.

LEIGHTON, Henry, Prof. of Geology, Univ. of Pittsburgh, Pittsburgh, Pa. ECONOMIC GEOLOGY.

LEIGHTON, Joseph Alexander, Prof. Emer. Philos., Ohio State Univ., Columbus, Ohio; The Alabama, Winter Park, Fla. PHILOSOPHY, SOCIAL SCIENCE.

LEIGHTON, Morris Morgan, Chief, Ill. State Geol. Survey, 121 Nat. Resources Bldg., Urbana, Ill.



GLACIAL GEOLOGY. b. Aug. 4, 1887, near Wellman, Io. s. Stephen Tibbetts and Jane (Wellman) L. Edn.: B.A., State Univ. of Ia., 1912, M.S., 1913; Ph.D., 1916, Univ. of Chicago. m. Ada Harriette Beach of Ft. Dodge, Ia., Aug. 12, 1913. d. Mr. and Mrs. Ralph Brewster Beach. c.: Freeman Beach; Morris Wellman; Richard Tibbetts. Exp.: Printer's Apprentice, 1901-05; Printer, 1906; Supt., Weber Printing Co., Ia. City, Ia., 1908-09; Instr. in Geol., Univ. of Wash., 1915-16; Instr., Summer Field Course, Univ. of Chicago and St. Univ. of Ia., 1916; Asst. Prof., Geol., Ia. S. T. C., Cedar Falls, Ia., 1916-17; Asst. Prof., Geol., Univ. of Wash., 1917-18; Geol., Wash. Geol. Survey; Act. Prof., Geol., Ohio State Univ. in Absentia from Univ. of Wash., 1918-19; Asst. Prof., Geol., Univ. of Ill., 1919-23; Geol., Ill. Geol. Survey, 1919-23; Chief of Ill. Geol. Survey, 1923—. Mem.: Sigma Xi; Chaos; Dial; Chicago Geog. Soc., Fellow; Geol. Soc. of Amer. (F., Councillor, 1937-40); A.A.A.S. (F., Vice-Pres., 1941); A. Ceramic Soc. (F.); A. A. State Geol., Former Pres.; Soc. of Econ. Geol. (Councillor, 1945-46, Pres., 1950); Chicago Acad. of Sci. (Hon.); A. A. Petrol. Geol. (Hon.); A.I.M.M.E.; Amer. Mining Cong.; Ill. Soc. of Engrs.; Ill. State Acad. of Sci., Pres., 1930; Ill. Mining Inst., Pres., 1941; Western Soc. Engrs.; Royal Soc. of Arts (F.). Author: The Iowan Drift (with W. C. Alden), 1917; The Country About Camp Lewis, Wash., 1918; Road-building Sands and Gravels of Wash., 1919; The Cahokia Mounds (with W. K. Moorehead), 1923; Summary Information on the State Geol. Survey and U. S. Geol. Survey, 1932; Compiler of Ill. Resources, 1944; Sou. Ill.—Resources and Potentials of the Sixteen Southernmost Counties (Co-author), 1949; Early Man (Contributor), 1937. Ph.D. Dissertation: The Iowan Drift. Contrb. to: Ednl. and Sci. Jours. War Record: Instr., Map Reading in Student Army Trng. Corps, Ohio St. Univ., 1919; Internationally Known in Pleistocene Geol. and Geol. Survey Admin. Hobby: Golf. Listed in: Who's Who in Amer.; A.M.S.; Who Knows—and What; Who's Who in Engrng.; Who's Who in Midwest; Who's Who in Chicago and Ill.; World Biog.

LEIGHTY, Clyde Evert, Collaborator, Bureau Plant Indus., U. S. D. A., Beltsville, Md. AGRONOMY.

LEIM, Alexander Henry, Chf. Biologist, Atlantic Biol. Sta., Fisheries Rsch. Bd. of Can., P. O. Box 254, Sta. Andrews, N. B., Can. **FISHERIES BIOLOGY.**

LEIPPER, Dale Frederick, Prof. of Physics and Meteorological Oceanography and Head, Department, Oceanography, A. and M. Coll. of Tex., College Station, Tex. **PHYSICAL AND METEOROLOGICAL OCEANOGRAPHY.** b. September 8, 1914, Salem, Ohio. s. Robert and Myrtle (Cost) L. Edn.: B.S., Education, Whittenberg Coll., Ohio 1937; M.A., Ohio State Univ., 1939; Certificate in Meteorol., Univ. of Calif., Los Angeles, 1942-43; Scripps Inst. of Oceanography, 1945-50; Ph.D., Univ. of Calif., 1950. m. Virginia Harrison of Spring Valley, Calif., May 14, 1942. d. J. B. Harrison. c.: Diane Louise; Janet Elizabeth; Bryan Robert; Anita Dale. Exp.: Ohio State Univ., 1939, Teaching Asst., Trigonometry; Voc. Schl., Chula Vista, Calif., Tchrr., 1940; Cons. Aircraft Corp., San Diego, Calif., Weight and Balance Engr., 1940; Capt., Meteorol., U.S.A.A.F., 1941-46; Scripps Inst. of Oceanog., La Jolla, Calif., Oceanographer, 1946-49; Act. Hd., Dept. and Assoc. Prof., Phys. and Meteorol. Oceanog., A. and M. Coll. of Tex., Coll. Sta., Tex., 1949-50; Hd. Dept. and Prof., Phys. and Meteorol. Oceanog., 1950—. Mem.: Phi Kappa Phi; Sigma Xi; Amer. Men of Sci.; Amer. Soc. Limnology and Oceanography; Amer. Geophysical Union; Tex. Acad. of Sci.; A.A.U.P.; Rotary; Reserve Officers Assn. Contrb. to: Sci. Jours. Ph.D. Dissertation: Sea Temperature Variations Associated with Tidal Currents in Stratified Shallow Water Over an Irregular Bottom. Travel: N. Amer. Hobbies: Music; Swimming. Listed in: A.M.S.; Who Knows—and What. Special Int.: Sea Temperature; Training in Oceanography.

LEITCH, Andrew, Hd., Dept. of Psychol. and Secy., Faculty, Bethany Coll., Bethany, W. Va. **PSYCHOLOGY.**

LEITH, Andrew, Golf House and Andover Rd., Haverford, Pa. **GEOLOGY.**

LEITH, Charles Kenneth, Prof. Emeritus, Univ. of Wis., Consultant, Atomic Energy Commn., Apt. 300-I, Sheraton Park Hotel, Washington 8, D. C. **GEOLOGY.** b. Trempealeau, Wis., Jan. 20, 1875. s. Charles A. and Martha E. (Gale) L. Edn.: B.S., Univ. of Wis., 1897; Ph.D., *ibid.*, 1901. Hon. Deg.: LL.D., Kenyon Coll., Ohio, 1926; D.Sc., Lawrence Coll., 1930; D.Sc., Columbia Univ., 1940; D.Sc., Stevens Inst. of Tech., 1943. m. Mary E. Mayers, Jan. 6, 1898. c. Kenneth; Andrew. Exp.: Geologist, U. S. Geol. Survey, 1900-05; Prof. and Chmn. of Dept. of Geol., Univ. of Wis., Madison, Wis., 1903—. Mem.: Fellow, Geol. Soc. of Amer.; Natl. Acad. of Sci.; Amer. Inst. of Mining and Metallurgical Engrs.; A.A.A.S.; Amer. Phil. Soc.; Soc. of Econ. Geol.; Mining and Metallurgical Soc. of Amer.; Washington Acad. of Sci.; Canadian Mining Inst.; British Mining and Metallurgical Inst.; Geol. Soc. of London; Cosmos Club; Chevy Chase Club; Univ. Clubs of Madison, Wis. and N. Y. C. Author: Econ. Aspects of Geol., 1921; World Minerals and World Politics, 1931; World Minerals and World Peace, 1943, etc. Contrb. to: Assoc. Ed. Jour. of Geol.; Assoc. Ed. Econ. Geol. Special Int.: Bus. Adv. Coun.; Pre-Cambrian Geol. and Minerals as Related to Natl. and World Econ.

LELAND, Emmons William, Experimentalist, Dept. of Agron., Cornell Univ., Ithaca, N. Y.

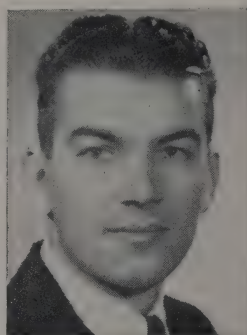
LELAND, Waldo Gifford, Dir. Emer., Amer. Council Learned Societies, 1219 16th St., Washington, D. C. **HISTORY.**

LEMBERT, Julius, 119 E. 74, N. Y. 19, N. Y. **OTOLARYNGOLOGY.**

LEMERT, Benjamin Franklin, Assoc. Prof. Econ. Geography, Duke Univ., Durham, N. C. **ECONOMIC GEOGRAPHY.**

LEMON, Harvey Brace, Prof. of Physics, Univ. of Chicago, Chicago, Ill. **PHYSICS.**

LEMON, Paul C., Asst. Prof. Biol., N. Y. State Coll. for Tchrs., Albanay, N. Y. **ECOLOGY AND**



CONSERVATION. b. September 25, 1912, Lincoln, Neb. s. Hastings A. and Mary Elizabeth (Cliffell) L. Edn.: A.B., Univ. of Neb., 1935; M.Sc., Univ. of Ill., 1936; Ph.D., Univ. of Minn., 1943. m. Thelma Palmatier of Ord, Nebr., Jan. 31, 1938. c.: Laurel Elyna; Gary Alan. Exp.: Grad. Asst., Univ. of Neb., 1934-35; Grad. Asst., Univ. of Ill., 1935-36; U. S. Forest Serv., 1936-48; N. Y. State Coll. for Tchrs., 1948—. Mem.: Soc. Amer. Foresters; Ecol. Soc. of Amer.; Sigma Xi; Gamma Alpha Graduate Sci. Soc.; Kiwanis. Contrb. to: Tech. Studies in Ecol. and Forestry. Ph.D. Dissertation: Effects of Fire on the Herbaceous and Shrubby Vegetation of the Southeastern U. S. War Record: U.S.D.A., Forestry Rsch. Travel: Canada; Mexico; Cuba. Hobbies: Photography; Winter Sports; Hiking; Flying. Listed in: Who Knows—and What; Who's Who in the East; Naturalists' Directory. Special Int.: Classification and Effects of Factors: Fire, Storms, Grazing, and Forestry.

LENCHNER, Theodore, Vitro Mfg. Co., 60 Greenway Dr., Pittsburgh 4, Pa. **CERAMICS.**

LENNES, N. J., 1325 Gerald Ave., Missoula, Mont. **MATHEMATICS.**

LENNOX, William Gordon, Asst. Prof. of Neurol., Harvard Med. Schl., 15 Shattuck St., Boston, Mass. **NEUROLOGY.**

LENTZ, Donald W. **MATHEMATICS.**

LENTZ, Theodore F., Assoc. Prof. of Edn. and Dir., Attitude Rsch. Lab., Washington Univ., St. Louis, Mo. **ATTITUDE RESEARCH.**

LEON, Edward, Rsch. Fellow, Univ. of Mich., Ann Arbor, Mich. **ORGANIC CHEMISTRY.** b.



Benton, Ill., May 2, 1925. s. John and Mary Anna (Letukas) L. Edn.: B.S., Univ. of Ill., 1949; M.S., Univ. of Mich., 1950. m. Mary Ellen Cooper, Aug. 29, 1953. Exp.: Tehng. Fellow, Univ. of Mich., Ann Arbor, Mich., 1949-53; Rsch. Fellow, Chem. Dept., *ibid.*, 1953—. Monsanto Chem. Co. Research Fellow, *ibid.*, 1953—. Mem.: Amer. Chem. Soc.; Sigma Xi; Phi Lambda Upsilon; Phi Kappa Phi; Phi Eta Sigma; Alpha Chi Sigma. Special Int.: Rearrangements of Organic Compounds Containing Nitrogen.

LEONARD, Carroll Mendenhall, Prof. of Mechanical Engineering, Box 106, Stillwater, Okla. **THERMODYNAMICS.** b. Edna, Iowa, June 9, 1901. s. Marcus and Mabel Wayne (Dix) L. Edn.: B.S., Kans. State Coll. of Agriculture and Applied Sci., 1924; M.E., *ibid.*, 1928; M.S., *ibid.*, 1929; Grad. Student, Univ. of Tex. m. Helen Romary of Gotebo, Okla., 1932. d. Wm. Romary. c.: Edward; Carroll; William; John; Gary. Exp.: Instr., Mech. Engrng., Rensselaer Poly. Inst., 1924-25; Instr., Mech. Engrng., Univ. of Cinn., 1925-26; Instr. and Asst. Prof., Kans. State Coll., 1926-29; Asst., Assoc. and Prof., Okla. A. and M., 1929-50. Hon. Pos.: Hon. Chmn., Student Br. A.S.M.E.; Faculty Advisor, Pi Tau Sigma. Mem.: A.S.M.E.; Pi Tau Sigma (Natl. Vice-Pres., 1951—);

Sigma Tau; Phi Kappa Phi; A.S.E.E.; Odd Fellows Lodge. Author: Heat Power Fundamentals, 1949. Contrb. to: Power Plant Engrng. Listed in: Who's Who in Engrng.; A.M.S.

LEONARD, Clifford Shattuck, Dept. of Pharmacol., Schl. of Med., Yale Univ., New Haven, Conn. **PHARMACOLOGY.**

LEONARD, Emery C., Asst. Curator, U. S. Natl. Museum, Div. Plants, Washington, D. C. **BOTANY.**

LEONARD, F. C., Prof. of Astronomy, Univ. of Calif., Los Angeles, Calif. **METEORITICS.**

LEONARD, Harold Judson, Dentist, 745 Fifth Ave., N. Y. 22, N. Y. **PERIODONTOLOGY.** b. Minneapolis, Minn., Nov. 24, 1887. s. Leon D. and Mary (Judson) L. Edn.: D.D.S., Univ. of Minn., 1912; B.A., *ibid.*, 1915. m. Marion Slater, Sept. 8, 1915. c.: Edwin Slater; Judson Greer; William Francis; Robert D. Exp.: Instr. and later Asst. and Assoc. Prof., Coll. of Dentistry, Univ. of Minn., 1913-26; Rsch. Asst. in Mouth Rsch. for the Amer. Dental Assn., 1913-15; Dir., Schl. for Dental Nurses, 1917-26; Chf. Dental Service, Minneapolis Gen. Hosp., 1920-21; Chf., Dental Dept., Students Health Service, 1922-26; Ednl. Dir. and Prof. of Oral Pathol., Marquette Univ. Dental Schl., 1926-27; Assoc. Prof. of Dentistry, Columbia Univ. Schl. of Dental and Oral Surgery, 1927; Prof., *ibid.*, 1928; Subjects Oral Diagnosis, Oral Hygiene, Periodontology, 1927-47; Chmn., Div. of Oral Diagnosis, 1927-35; Chmn., Div. Periodontology, 1935-47; Chf. Dental Service, Presbyterian Hosp., N. Y., 1933-37. Hon. Pos.: Chmn., Periodontia Section, Amer. Assn. Dental Schls., 1938-47; Chmn., Periodontia Section, Amer. Dental Assn., 1942-47; Pres., Amer. Acad. Periodontology, 1931-32; Secy.-Treas., Amer. Bd. Periodontol., 1939—; Secy.-Treas., Advisory Bd. for Dental Specialties, 1939-51. Mem.: Fellow, A.A.A.S.; Fellow, Amer. Acad. Periodontology; Internatl. Assn. for Dental Rsch.; Amer. Dental Assn.; Pan Amer. Med. Assn.; Delta Sigma Delta; Sigma Xi; Omicron Kappa Upsilon. Contrb. to: Jour. Periodontol.; Amer. Dental Assn. Jour.; Dental Cosmos; Jour. Dental Rsch. Special Int.: Preventive Dentistry and Periodontology.

LEONARD, Herman Burr, Prof. of Math., Univ. of Ariz., Tucson, Ariz. **MECHANICS.**

LEONARD, Mortimer D., Entomologist, Julius Hyman and Co., Denver, Colo. **ENTOMOLOGY.**

LEONARD, Nelson, Univ. of Ill., Urbana, Ill. **ORGANIC CHEMISTRY.**

LEONARD, Samuel Leeson, Assoc. Prof., Dept. of Zool., Cornell Univ., Ithaca, N. Y. **ENDOCRINOLOGY.**

LEONARD, Warren H., Prof. of Agronomy, Colo. A. and M. Coll., Agronomist, Colo. Agri. Exptl. Sta., Fort Collins, Colo. **AGRONOMY (FIELD CROPS), PLANT GENETICS (BARLEY).** b. New Sharon, Iowa, July 5, 1900. s. Edward James and Zilla (Miller) L. Edn.: B.Sc., Colo. A. and M. Coll., 1926; M.Sc., Univ. of Nebr., 1930; Ph.D., Univ. of Minn., 1940. m. Editha Todd June 4, 1931. c.: Kay. Exp.: Asst. Exten. Agronomist, Colo. A. and M. Coll., Fort Collins, Colo., 1926-27; Asst. Editor of Publications, *ibid.*, 1928; Grad. Asst. in Agron. Univ. of Nebr., Lincoln, Nebr., 1928-29; Asst. Prof. of Agronomy, Colo. A. and M. Coll., 1929-34; Asst. Agronomist, Colo. Agri. Exptl. Sta., Fort Collins, Colo., 1929-34; Assoc. Prof. of Agronomy, Colo. A. and M. Coll., 1934-43; Assoc. Agronomist, Colo. Agri. Exptl. Sta., Fort Collins, Colo., 1934-43; Prof. of Agronomy, Colo. A. and M. Coll., 1943—; Agronomist, Colo. Agri. Exptl. Sta., Fort Collins, Colo., 1943—. Mem.: Amer. Soc. Agronomy; Fellow, A.A.A.S.; Amer. Genetics Assn.; Amer. Stat. Assn.; Amer. Sugar Beet Technologists; Bot. Soc. Amer.; Ecological Soc. Amer.; Biometrics Soc.; Genetics Soc. Japan; Genetics Soc. Amer.; Soc. for Study of Evolution; Sigma Chi; Sigma Xi; Phi Kappa Phi. Author: co-author: Principles of Field Crop Production, 1949; author, Gen. Genetics Handbook, 1948. Contrb. to: Agronomy Jour.; Genetics. War Record: Ist Lt., Cap., Major, CAC, Aus. Chf. Agri. Div., Natural Resources Section, Gen. Headquarters, Supreme Commander for the Allied Powers,

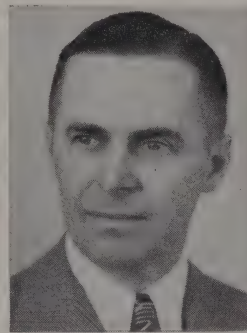
Tokyo, Japan, Oct. 2, 1945-46. Decorated Legion of Merit by Gen. Douglas MacArthur, July 22, 1946. Gen. Int.: Chief, Agri. Div., Natural Resources Section, Gen. Headquarters, Supreme Commander for the Allied Powers, Tokyo, Japan, June 17, 1948-Sept. 12, 1949. Dept. of Army "Commendation for Meritorious Civilian Service" for Service, from July 1, 1948-Aug. 18, 1949 in Japan. Ministry of Agri. and Forestry, Japanese Gov., Certificate of Appreciation for Service to Japanese Agri., Aug. 12, 1949. Special Inst.: Corn Improvement, Barley Genetics, Applied Statistics, Japanese Agriculture.

LEONHARD, Fred D. **MATHEMATICS.**

LEOPOLD, Eugene Joseph, Asst. Visitory Physician, Johns Hopkins Hosp., 200 Lafayette Ave., Baltimore, Md. **INTERNAL MEDICINE, DIABETES.**

LE PAGE, Clifford Blondel, Asst. Secy., The Amer. Soc. Mech. Engrs., 29 W. 39th St., N. Y., N. Y. **PHYSICAL SCIENCE, ENGINEERING.**

LEREAS, Harold J., Lectr., Dept. Biol., Pacific Luth. Coll., Box 705, Parkland, Wash. **BIOLOGY.**



b. Dec. 30, 1908, Barrett, Minn. s. John J. and Nelline (Vik) L. Edn.: B.A., Luth. Coll., 1930; Grad., Northwest Univ., 1931; M.S., 1932, Ph.D., 1935, D.D.S., 1946, Univ. of Mich. m. Helen Catherine Stein of Ann Arbor, Mich., Nov. 1, 1935. s. Mr. and Mrs. Albert C. Stein. c.: Solveigh Catherine; Judith Helen; John Albert. Exp.: Asst. Zool., Cranbrook Inst. of Sci., Bloomfield Hills, Mich., 1934-35; Prof. of Biol., Pacific Luth. Coll., Parkland, Wash., 1935-42; Prof. of Biol., Luth. Coll., Decorah, Ia., 1942-43; Dental Student, Univ. of Mich., 1943-46; Dentist, Ann Arbor, Mich., 1946; Lectr. in Biol. (Part-time), Pacific Luth. Coll., 1947—; Dentist, Parkland, Wash., 1947—. Mem.: A.S.A.S.; Sigma Xi; A.S.M.; Pacific Northwest Bird and Mammal Soc.; Amer. Dental Soc.; Kiwanis; Amer. Legion. Contrb. to: Jour. of Mammalol. Ph.D. Dissertation: Variations in *Peromyscus maniculatus osgoodi* from the Uinta Mountains, Utah. War Record: W. W. II Vet. Hobbies: Camping; Gardening. Listed in: A.M.S.; Amer. Dental Assn.; Who's Who on the Pacific Coast.

LERNER, I. Michael, Assoc. Prof. Poultry Husbandry, Univ. of Calif., Berkeley, Calif. **GENETICS.**

LESER, Tadeusz, Asst. Prof. of Math., Univ. of Ky., Lexington, Ky. **APPLIED MATHEMATICS.** b. Lwow, Poland, Dec. 14, 1908. s. Zygmunt and Emilia (Perman) L. Edn.: M.E., Warsaw Polytechnic, Warsaw, Poland, 1939; Ph.D., Imperial Colleges of Sci., Univ. of London, 1944. m. Violet Grace Batten, Sept., 1946. Exp.: Asst. Manager, Polish Army Repair Workshop, Krakow, Poland, 1931-34; Rsch. Engr., Petroleum Warfare Dept., London, England, 1942-46; Rsch. Engr., Industrial Rsch. Co., *ibid.*, 1947; Assoc. Prof. of Math., Emory and Henry Coll., Emory, Va., 1947-48; Asst. Prof. of Math., Univ. of Ky., Lexington, Ky., 1948—. Mem.: Institution of Mech. Engr.; Math. Assn. of Amer. Contrb. to: Math. Reviews; Review on Elasticity and Fluid Dynamics.

LESLEY, James Wyvill, Assoc. Geneticist, Univ. of Calif. Citrus Expt. Sta., Riverside, Calif. **GENETICS.**

LESLIE, William Russell, Supt., Dominion Expt. Sta., Morden, Manitoba, Can. **HORTICULTURE.**

LE SOURD, Homer Williamson, retired, 29 Kirkland St., Cambridge, Mass. **PHYSICS, EDUCATION.**

LESSARD, Maurice J., Owner and Dir., Rutherglen Home for Mentally Retarded Children, Rt. 1, Longview, Wash. **CLINICAL PSYCHOLOGY.** b. September 21, 1918.



Nashua, N. H. s. Joseph and Corana (Boillard) L. Edn.: B.S., Univ. of N. Dak., 1946; Ph.D., ibid., 1949. m. Mary Kearney, July 13, 1945. d. R. E. and Gertrude Kearney, Devils Lake, N. Dak. c.: Patricia Ann. Exp.: Supt., Pub. Schls., Bowesmont, N. Dak., 1946-47; Dir., Psychol. Serv., Univ. of Portland, 1949-52; Owner and Dir., Rutherglen Home for Mentally Retarded Children, Longview, Wash., 1953—. Mem.: Phi Delta Kappa; A.A.A.S.; Amer. Psychol. Assn.; West. Psychol. Assn.; A.A.U.P. Ph.D. Dissertation: Factor Analysis of Fifteen Motor Tests. Travel: U. S.; Canada. Hobby: Gardening. Listed in: Yearbook of Amer. Psychol. Assn.

LESTER, Horace H., Physicist and Asst. Dir., Watertown Arsenal Lab., Watertown, Mass. **PHYSICAL METALLURGY.**

LESTER, Oliver Clarence, Prof. of Physics, Dean Grad. Schl., and Vice-Pres. Emer., Univ. of Colo., 1061 11th St., Boulder, Colo. **RADIOACTIVITY.**

LESTER, W. Ronald, Pittsburgh Corning Corp., Sedalia, Mo. **CERAMICS.**

LETNER, Harold R., Rsch. Physicist, Mellon Inst., 4400 Fifth Ave., Pittsburgh, Pa. **PHYSICS.**

LEUALLEN, Elliott Emerson, Dean, Coll. of Pharmacy, Columbia Univ., 115 W. 68th St., N. Y. 23, N. Y. **PHARMACY.** b. Cape May Court House, N. J., Mar. 18, 1914. s. Samuel and Nellie (Earley) L. Edn.: B.Sc., Philadelphia Coll. of Pharm. and Sci., 1935; M.Sc., ibid., 1938; D.Sc., ibid., 1947. m. Dorothy Duffield, Sept. 9, 1939. c. Beverly Ann; John Dennis. Exp.: Instr. in Pharmacy, Amer. Univ. of Beirut, Lebanon, 1935-37; Asst. Instr., Asst. Prof. of Pharmaceutical Chem., Philadelphia Coll. of Pharm. and Sci., 1937-48; Prof. of Pharm., Columbia Univ. Coll. of Pharmacy, 1948—; Assoc. Dean, ibid., 1951-52; Dean, ibid., 1952—. Mem.: A.A.A.S.; Amer. Pharm. Assn.; Amer. Chem. Soc.; N. Y. Acad. Sci.; Amer. Soc. Hospital Pharmacists; Amer. Coll. Apothecaries; N. Y. State Pharmaceutical Assn.; Kappa Psi; Rho Pi Phi; Alpha Zeta Omega; Delta Sigma Theta; Sigma Tau Epsilon. Contrb. to: Jour. Amer. Pharm. Assn.; Amer. Professional Pharmacist; Pharm. Internat.; Amer. Jour. Pharmaceutical Edn. Special Int.: Pharmaceutical Formulation, Rsch. and Development.

LEUSCHNER, Armin Otto, 1816 Scenic Ave., Berkeley 9, Calif.

LEVA, Max Consulting Chem. Engr., 3921 Cloverlea St., Pittsburgh 27, Pa. **CHEMICAL ENGINEERING.**



FLUID FLOW, FLUIDIZATION, HEAT TRANSFER, CONTACT CATALYSIS, GAS ABSORPTION, TOWER PACKINGS. b. Ruchheim, Germany, Dec. 10, 1913. s. Joseph and Flora (Waldbott) L. Edn.: B.S., Univ. of Cincinnati, 1941; M.S., Carnegie Inst. of Tech., 1947. m. Irma Bass, Mar. 8, 1941. c.: Nancy Joan; Joseph Leon; Maxine Flora. Exp.: Rsch. Chemist, Hilton Davis Chem. Co., Cincinnati, Ohio, 1935-39; Chem. Engr., Vulcan Copper and Supply Co., Cincinnati, Ohio, 1940-42; Chem. Design Engr.,

Blaw Knox Co., Blawnox, Pa., 1942-43; Rsch. Project Leader in Chem. Engrng., U. S. Bur. of Mines, Pittsburgh, Pa., 1944-49; Consulting Chem. Engr., Pittsburgh, Pa., 1949—. Mem.: Amer. Chem. Soc.; Amer. Inst. of Chem. Engrs.; Sigma Xi. Author: Tower Packings and Packed Tower Design, 1951; Fluid Flow Through Packed and Fluidized Systems, 1951. Contrb. to: Indus. and Engrng. Chem.; Chem. Engrng. Progress; Chem. Engrng.; Trans. A.S.M.E.; Chimie et Industrie.

LeVEEN, Harry Henry, Assoc. Prof. of Biol., Rsch. Assoc., N. Mex. Milit. Inst., Roswell, N. Mex. **EXPERIMENTAL MEDICINE AND SURGERY.** b. Woodhaven, N. Y., Aug. 10, 1914. s. Edward Philip and Anna (Slaburky) L. Edn.: B.S., Princeton Univ., 1936; M.D., N. Y. Univ., 1940; M.S., Univ. of Chicago, 1947. m. Jeanette L. Rubricus, Oct. 12, 1945. c.: Robert Fredrick; Eric Gifford. Exp.: Instr. of Surgery, Univ. of Chicago, Chicago, Ill., 1945-46; Instr., N. Y. Univ., Med. Coll., N. Y. C., 1947-50; Assoc. Prof., Loyola Univ., Chicago, Ill., 1950-52; Assoc. Prof., N. Mex. Milit. Inst., Roswell, N. Mex., 1952—. Mem.: N. Y. Acad. of Med.; Soc. for Exptl. Biol. and Med.; Harvey Soc.; A.A.A.S.; Sigma Xi; N. Y. Acad. of Sci. Contrb. to: Various Med. Jour. Special Int.: Surgery; Exptl. Surgery; Physiol. and Nutrition.

LeVEQUE, Norma, Asst. Prof. of Biol., Univ. of Colo., Boulder, Colo. **BIOLOGY.**

LEVERENZ, H. W., RCA Labs., Princeton, N. J. **IMMUNIZING** (Contributions in Phosphor Chemistry).

LEVERTON, Ruth Mandeville, Assoc. Prof. Human Nutrition Rsch., Univ. of Nebr., Lincoln, Nebr. **NUTRITION.**

LeVESCONTE, Amy Marie, Prof. of Chem., Flora Macdonald Coll., Red Springs, N. C. **CHEMISTRY.**



b. Prior Lake, Minn., Apr. 24, 1898. d. John and Lillie (Gibbs) L. Edn.: B.A., Macalester Coll., 1919; M.S., Minn., Univ., 1924; Ph.D., Iowa State Coll., 1928. Exp.: Tchng., H. S., Minn., 1919-24; Instr. in Chem., Iowa State Coll., Ames, Iowa, 1928-30; Prof. of Chem., Mary Hardin Baylor Coll., 1930-51; Prof. of Chem., Flora Macdonald Coll., Red Springs, North Carolina, 1951—. Member: Sigma Xi; Sigma Delta Epsilon; Iota Sigma Pi; Amer. Chem. Soc.; A.A.A.S.; Natl. Sci. Tchrs. Assn.; A.A.U.W. Author: Introductory Chem. with Household Applications, 1933; Lab. Exercises to Accompany, with N. M. Naylor, 1933. Contrb. to: Cereal Chem.; Jour. of Chem. Edn. Special Int.: Tchng. of Chem. as Applied to Home Ec.

LEVIN, Morton Loeb, Dir., Cancer Control, N. Y. State Dept. of Health, 18 Dove St., Albany, N. Y. **PUBLIC HEALTH.**

LEVINE, Max, Prof. of Bacteriol., Iowa State Coll., Ames, Iowa. **BACTERIOLOGY.**

LEVINE, Michael, Biologist, Montefiore Hosp., Gunn Hill Rd., N. Y., N. Y. **CANCER RESEARCH.**

LEVINE, Samuel Albert, Physician, Peter Bent Brigham Hosp. and Asst. Prof. of Med., Harvard Med. Schl., 270 Commonwealth Ave., Boston, Mass. **CARDIOLOGY.**

LEVINE, Samuel Z., Prof. of Pediatrics, Med. Coll., Cornell Univ., 211 Central Park W., N. Y., N. Y. **PEDIATRICS.**

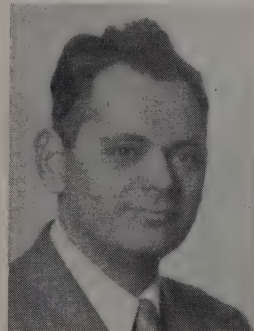
LEVINE, Victor E., Prof. of Biol. Chem. and Nutrition, Schl. of Med., Creighton Univ., Omaha, Nebr. **BIOLOGICAL CHEMISTRY, NUTRITION.**

LEVINE, Philip, Dir., Biologic Div., Ortho Rsch. Foundation, Raritan, N. J. IMMUNOLOGY, HUMAN GENETICS. b. Russia, Aug. 10, 1900. s. Morris and Faye (Zirulick) L. Edn.: B.S., C. C. N. Y., 1919; M.D., Cornell Univ. Med. Schl., 1923; M.A., ibid., 1926; F. A. C. P., ibid., 1943. m. Hilda Perlmutter of Newark, N. J., May 1, 1938. d. Max and Ella Perlmutter. c.: Phyllis Ann; Mark Armin; Paul Karl; Victor Raphael. Exp.: Asst., later Assoc. Mem., Rockefeller Inst. Med. Rsch., 1925-32; Instr., Univ. of Wis. Med. Schl., 1932-35; Dir. of Serology and Bacteriol., Blood Bank at Newark Bethelhem Israel Hospital, 1935-44; Director of Biologic Division, Ortho Research Foundation, Raritan, New Jersey, 1944—; Hon. Pos.: Consultant, Army Grad. Med. Center; Consultant at Numerous Hosps. in N. Y. Area; Advisory Ed. Bd. of Jour. of Dermatology and Amer. Jour. of Human Genetics; Recipient of Lasker, Mead Johnson and Ward Burdick Awards; Passano Foundation Award. Mem.: Sigma Xi; Harvey Soc.; Amer. Assn. of Nat.; Amer. Soc. of Human Gen.; Amer. Coll. of Physicians; Amer. Coll. of Allergy; A.A.A.S. Author: Over 150 Original Scientific Papers on Blood Groups, Transfusions, the Rh Factor, Soluble Substance of Bacteria; Discovered Cause of Hemolytic Disease of Newborn; Discovered Blood Factor, Later Known as "Rh", and also the Blood Factors "Hr" Jay and "Cellano." War Record: Consult. to Army Grad. Med. Schl. and to Comm. on Blood Procurement of the Natl. Rsch. Coun. Travel: Europe; Puerto Rico. Hobbies: Lit.; Classical Music. Listed in: Who's Who in Amer.; Internatl. World Who's Who; Who Knows—and What; A.M.S. Special Int.: Pediatric Neurol. and Psychiatry. Cerebrospinal Fluid.



LEVINGER, David, Vice-Pres. and Works Mgr., Western Electric Co., Hawthorne Sta., Chicago, Ill.

LEVINSON, Boris M., Asst. Prof., Schl. of Edn. and Community Admin., Yeshiva Univ., 186 St. and Amsterdam Ave., N. Y. 33, N. Y. CLINICAL PSYCHOLOGY. b. Kalvarijah, Lithuania, July 1, 1907. s. Moses and Rose (Lev) L. Edn.: B.S., Coll. City of N. Y., 1937; M.S., ibid., 1938; Ph.D., N. Y. Univ., 1947. m. Ruth Berkowitz, June 16, 1934. c.: Martin; David. Exp.: Psychologist and later Chf. Psychologist, Adult Guidance Service, Bd. of Edn., N. Y. C., 1937-40; Consulting Psychologist 1938—; Clinical Psychologist, Veterans Rehabilitation and Mental Hygiene Clinics, Jewish Hosp. of Brooklyn, 1944-48; Supvg. Clinical Psychologist, Psychol. Clinic, Yeshiva Univ., 1951—; Asst. Prof., ibid., 1952; Lectr., City Coll., 1947—; Lectr., Hunter Coll., 1949—. Hon. Pos.: Mem., Editorial Bd., Newsletter of the Grad. Div., Yeshiva Univ. Mem.: Amer. Psychol. Assoc. Eastern Psychol. Assn.; A.A.A.S.; N. Y. State Psychol. Assn.; Soc. for Projective Techniques; Phi Delta Kappa. Contbr. to: Jewish Parents Mag. Special Int.: Psychometric Patterns; Projective Techniques; Psychotherapy; Treatment of Exceptional Children.



LEVINSON, Abraham, Prof. of Pediatrics, Northwestern Univ., Med. Schl., Chicago, Ill. PEDIATRIC NEUROLOGY. b. Russia, Aug. 25, 1888. s. Yehudah and Rebecca (Krueger) L. Edn.: M.D., Univ. of Ill., 1911; B.S., Univ. of Chicago, 1917; Postgraduate work in Vienna and Berlin, 1914-15, 23, 28. m. Ida Perlstein, 1912. c.: Myrtle; Judith

and Julian (dec.). Exp.: Assoc. in Pediatrics, Northwestern Univ., Med. Schl., Chicago, Ill., 1917-36; Asst. Prof., ibid., 1936-42; Assoc. Prof., ibid., 1942-50; Prof., ibid., 1950—; Prof. Cook Co. Grad. Schl. of Med., ibid., 1934—; Hd. Dept., ibid., 1947; Assoc. Att. Phys., Michael Reese Hosp., ibid., 1916-23; Att. Phys., ibid., 1923-36; Sr. Att. Phys., ibid., 1936—; Chf. Ped., Dept., Mt. Sinai, 1919-42; Sr. Att., ibid., 1942—; Att. Phys., Children's Div., Cook Co. Hosp., ibid., 1920—; Chf. of Staff, ibid., 1947—. Hon. Pos.: Pres., Chicago Pediatric Soc., 1936; Chmn., Com. on Mental Hygiene, Ill. State Med. Soc. Mem.: A.M.A.; Assn. Med. Hist.; Inst. of Med.; Acad. of Ped.; Ill. Med. Soc.; Chicago Med. Soc. Chicago Ped. Soc.; Phi Lambda Kappa; Phi Delta Epsilon; Sigma Xi. Author: Cerebrospinal Fluid in Health and Disease, 1919; Tobis and His Work, 1924; Examination of Children, 1924; Pediatric Nursing, 1925; Pioneers of Pediatrics, 1936; The Mentally Retarded Child, 1952. Contbr. to: Jour. A.M.A.; Amer. Jour. of Diseases of Children; Jour. of Pediatrics; Amer. Jour. of Mental Deficiency; Annals of Med. Hist.; Med. Life; Amer. Jour. of Med. Sci.; Jour. Infectious Diseases; Amer. Jour. of Physiol.; Biochem. Special Int.: Pediatric Neurol. and Psychiatry. Cerebrospinal Fluid.

LEVINSON, Horace C., Consultant, Kennebunk, Maine. MATHEMATICS AND OPERATIONS RESEARCH. b. Chicago, Ill., June 30, 1895. s. Salmon O. and Helen Bartlett (Haire) L. Edn.: B.A., Yale Univ., 1917; Ph.D., Univ. of Chicago, 1922; Dr., Univ. of Paris, 1923. m. Alma Wells, June 23, 1921. c.: Alma Prescott and Ruth B. Exp.: Instr. Dept. of Math., Ohio State Univ., Columbus, Ohio, 1923; Dir. of Rsch., Treas. and Dir., Bernard Hewitt and Co., 1924-31; Vice-President, Treas. and Dir., Rural Prog., Inc., 1934-38; Dir. of Rsch., Treas. and Dir., L. Bamberger and Co., Newark, N. J., 1939-46; Chmn., Comm. on Operations Rsch. of Natl. Rsch. Council, 1949—; Chmn. Bd., Tele-Rama, Inc., New York, N. Y., 1949—; Consultant, Arthur D. Little Inc., Cambridge, Mass., 1952—. Mem.: Amer. Math. Soc. Sigma Xi; Fellow, Operations Rsch. Soc. of Amer. Author: The Law of Gravitation in Relativity with E. B. Zeisler, 1931; Your Chance to Win, 1939; The Sci. of Chance, 1950. Special Int.: Relativity; Operations Rsch.



LEVINSON, Norman, Prof., Math. Dept., Mass. Inst. of Tech., Cambridge, Mass. MATHEMATICS.

LEVINSON, Samuel A., Prof. of Pathol., Univ. of Ill., 808 S. Wood St., Chicago, Ill. PATHOLOGY.

LEVITT, Abel, Assoc. Prof. of Med. and Therapeutics, Med. Schl., Univ. of Buffalo, 333 Linwood Ave., Buffalo, N. Y. INTERNAL MEDICINE.

LEVITT, Jacob, Asst. Prof. of Botany, Univ. of Mo., Columbia, Mo. PLANT PHYSIOLOGY.

LEVORSEN, Arville Irving, Prof. and Exec. Hd., Dept. of Geol., Stanford Univ., Stanford, Calif. PETROLEUM GEOLOGY.

LEVY, Fritz, Pathologist, Veterans Admin. Hosp., Huntington, W. Va. PATHOLOGY.

LEVY, Robert Louis, Prof. of Clinical Med., Coll. of Physicians and Surgeons, Columbia Univ., N. Y., N. Y. CARDIOLOGY.

LEWIS, Bernard, U. S. Bureau of Mines, Pittsburgh, Pa. COMBUSTION.

LEWIS, Beverley West, Physical Chemist, U. S. Bureau of Mines, Eastern Expt. Station, P. O. Box 356, College Park, Md. PHYSICAL CHEMISTRY. b. Norfolk, Va., June 23, 1921. s. Judd W., S. and Adelaide (Sykes) L. Edn.: B.S., Coll. of Wil-

ham and Mary, 1946; M.S., Univ. of Md., 1951. m. Gladys Toxey, June 17, 1949. Exp.: Chemist, Johns Hopkins Univ., 1943; Rsch. Asst., Metallurgical Lab., Univ. of Chicago, Atomic Energy Project, 1945-46; Instr. of Chem., Norfolk Div., Coll. of William and Mary and Va. Poly. Inst., 1947-48; Rsch. Fellow, Univ. of Md., 1949-50; Phys. Chemist, U. S. Bureau of Mines, Eastern Expt. Station, College Park, Md., 1951—. Mem.: Amer. Chem. Soc.; Phi Beta Kappa. Contrb. to: Jour. Phys. Chem. Special Int.: Reaction Kinetics of Solutions; Quantitative Spectrography.

LEWIS, Brother George, Vice-Pres. and Prof. of Math., LaSalle Coll., Logan Sta., Philadelphia, Pa. MATHEMATICS.

LEWIS, David, Asst. Prof., Dept. of Chem., City Coll. of N. Y., Convent Ave. and 139th St., N. Y. N. Y. ANALYTICAL, PHYSICAL CHEMISTRY.

LEWIS, Evan J., Physicist, Corning Glassworks, Corning, N. Y. PHYSICS.

LEWIS, George Truman, Chf., Div. Biochem. Med. Rsch. Foundation of Dade Co., Miami, Fla. BIOCHEMISTRY. b. Bolton Landing, N. Y., July 1, 1901. s. Charles and Clara (Bowen) L. Edn.: B.S., Middlebury Coll., 1922; Ph.D., Univ. of Mich., 1927. m. Phyllis Wright of Crown Point, N. Y., Sept. 12, 1923. d. Mark and Frances Wright. c.: Elizabeth; Alice; George. Exp.: Instr. in Physiol. Chem., Univ. of Mich., 1925-27; Asst. Prof. of Biochem., Emory Univ., 1927-34; Assoc. Prof., 1935-49; Prof., 1949—; Chmn., Dept., Schl. of Med., 1941-49; Chmn., Dept., Schl. of Dent., 1950-51; Chf., Div. Biochem. Med. Rsch. Foundation of Dade Co., Miami, Fla., 1951—. Hon. Pos.: Fellow of the Commonwealth Fund, 1939-40; Pres., Emory Chapt., Sigma Xi, 1951. Mem.: A.C.S.; Amer. Soc. Biol. Chem.; Amer. Assn. for Cancer Rsch.; Amer. Pub. Health Assn.; A.A.A.S.; Kappa Delta Rho; Phi Beta Kappa; Sigma Xi; Phi Lambda Upsilon; Lions Club. Author: A Lab. Manual of Biochem. with Evangeline Papageorge, 1939. Contrb. to: Jour. Biol. Chem.; Proc. Soc. Exptl. Biol. Med. Ph.D. Dissertation: The Effect of Sulfur and of Certain Compounds Containing Sulfur on the Growth of the Young White Rat. Listed in: A.M.S.; Who's Who in Meth.; Amer. Young Men. Special Int.: Nutrition; Clinical Chem.

LEWIS, Gladys Kinsman, 401 S. Lafayette, Denver, Colo. CHEMISTRY.

LEWIS, Howard Bishop, John Jacob Abel Univ. Prof. of Biol. Chem., Dept. of Biol. Chem., Univ. of Mich. Med. Schl., Ann Arbor, Mich. BIOLOGICAL CHEMISTRY. b. Southington, Conn., Nov. 8, 1887. s. Frederick Austin and Charlotte Rachel (Parmelee) L. Edn.: A.B., Yale Univ., 1908; Ph.D., ibid., 1913. m. Mildred Lois Eaton, June 15, 1915. c.: Charlotte Barber and Elisabeth Parmelee. Exp.: Asst. in Physiol. Chem., Yale Univ., New Haven, Conn., 1911-13; Instr., Univ. of Pa., Philadelphia, Pa., 1913-15; Assoc., Asst. and Assoc. Prof., Univ. of Ill., Urbana, Ill., 1915-22; Prof. and Chmn. Biol. Chem., Univ. of Mich., Ann Arbor, Mich., 1922; John Jacob Abel Univ. Prof., ibid., 1947—. Hon. Pos.: Natl. Bd. of Med. Examiners, 1935-50; Coun. on Foods and Nutrition, Amer. Med. Assn., 1936—; Ed. Bd., Soc. Exptl. Biol. Med., 1927-38; Jour. Biol. Chem., 1938—; Physiol. Rev., 1935-39; Chem. Rev., 1938-40; Jour. Nutrition, 1935-39, 1940-45; Chmn., Mich. Nutrition Coun., 1948-50. Mem.: Natl. Acad. of Sci.; Amer. Chem. Soc.; Fellow, A.A.A.S.; Amer. Soc. of Biol. Chem.; Amer. Inst. of Nutrition; Amer. Physiol. Soc.; Soc. of Exptl. Biol. and Med.; Amer. Pharm. Assn.; N. Y. Acad. of Sci.; Alpha Omega Alpha; Phi Beta Kappa; Phi Kappa Phi; Phi Lambda Upsilon; Phi Sigma; Rho Chi; Sigma Xi; Alpha Chi Sigma. Contrb. to: Jour. Biol. Chem.; Jour. Amer. Chem. Soc.; Jour. Nutrition; Amer. Jour. Physiol.; Proc. Soc. of Exptl. Biol. and Med. Special Int.: Biol. Chem.; Biol. Conjugation; Natural Intoxicants.

LEWIS, Isabel Martin, Astronomer, U. S. Naval Observatory, 6515 16th St., N. W., Washington, D. C. ASTRONOMY.

LEWIS, Ivey Foreman, Miller Prof. of Biol. and Dean, Univ. of Va., Charlottesville, Va. BOTANY.

LEWIS, James Clement, Biochemist, Western Regional Rsch. Lab., U. S. D. A., Albany, Calif. MICROBIOL BIOCHEMISTRY.

LEWIS, Nolan D. C., Prof. of Psychiatry, Coll. of Physicians and Surgeons, Columbia Univ., N. Y., N. Y. PSYCHIATRY.

LEWIS, Ralph William, Assoc. Prof., Mich. State Coll., East Lansing, Mich. BIOLOGY.

LEWIS, Robert Strong, Prof. of Mining, Univ. of Utah, Salt Lake City, Utah. MINING ENGINEERING.

LEWIS, Sam, Sam Lewis and Associates, Chicago, Ill. AIR CONDITIONING AND VENTILATION.

LEWIS, Walter Wallace, Prof. of Elec. Engrng., Union Coll., 1675 Wendell Ave., Schenectady 8, N. Y. ELECTRICAL ENGINEERING. b. Oct. 4, 1881, Denver, Colo. s. John and Ada (Wigham) L. Edn.: B.S., Univ. of Colo., 1907; E.E., ibid., 1923; M.S., Union Coll., 1923; Sc.D., Univ. of Colo., 1936. m. Olive Carpenter of Stephentown, N. Y., June 14, 1924. d. George H. and Mary Carpenter. c.: Eleanor R. and Caroline O. Exp.: Testing Dept., Gen. Elec. Co., 1907-09; Transformer Dept., ibid., 1909-13; Asst. to Works, Elec. Engr., ibid., 1914-16; Power and Mining Engrng. Dept., ibid., 1917-20; Lighting Engrng. Dept., ibid., 1920-21; Central Sta. Engrng. Dept., ibid., 1922-46; Prof. of Elec. Engrng., Union Coll., 1946—; In Chg. of Lightning Rsch. on Transmission Lines, 1925-46, Gen. Elec. Co. Hon. Pos.: Chmn., A.S.A. Com. on Code for Protection Against Lightning; Fellow, Amer. Inst. of Elec. Engrs. Mem.: Internatl. Conf. on Large High Tension Elec. Systems; Tau Beta Pi; Sigma Xi; Cambrian Male Chorus. Author: Transmission Line Engrng., 1928; Protection of Transmission Systems Against Lightning, 1950; About 60 Papers in Tech. Jours. Contrb. to: Elec. Engrng.; Elec. World; Elec. Light and Power; Gen. Elec. Rev. War Record: 1st Lt., Ordnance Dept., U. S. Army, 1918. Travel: Japan; China; England; France; Italy; Germany; Belgium; Brazil; Argentina. Gen. Int.: Lightning Rsch. on Transmission Lines, 1925-46; Influenced Design of Transmission Lines and Apparatus Connected to Them. Hobbies: Choral Singing; Genealogy; Photography. Listed in: Who's Who in Engrng.; Who's Who in the East; Who Knows—What. Special Int.: Effects of Lightning on Transmission Systems and Buildings; Grounding of Systems; Protection of Systems and Buildings.

LEWIS, Warren Harmon, Mem., The Wistar Inst. of Anatomy and Biol., Philadelphia 4, Pa. ANATOMY, EMBRYOLOGY, CYTOLOGY, TISSUE CULTURE. b. Suffield, Conn., June 17, 1870. s. John and Adelaide (Harmon) L. Edn.: B.S., Univ. of Mich., 1894; M.D., The Johns Hopkins Univ., 1900. m. Margaret A. Reed, May 23, 1910. c.: Margaret Warren R.; Jessica. Exp.: Asst. in Zool., Univ. of Mich., Ann Arbor, Mich., 1894-96; Asst., Instr., Assoc., Asst. Prof. of Anatomy, 1900-13; Prof. of Physiological Anatomy, Johns Hopkins Med. Schl., Baltimore, Md., 1913-40; Research. Assoc., Carnegie Institute of Washington, 1919-40; Mem., The Wistar Inst., Philadelphia, Pa., 1940—. Mem.: National Acad. of Sci.; Amer. Phil. Soc.; Amer. Assn. Anatomists; Amer. Physiol. Soc.; Internatl. Soc. for Cell Biol.; A.A.A.S., Fellow; Royal Microscopical Soc.; Soc. der Med. de Gand; Phi Beta Kappa; Acad. Natl. dei Lincei, Roma. Hon. Pos.: Pres., Amer. Assn. of Anatomists, 1934-36; Pres., Mt. Desert Is. Biol. Lab., 1933-37; Pres., Internal Soc. for Exptl. Cytol., 1938-48. Author: Gray's Anatomy, 1918-42; Gen. Cytol.; The Structure of Protoplasm; Human Embryol. Contrb. to: Amer. Jour. of Anatomy; Anatomy Record; Jour. of Exptl. Zool.; Biol. Bull.;



Cancer Rsch.; Sci. Gen. Int.: Motion Pictures of Cells and Developing Eggs have had World Wide Distribution. Special Int.: Anatomy Embryol.; Cytol.; Cancer; Tissue Culture.

LEWIS, Warren Kendall, Mass. Inst. of Tech., Cambridge, Mass.

LEWIS, William Drayton, Prof. of Psychol., Southwestern La. Inst., Lafayette, La. PSYCHOLOGY. Kans. City, Mo., Aug. 26, 1901. s. George Vincent and Maysie (Badger) L. Edn.: A.B., Westminster Coll., Fulton, Mo., 1923; M.A., Univ. of Wis., 1925; Ph.D., Geo. Peabody Coll. for Tchrs., 1939. m. Margaret White of Wellsville, Mo., Aug. 12, 1926. d. Mr. and Mrs. B. T. White. c.: Mary Margaret. Exp.: Instr., Westminster Coll., 1923-24; Prin., Stuart Robinson Schl., 1925-29; Prof. of Psychol. and Philos., Ark. Coll., 1931-33; Prof. of Psychol., Murray S. T. C., Murray, Ky., 1939-46, Southwestern La. Inst., 1947—; Murray Naval Flight Prep. Schl., 1943-45. Mem.: Phi Delta Kappa; Kappa Delta Pi; Amer. Psychol. Assn.; A.A.A.S.; La. Edn. Assn. Contrb. to: Schl. and Soc.; Jour. of Genetic Psychol.; Jour. of Ednl Rsch.; Jour. of Experimental Edn.; Gifted Children. Ph. D. Dissertation: A Study of Superior Children in the Elem. Schl.

LI, Shu-t'ien, Chartered Civ. Engr., Ministry of Econ. Affairs, Certified Prof., Ministry of Edn., Republic of China; Acad. Coun., Natl. Acad. of Peiping; Chief Civil Engr., Booton Associates, Inc., N. Y. C.; 504 W. 112th St., N. Y. 25.



N. Y. TRANSPORTATION, STRUCTURAL, AND HYDRAULIC ENGINEERING; ENGINEERING MECHANICS, ENGINEERING HYDRAULICS, AND ENGINEERING ECONOMICS. b. Feb. 12, 1900, Changli, Hopei, China. s. Wan-Kwei and Chang Li. Edn.: B.S. in C.E., Natl. Pei-Yang Univ., 1923; Ph.D. in C.E., Cornell Univ., 1926. m. Tsu-hsün Lin-Li, 1919. c.: Ching-Chen; Shu-chen; Chi-chen; Hsiao-Keng; Tsu-Keng. Exp.: Tsing-Hua Grad. Fellow in Civ. Eng. to U. S.; Cornell Grad. Scholar in C.E., 1924-25; Cornell McGraw Fellow in C.E., 1925-26; Prof. of Trans. Eng., Natl. Pei-Yang Univ., 1927-28; Exec. Mem. and Chf. Sec.; N. China River Com., 1928-37; Pres., Natl. Tangshan Eng. Coll., 1930-32; Pres., Dir. of Eng. Rsch. Inst., Natl. Pei-Yang Eng. Coll., 1932-39; Exec. Mem. of Adm. Coun., Natl. Northwestern Assoc. Univ., 1937-38; Chmn., Adm. Coun. Natl. Northwestern Eng. Coll., 1938-39; First Pres., Natl. Sikang Inst. of Tech. and Agri., 1939-41; First Pres., Natl. Kwei-Chow Coll. of Agri. and Eng., 1941-42; Vice-Pres., Yellow River Com., 1943-47; Prof. Civil and Hyd. Eng. and Dean Coll. of Eng., Natl. Pei-Yang Univ., 1946-50; Present Position, 1953—, Past Pres.: Assn. of Chinese and Amer. Engrs.; Chinese Hydraulic Engineering Soc. Mem.: Natl. Acad. of Peiping; Amer. Soc. C.E.; Amer. Concrete Inst.; Dir., Chinese Soc. of Engrs.; Past 1st Vice-Pres., Chinese Soc. of Civil Engrs.; Dir., Chinese Mun. Eng. Soc.; Chinese Soil Mechanics Soc.; Mem., Internatl. Assn. for Hyd. Rsch.; Internatl. Assn. for Bridge and Struct. Engr.; Permanent Internatl. Assn. of Navigation Congresses, Pres., Chinese Section; Pres., Natl. Exec. Coun.; Phi Tau Phi; Mem., Phi Kappa Phi; Sigma Xi; Scientific Rsch., Soc. of Amer.; Rho Psi. Author: Great-Northern Port, 1930; Irrigation in Korea, 1930; Hydraulic Prob. of China, 2 Vols., 1936; Achievements in Tunnel Construction, 1950; Achievements in Bridge Engr., 1950; Achievements in Dam Bldg., 1950; The Evolution of Jet Propulsion, 1950; The Development of Rockets, 1950; The Progress of Helicopters and Airships, 1950; The Earliest Chinese Inventions and Discoveries, 1950; The Evolution of Gyroscope, 1950. Contrb. to: Four Papers; World Engr. Cong. Proceedings, Tokyo, 1929; Recipient of 1st Class

Hydraulic Decoration from Republic of China. Ph.D. Dissertation: Eng. Economics of Railroad Operation. War Record: Recipient of Victory Decoration after World War II from Republic of China for Distinguished Service in Wartime Conservancy. Travel: N. Amer.; Great Britain; Europe; Korea; Japan; Formosa. Listed in: World Biog.; Who's Who in the World; Biog. of China.

LI, Tau Chung-Heng, Lead Aero Elastic Engr., Box 5907, Dallas, Tex. ANALYSIS AND APPLIED MATHEMATICS. b. Pinkiang, China, July 20, 1905. s. Li, Kai-Fang and Lu, Mao-Chen. Edn.: B.A., Natl. Southeastern Univ., Nanking, China, 1927; Ph.D., Univ. of Munich, Ger., 1934. m. Dora Wen Fang Chang of Tientsin, China, Nov. 15, 1942. d. Po-Heng Chang. c.: Victor and Felix. Exp.: Instr., Natl. Tsing Hua Univ., Peking, 1934-36; Asst. Prof., Natl. Shantung Univ., Tsingtao, 1936-38; Assoc. Prof., Natl. Tung Chi Univ., Shanghai, 1938-40; Prof., Natl. Fuh Tan Univ., 1940-47, Chungking and Shanghai. Hon. Pos.: Chmn. of Dept. of Math., Natl. Shantung Univ., Tung-Chi Univ., Fuh Tan Univ.; Dean of the Coll. of Sci., Fuh Tan Univ. Mem.: Deutsche Mathematiker Vereinigung; The Amer. Math. Soc.; The Math. Assn. of Amer.; Ia. Acad. of Sci. Contrb. to: Acta Mathematica; Crelle's Jour.; Commentarii Mathematici. Ph.D. Dissertation: Die Stabilitätsfrage bei Differenzengleichungen. Travel: Italy; France; Germany; Switzerland; China; Philippine Islands; Java; Ceylon and Indochina. Listed in A.M.S.; World Biography. Special Int.: Aerodynamics and Non-linear Differential Equations.

LIANG, Shou Chu, Rsch. Chemist, Dominion Tar and Chem. Co., 3547 Allard St., Ville LaSalle, Quebec, Can. PHYSICAL CHEMISTRY. b. Peiping, China, May 14, 1920. s. Chingtung and Wenchiao (Lin) L. Edn.: B.S., Natl. Cent. Univ., China, 1942; M.A., Princeton Univ., 1946; Ph.D., ibid., 1947. m. Manna Woo, 1950. c.: Pitur. Exp.: Analytical Chemist in Chinese Factories, 1942-44; Rsch. Asst. in Chem., Princeton Univ., 1945-47; Postdoctoral Fellow, ibid., 1947-48; Rsch. Chemist, Merck & Co., Inc., 1948-49; Postdoctoral Rsch. Fellow, Natl. Rsch. Council, Ottawa, Can., 1949-51; Asst. Rsch. Officer II, ibid., 1951-53; Rsch. Chemist, Dominion Tar and Chem. Co., 1953—. Mem.: Amer. Chem. Soc.; A.A.A.S.; Sigma Xi. Contrb. to: Jour. Amer. Chem. Soc.; Jour. Chem. Phys.; Jour. Applied Phys.; Jour. Phys. Chem.; Rev. Scientific Instruments. Special Int.: Surface Chem.; Catalysis; Thermal Transpiration; Adsorption.

LIBBEY, Donald Smith, Supt., Hot Springs Natl. Park, 607 Reserve Ave., Hot Springs, Ark. GEOL.

OGY, VOLCANOLOGY, KARST PHENOMENA. b. La Plata, Mo., Dec. 27, 1892. s. Howard L. and Florence Emily (Smith) L. Edn.: B.A., Univ. of Mo., 1915; M.A., ibid., 1922. m. Marie Beiderlinden, Dec. 11, 1922. c.: Donald Linden. Exp.: Postal Clerk, Centralia, Mo., 1915-16; Jr. Accountant Finance Branch, Office Qtmstr. Gen., 1917-18; Sales Correspondent, Aluminum Co. of Amer., E. St. Louis, Mo., 1919-20; Sales Repr., Chance Co., Centralia, Mo., 1920-21; Instr. to Prof.

and Hd. Dept. of Geol., Drury Coll., 1922-32; Assoc. Park Naturalist, Crater Lake Natl. Park, 1932-33; Supvr. of Emergency Consn. Work, Natl. Park Service, 1933-36; Supt., Hot Springs, Glacier and Carlsbad Caverns Natl. Parks, Hot Springs, Ark., 1936—. Mem.: Geol. Soc. of Amer.; Amer. Geophys. Union; A.A.A.S.; Sigma Xi; Sigma Gamma Epsilon; Gamma Sigma Delta; Rotary Internatl. Author: Manual for Geol., 1926; Sao Paulo Coffee Regio, Brazil, 1927; Econ. Utilization of the Liano Estracado, 1928; Correlation of Mammalian Life and the Ice Age in Europe, 1929; Karst Formations of the Ozark Highland Regions of Mo., 1930; Carbonized Logs and Pumice Deposits of Crater Lake Natl. Park, 1932;



Cavern Formations Carlsbad Caverns Natl. Park, 1949. Special Int.: Ozark Highland of Mo., and Ark.; Cascade Mt. of Ore., Permian Basin in N. Mex. and W. Tex.

LIBBY, Willard F., Prof. of Chem., Inst. for Nuclear Studies, Univ. of Chicago, Chicago 37, Ill. **PHYSICAL CHEMISTRY; RADIO-CHEMISTRY.** b. Grand Valley, Colo., Dec. 17, 1908. s. Edward Ora and Eva May (Rivers) L. Edn.: B.S., Univ. of Calif., 1931; Ph.D., ibid., 1933. m. Leonor Hickey, Aug. 9, 1940. c.: Susan Charlotte; Janet Eva. Exp.: Instr., Asst. Prof., Assoc. Prof. of Chem., Univ. of Calif. 1933-45; Chemist, Div. of War Rsch., Columbia Univ., 1941-44; Chemist, Carbide and Carbon Chem. Corp., Columbia Univ., 1944-45; Prof. of Chem., Univ. of Chicago, 1945—. Mem.: Amer. Chem. Soc.; Amer. Phys. Soc.; A.A.A.S.; Natl. Acad. of Sci.; Phi Beta Kappa; Pi Mu Epsilon; Sigma Xi; Alpha Chi Sigma. Author: Radiocarbon Dating, 1952. Contr. to: Phys. Rev.; Jour. Chem. Phys.; etc. Gen. Int.: Guggenheim Memorial Foundation Fellow, 1941 and 1952; Rsch. Corp. Award, 1951; Mem., General Advisory Com., U. S. Atomic Energy Comm., 1950—. Special Int.: Physical and Radiochem.

LIBBY, Winthrop Charles, Prof. and Hd., Dept. of Agron., Univ. of Maine, Orono, Maine. **AGRONOMY.**

LICHTENBERG, Chester, Admr. Product Quality, General Electric Co., 4624 Tacoma Ave., Fort Wayne, Ind. **ENGINEERING.**

LIEB, Charles Christian, Hossack Prof. Emer. Pharmacol., Med. Schl., Columbia Univ., 1 West 72nd St., N. Y., N. Y. **PHARMACOLOGY.**

LIEBEN, Fritz, Public Health Rsch. Fellow, Mt. Sinai Hosp., N. Y. 25, N. Y. **AMINO ACID AND PROTEIN CHEMISTRY.**



b. Vienna, Austria, Feb. 25, 1890. s. Adolf and Mathilde (Schey) L. Edn.: Ph.D., Vienna Univ., 1918. m. Gerda Lieben. c.: Verena V. Laube; Joachim; Wolfgang. Exp.: Asst., Vienna Univ., Vienna, Austria, 1920; Lectr. in Biochem., ibid., 1925—; Prof., ibid., 1935-38; Rsch. Fellow, Wash. Univ., Schl. of Med., St. Louis, Mo., 1941-43; Lectr. in Biochem., Johns Hopkins Univ., Baltimore, Md., 1943-44; Consultant, of N. Y. Indus. Plant, 1945; Y. Indus. Plant, 1945; Public Health Rsch. Fellow, Mt. Sinai Hosp., N. Y. City, 1946—. Mem.: A.A.A.S.; Amer. Chem. Soc.; Amer. Soc. of European Chem.; N. Y. Acad. of Sci. Author: Hist. of Psychol. Chem., 1935; Conception About the Structure of Matter, 1952. Contr. to: Biochem. Zeitschrift; Monatshefte f. Chemie; Oesterr. Chem. Ztg.; Jour. of Biol. Chem.; Jour. of Mt. Sinai Hosp. Special Int.: Amino Acid and Protein Chem.

LIEBMANN, Alfred J., Pres., Schenley Rsch. Inst., 350 Fifth Ave., N. Y. 1, N. Y. **FERMENTOLOGY;**

DISTILLATION; ANTIBIOTICS. b. Zurich, Switzerland, Aug. 4, 1885. s. Albert and Mathilda (Gutmann) L. Edn.: B.A., Technische Hochschule, Zurich, Switzerland, 1904; Chem.E., Eidgen. Polytechnikum, 1907; Ph.D., Univ. Zurich, 1909. m. Edna Keller, 1916. Exp.: Rsch. Chemist, General Electric Rsch. Lab., Lynn, Mass. and Harrison, N. J., 1909-10; Chf. Chemist, Metallic Filament Works, Munich—Pasing, 1911; Chf. Chemist, Watt Lamp Works, Vienna, 1912; General Mgr., Oir. and Vice-Pres., Independent



General Mgr., Oir. and Vice-Pres., Independent

Lamp and Wire Co., Weehawken, N. J., 1912-20; Mgr., Elkon Works of General Electric Co., Weehawken, N. J., 1921-26; Industrial Consultant, ibid., 1926-33; Technical Dir. and Consultant, Schenley Industries, Inc., 1933—. Hon. Pos.: Mem., War Service Com., 1917-18; Mem., War Production Bd., Penicillin Producers Industry Advisory Com., 1943-45; Trustee, Knickerbocker Hosp., 1925-51. Mem.: Amer. Chem. Soc.; Electrochem. Soc.; Soc. Amer. Oil Chemist; Electron-Microscopic Soc.; N. Y. Acad. Sci.; Amer. Bacteriologists. Contr. to: Amer. Wine and Liquor Jour.; Jour. Amer. Ceramic Soc.; Jour. Assn. of Official Agril. Chemists; Indus. and Engrng. Chem.; Cincinnati Jour. Med.; Oil and Soap; Sci.; Jour. Amer. Chem. Soc.; etc. Special Int.: Penicillin; Streptomycin; Biol.

LIEBER, Lillian R., Prof. and Hd., Dept. of Math., Long Island Univ., 375 Pearl St., Brooklyn N. Y. **MATHEMATICS.**

LIEBERMAN, S., Columbia Univ., Med. Schl., N. Y., N. Y. **STEROID CHEMISTRY.**

LIEBOWITZ, Benjamin, Pres., Trubenizing Process Corp., 350 Fifth Ave., N. Y., N. Y. **PHYSICS.**

LIERLE Dean McAllister, Prof. and Hd., Dept. of Otolaryngology and Oral Surgery, State Univ. of Iowa Hosp., Iowa City, Iowa. **OTOLARYNGOLOGY, FACIOMAXILLARY.**

LIFSON, Nathan, Univ. of Minn., Minneapolis 7, Minn. **PHYSIOLOGY.**

LIGHT, Richard Upjohn, Practicing Neurosurgeon, 124 Bulkley St., Kalamazoo, Mich. **NEUROLOGICAL SURGERY.**

LIGHT, Vernal Earl, Assoc. Prof. of Biol., Lebanon Valley Coll., Annville, Pa. **ZOOLOGICAL SCIENCES.**

LIGHTBODY, Howard David, Quartermaster Food and Container Inst. Armed Forces, 1849 W. Pershing Rd., Chicago, Ill. **BIOCHEMISTRY.**

LIKERT, Rensis, Prof. of Psychol. and Sociology, and Dir., Survey Rsch. Center, Univ. of Mich., Ann Arbor, Mich.

LILLIE, Howard R., 191 Delevan Ave., Corning, Ind. **CERAMICS.**

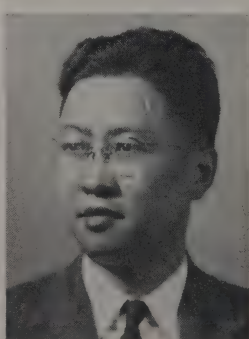
LILLIE, Ralph D., Chief, Lab. of Pathol. and Pharmacol., Natl. Insts. of Health, Bethesda, Md. **HISTOCHEMISTRY.**

LILLIE, Ralph Stayer, Prof. Emer. Physiol., Physiol. Lab., Univ. of Chicago, 5545 Kenwood Ave., Chicago, Ill. **GENERAL PHYSIOLOGY.**

LILLY, Virgil Greene, Assoc. Physiologist, Expt. Sta., W. Va. Univ., Morgantown, W. Va. **PHYSIOLOGY FUNGI.**

LIN, C. C., Dept. of Math., Mass. Inst. of Tech., Cambridge, Mass. **HYDRODYNAMICS.**

LIN, Tung H., Assoc. Prof. in Aeronautical Engrng., Coll. of Engrng., Univ. of Detroit, 12107

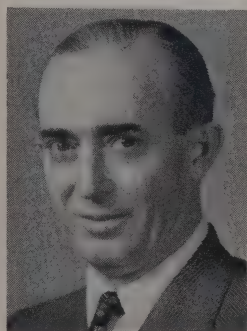


Rutherford, Detroit, Mich. **ENGINEERING.** b. Chungking, China, May 26, 1911. s. Yao-Chiang and Yueh (Kuo) L. Edn.: B.S., Tangsham Coll., 1933; S.M., Mass. Inst. of Tech.; D.Sc., Univ. of Mich. m. Susan Chiang of Cheekiang, China, Mar. 19, 1939. d. Jee-Chiao and Liu Chiang. c.: Rita; Robert; James Lin. Exp.: 1937-39, Prof. of Aero. Engrng., Tsing Hwa Univ., China; 1940-45, Project Engr. and Chf. Engr. of Chinese Airplane Factory; 1946-48, Office of Chinese Tech. Mission in England of Chinese Aircraft Ind. Hon. Pos.: Reviewer of Applied

Mechanics Rev. Mem.: I.Ae.Sc.; A.S.E.S.; A.S.E.E.; Phi Tau Phi; A.F.R.Ae.S. Contrb. to: Number of Papers Published in Jour. of Inst. of Aero. Sci.; Proceedings of U. S. Cong. of Applied Mechanics. Travel: France; England; Switzerland; Italy. Hobby: Chess. Special Int.: Structures, Elastic Stability, Acceleration Measurement, Plasticity.

LINCICOME, David Richard, Rsch. Parasitologist, E. I. du Pont de Nemours & Co., Stine Lab., Newark, Del. **PARASITOLOGY**. b. Champaign, Ill., Jan. 17, 1914. s. David R. and Olive Iola (Casper) L. Edn.: B.S. and M.S., Univ. of Ill., 1937; Ph.D., Tulane Univ., 1941. m. Dorothy Van Cleave, Sept. 1, 1941. c.: David Van Cleave; Judith Ann. Exp.: Scholar in Zool., Univ. of Ill., 1936-37; Asst. in Tropical Med., Tulane Med. Schl., 1937-41; Instr. in Zool., Univ. of Ky., 1941-46; Asst. Prof. of Zool., *ibid.*, 1946-47; Asst. Prof. of Parasitol., Univ. of Wis., 1947-49; Rsch. Parasitologist, E. I. du Pont de Nemours & Co., 1949—. Mem.: A.A.A.S.; Amer. Soc. Tropical Med.; Amer. Soc. Parasitologists; Amer. Micros. Soc.; N. Y. Acad. Sci.; Midwestern Conf. of Parasitologists; Phi Beta Kappa; Sigma Xi; Fellow, Royal Soc. of Tropical Med. and Hygiene (London); Helminthological Soc. of Wash.; Soc. of Systematic Zoologists; Amer. Soc. Protozoologists; Amer. Soc. of Zoologists. Contrb. to: Exptl. Parasitology; Jour. of Parasitology; Amer. Jour. Tropical Med. and Hygiene; Trans. Royal Soc. of Tropical Med. and Hygiene; U. S. Armed Forces Med. Jour.; New Orleans Med. and Surgical Jour.; Southern Med. Jour.; Ky. Med. Jour.; etc. Gen. Int.: Managing Editor, Jour. Expt. Parasitology, 1951—. Special Int.: Taxonomy of the Acanthocephala and Nematoda, Cestoda; Epidemiology of Tropical and Parasitic Diseases; Diagnosis of Parasitic Diseases; Treatment and Control of Parasitic Diseases of Man and Domestic Animals.

LINCOLN, Bert Hartzell, Chemist-Patent Adviser, 920 East Overbrook, Ponca City, Oklahoma. b.



1900, Van Buren, Ark. Edn.: Univ. of Ark., B.S. Degree, and three yrs. grad. study at the Univ. of Colo. s. Charles Albert and Colia (Epps) L. m. Sara Alice (Blackburn). c.: Gilbert H.; Sara Ann; John Charles. Exp.: Instr., Univ. of Ark. and Univ. of Colo.; Asst. St. Bacteriol., of State of Colo., Dept. of Sanitary Engrng., 1924; Rsch. Chemist, Continental Oil Co. from 1926-30; Asst. to Manufacturing Mgr., Continental Oil Co., 1930-33; Admitted to Patent

Office Bar in 1933; Asst. Sec., The Lubrizol Development Corp., 1935-51; Chief Chemist, 1933-48; Continental Patent Adviser, 1948—. Petroleum chemistry in general but primarily in gasoline, wax, lubricating oil and additives for lubricants. Reserve Officer, Chem. Warfare Ser., 1926-41; Elder, Presby. Ch.; Mem.: Amer. Chem. Soc.; Fellow of Amer. Inst. of Chem.; Alpha Chi Sigma; A.A.A.S.; Sigma Xi; Kappa Alpha; Knights of Pythias; Mason; Mem. Toluene Tech. Com.; Natl. Roster of Scientific and Specialized Personnel, 5-261-016. Alternate; Tech. Advisory Com.; Has 108 U. S. Patents as Inventor or Co-inventor and 56 patents in Foreign Countries as Inventor or Co-inventor; Contributor to the Sci. of Petroleum (1938); Pubs.: "Fundamental Chem. and Physical Forces in Lubrication," (1935); "Practical Selection of Improved Lubricants," (1935); "X-ray Diffraction Studies of Lubricants," (1936); Mem., A.P.I. Com. on Book, "Physical Constants of Hydrocarbons"; "Uses of Fats, Fatty Oils, and Derivatives in the Petroleum Industry," (1940); "Oxidation of Petroleum Lubricants," (1941); "Changes Occurring in Oils and Engines from Uses," (1942); "Determination of Salts in Crude Oil," (1942); "Radio Sulfur Tracer Study of Sulfurized Lubrication Addition Agents," (1943).

LINCOLN, Edmond Earl, Economic Adviser, E. I. du Pont de Nemours and Co., Inc., Wilmington, Del. **BUSINESS POLICY, MANAGEMENT.**

LINCOLN, Edward Andrews, Consulting Psychol., Thomposn St., Halifax, Mass. **EDUCATIONAL MEASUREMENT AND PSYCHOLOGY**. b. Raynham, Mass., Oct. 3, 1899. s. Minot J. and Helen (Andrews) L. m. Bertha S. Hayes of Pen-Yan, New York, June 28, 1921. c.: Anne; Jean. Edn.: Bridgewater, Mass., State Nor. Schl., 1907-11; A.B., Harvard Univ., 1913; A.M., Harvard, 1916; Ed.D., Harvard Univ., 1924. Exp.: H. S. Tehr., Middletown, Conn., 1913-14; H. S. Tehr., Natick, Mass., 1914-15; Asst. in Edn., Harvard Grad. Schl. of Edn., 1920-22; Instr. in Edn., Harvard Grad. Schl. of Edn., 1922-24; Asst. Prof. of Edn., Harvard Grad. Schl. of Edn., 1924-35; Lectr. in Edn., Univ. of Calif., 1934; Consulting Psychol., Halifax, Mass., 1935—. Psychologist, Cambridge Somerville Youth Study, 1937-39; Civilian Psychologist, U. S. A., 1941-43; Psychologist, Harvard Law Schl., 1942-45. Mem.: Mass. Soc. of Clin. Psychol.; A.A.A.S.; Amer. Edn. Rsch. Assn.; N.S.S.E.; Phi Delta Kappa; Phi Gamma Mu; Kappa Delta Phi (Natl. Treas.); Amer. Psychol. Assn.; Natl. Voc. Guidance Assn.; N.E.A. Contrb. to: Jour. Edn. Psychol.; Jour. Edn. Rsch.; Schl. and Soc.; Jour. Edn. Exp., etc. Author: Beginnings in Edn. Measurement, 1924; Sex Differences in the Growth of Amer. Schl. Children, 1927; Testing and the Uses of Test Results, 1935. Rsch. of Gen. Int.: Sex Differences; Ability Grouping. War Record: Psychol. Service; 1st Lt. Listed in: Who's Who in Mass.

LIND, Samuel Colville, Box P. Oak Ridge, Tenn. **ROLOGY.**

LINDEMANN, Howard Charles, Mgr., Optical Dept. and Instrument Designer, Natl. Elec. Inst. Co., 92-21 Corona Ave., Elmhurst, N. Y. **PHYSICS.**

LINDGREN, Lawrence Fridtjof, Instr., Dept. of Bacteriol., Univ. of Nebr., Lincoln, Nebr. **SANITARY BACTERIOLOGY.**

LINDQUIST, Harry Gotfred, Asst. Prof. Dairy Indus., Mass. State Coll., Amherst, Mass. **DAIRY INDUSTRY.**

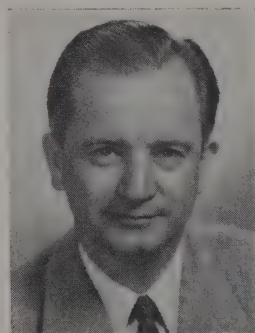
LINDSAY, George A., Prof. of Physics, Univ. of Mich., Ann Arbor, Mich. **PHYSICIST.**

LINDSAY, Robert Bruce, Hazard Prof. of Physics and Chmn. Dept., Brown Univ., Providence, R. I. **PHYSICS.**

LINDSAY, Ruth Hutchinson, Dean Residence and Assoc. Prof. of Botany, Crawford House, Wellesley Coll., Wellesley, Mass. **BOTANY.**

LINDSEY, Arthur Ward, Prof. Biol. Sci., Denison Univ., Granville, Ohio. **ENTOMOLOGY, ORGANIC EVOLUTION.**

LINDSLEY, Donald Benjamin, Prof. of Psychol., Univ. of Calif., Los Angeles 24, Calif. **PSYCHO-**



LOGY AND NEUROPHYSIOLOGY. b. Brownhelm, Ohio, Dec. 23, 1907. s. Benjamin Kent and Mattie E. (Jenne) L. Edn.: A.B., Wittenberg Coll., 1929; M.A., Univ. of Iowa, 1930; Ph.D., *ibid.*, 1932. m. Ellen Ford Aug. 16, 1933. c.: David F.; Margaret; Robert K.; Sara Ellen. Exp.: Instr. of Psychol., Univ. of Ill., Urbana, Ill., 1932-33; Natl. Rsch. Coun. Fellow, Dept. of Physiology, Harvard Med. Schl. and Dept. of Neuropsychiatry, Mass. General Hosp., Boston, Mass., 1933-35; Rsch. Assoc., Brush Foundation, Western Res. Univ., Med. Schl., Cleveland, Ohio, 1935-38; Asst. Prof. of Psychol., Brown Univ. and Dir. of Psychol. Lab., Bradley Hosp., Providence, R. I., 1938-46; Prof. of Psychol., Northwestern Univ., Evanston, Ill., 1946-51; Prof. of Psychol., Univ. of Calif. and Med. Schl., Los Angeles, Calif., 1952—. Mem.: Amer. Electroencephalographic Soc.;

Soc. of Exptl. Psychol.; Soc. of Exptl. Biol. and Med.; Amer. Psychologists Assn.; Amer. Psychological Soc.; Amer. Psychosomatic Soc.; Sigma Xi; A.A.U.P.; Natl. Acad. of Sci.; Phi Gamma Delta; Blue Key; Gamma Alpha. Contrb. to: Jour. of Exptl. Psychol.; Arch. of Neurol. and Psychiat.; Brain; Jour. of Gen. Psychol.; Jour. Genetic Psychol.; Sci. Proc. Soc. of Exptl. Biol. and Med.; Psychol. Monographs; Amer. Jour. of Psychol.; Psychosomatic Med.; Jour. of Comp. Neurol.; Psychol. Bull.; Rsch. Publication Nervous and Mental Diseases; Jour. of Lab. and Clin. Med.; Proc. Natl. Acad. of Sci. Special Int.: Physiol. Psychol., Electroencephalography; Electromyography; Neurophysiol.; Emotion; Brain Function; Behavior Disorders; Perceptual Processes; Neural and Behavioral Development in Infancy and Childhood.

LINDSTROM, Alice Lee, Rsch. Assoc., Chem. Dept., Reed Coll., Portland, Ore. **BIOCHEMISTRY**. b. Pomeroy, Ohio, Jan. 29, 1914. d. Albert Wayne and Bertha (Mees) Lee. Exp.: A.B., Univ. of Cincinnati, 1946; M.S., *ibid.*, 1948. m. Anton Lindstrom, June 9, 1951. Exp.: Cancer Rsch. Fellow, Univ. of Cincinnati, Cincinnati, Ohio, 1946-48; Biochem. Rsch. Asst., Reed Coll., Portland, Ore., 1948-49; Biochem. Rsch. Asst., Univ. of Ore., Med. Schl., Portland, Ore., 1949-50; Biochem. Rsch. Assoc., Reed Coll., Portland, Ore., 1950—. Mem.: Amer. Chem. Soc.; A.A.A.S.; Sigma Xi; Iota Sigma Pi; Phi Mu. Contrb. to: Cancer Rsch. 9, 139-143 (1949). Special Int.: Radioisotopes in Metabolism Studies.

LINDSTROM, Ernest W., Prof. and Hd., Dept. of Genetics and Vice Dean, Grad. Coll., Iowa State Coll., Ames, Iowa. **GENETICS**.

LINDWALL, Harry Gustave, Prof. and Admin. Chmn., Dept. of Chem., N. Y., Univ. Hgts., Bronx, N. Y. **CHEMISTRY**.

LINEHAN, Paul Henry, Prof. of Math., City Coll. of N. Y., N. Y., N. Y. **MATHEMATICS**.

LINELL, Eric Ambrose, Prof. Neuropathy, Univ. of Toronto, Toronto, Ont., Can. **NEUROLOGY**.

LINES, Edwin F., retired, 115 Philadelphia Ave., Takoma Park, Md. **GEOLOGY**.

LINWEAVER, Hans, Sr. Biochemist in Chg. Enzyme Section, Western Regional Rsch. Lab., Albany, Calif. **ENZYMOLGY**.

LINWEAVER, John Rogers, Sci. Tchr., 109 Stinson St., Chapel Hill, N. C. **SCIENCE EDUCATION**. b. Wash., D. C. Aug. 25, 1925. s. Norris and Emma (Bottomly) L. Edn.: A.B., Univ. of N. C., 1948; M.A., *ibid.*, 1951. m. Sally Howe of Tarrentun, Pa., Sept. 12, 1948. d. Mr. and Mrs. Charles Howe. Exp.: Voc. Counselor, 1949-50; Student Voc. Counselor, 1949-50; Sci. Tchr., Chapel Hill Elem. Schl., 1951—. Hon. Pos.: Natl. Sci. Tchrs. Assn.; Phi Delta Kappa; Pres., N.C.E.A.; N.E.A.; N. C. Acad. of Sci.; A.A.A.S. War Record: Cpl., U.S.M.C.R., 1943-46. Hobbies:

Philosophy; Sci.; Singing; Dogs. Travel: Far East; Europe.

LINFIELD, Ben Zion, 1324 Hill Top Rd., Charlottesville, Va. **MATHEMATICS**.

LINFIELD, Frederick B., retired, 721 Third Ave., S., Bozeman, Mont. **DAIRYING**.

LINGAME, J. J., Harvard Univ., Cambridge, Mass. **CHEMISTRY, ANALYTICAL**.

LINK, George Konrad Karl, Prof. of Botany, Univ. of Chicago, Chicago, Ill. **PLANT PATHOLOGY**.

LINFORD, Leon B., Prof. of Physics and Hd. of Dept., Univ. of Utah, Salt Lake City 1, Utah.



PHYSICS. b. Logan, Utah, July 8, 1904. s. James H. and Mary Hooper (Blood) L. Edn.: B.S., Utah State Agril. Coll., 1923; M.A., *ibid.*, 1925; Ph.D., Univ. of Calif., 1930. m. Imogene Kesler, June 20, 1936. c.: Lawrence, Rulon. Exp.: Natl. Rsch. Fellow, Princeton Univ., Princeton, N. J., 1930-32; Assoc. Prof. of Math., Utah State Agril. Coll., Logan, Utah, 1932-35; Hd. Dept. of Math., *ibid.*, 1933-36; Prof. of Physics and Hd. of Dept., Utah State Agril. Coll., Logan, Utah, 1935-41; Staff Mem., Mass. Inst. of Tech., Radiation Lab., Cambridge, Mass., 1941-45; Mem. Bd. of Editors, Radiation Lab. Tchr. Series, *ibid.*, 1945-46; Physicist Naval Rsch. Lab., Boston Field Sta., Boston, Mass., 1946; Prof. of Physics and Hd. of Dept., Univ. of Utah, Salt Lake City, Utah, 1946—. Mem.: A.A.A.S.; A.A.U.P.; Fellow, Amer. Phys. Soc.; Utah Acad. of Sci., Arts and Letters; Sigma Xi; Sigma Pi Sigma; Pi Kappa Alpha. Contrb. to: Phys. Rev.; Rev. of Modern Phys.; Soil Sci. Special Int.: Electronics, Specially Ionosphere Soundings, Radar, Photoelectricity, Moisture Relations in Porous Media.

LINK, Karl Paul, Prof. of Biochem., Univ. of Wis., Madison, Wis. **CARBOHYDRATE CHEMISTRY, CHEMISTRY OF 4-HYDROXYCOUMARINS, BLOOD COAGULATION, DISEASE RESISTANCE OF PLANTS**. b. La Porte, Ind., Jan. 31, 1901. s. George and Fredericka (Mohr) L. Edn.: B.Sc., Univ. of Wis., 1922; M.Sc., *ibid.*, 1923; Ph.D., *ibid.*, 1925. m. Elizabeth Feldman, Sept. 20, 1930. c.: John Kailin; Thomas Paul. Exp.: Asst. and Assoc. Prof. of Agri. Chem., Univ. of Wis., Madison, Wis., 1927-30; Prof. of Biochem., *ibid.*, 1931—. Hon. Pos.: Collaborator, U.S.D.A., Soy Bean Lab., 1937-40; U.S.D.A. Northern Regional Lab., Peoria, Ill., 1940-45; Consultant to Corn Processing and Brewing Indus., 1938—. Mem.: A.A.A.S.; Amer. Chem. Soc.; Natl. Acad. of Sci.; Harvey Soc.; Amer. Chem. Soc.; Federation Amer. Soc. for Exptl. Biol.; Sigma Xi; Phi Lambda Epsilon; Phi Kappa Phi; Phi Sigma; Alpha Zeta. Contrb. to: Jour. Amer. Chem. Soc.; Jour. Biol. Chem., etc. Special Int.: Chem. of Sugars, Characterization and Identification, Alkali Labile Glycosides; Chem. of Hexuronic Acids; Chem. and Physiol. Action of 4-Hydroxycoumarin Anticoagulants; Blood Coagulation; Rodent Control; Dicumarol and Warfarin Applications.

LINK, Theodore A., Chf. Geologist, Imperial Oil Ltd., Toronto, Ont., Can. **PETROLEUM GEOLOGY**.

LINSDALE, Jean Myron, Rsch. Assoc., Museum Vertebrate Zool., Univ. of Calif., Berkeley, Calif. **VERTEBRATE ZOOLOGY**.

LINSKER, Fred, Pres. and Dir. of Rsch., 17 West 60th St., N. Y. 23, N. Y. **ORGANIC CHEMISTRY**. b. Lwow, Poland, Dec. 10, 1917. s. Raphael and Golde (Gart) L. Edn.: M.A., Columbia Univ., 1943; Ph.D., *ibid.*, 1944. Exp.: Merck and Co. Fellowship at Columbia Univ., 1942-44; Rsch. Chemist and Project Dir., R. L. Evans Associates, 250 East 43rd St., N. Y., 1944-46; Pres. and Dir. of Rsch., Bios Labs, Inc., 1946—. Mem.: A.A.A.S.; Amer. Chemical Soc. Contrb. to: Jour. Amer. Chemical Soc.; Jour. of Organic Chem. Ph.D. Dissertation: Amidinoarsenicals. Travel: Europe, Gen.



Int.: Develop. of New Drugs. Hobbies: Photography; Stamp Collections. Listed in: A.M.S.

LINSLEY, Earle Garfield, Prof. Emer. Astron., Mills Coll., 4150 39th Ave., Oakland, Calif. **ASTRONOMY**.

LINSLEY, Earle Gorton, Asst. Prof. Entomol., 112 Agri. Hall, Univ. of Calif., Berkeley, Calif. **ENTOMOLOGY**.

LINSLEY, Roy K., Dept. of Civil Engrng., Stanford Univ., Stanford, Calif. **HYDROLOGY**.

LINTON, Morris Albert, Pres., Provident Mutual Life Insurance Co., Philadelphia, Pa.

LINTON, Ralph Sterling Prof. of Anthropol., Yale Univ., Inst. of Human Relations, 333 Cedar St., New Haven, Conn. **ANTHROPOLOGY**.



b. Phila., Pa., Feb. 27, 1893. s. Isaiah Waterman and Mary Elisabeth (Gillingham) L. Edn.: B.A., Swarthmore Coll., 1915; M.A., Univ. of Pa., 1916; Ph.D., Harvard, 1925. m. Adelin M. Hohlfield of Madison, Wis., Aug. 21, 1934. c.: David Hector. Exp.: Asst. Curator of Ethnol., Field Museum of Nat. Hist., 1922-28; Prof. of Anthropol., Univ. of Wis., 1928-37; Prof. of Anthropol., Columbia Univ., 1937-39; Chmn., Dept. of Anthropol., ibid., 1939-

43; Sterling Prof. of Anthropol., Yale Univ., 1946—. Hon. Pos.: Pres., Amer. Anthropol. Assn., 1946; Chmn., Sect. on Anthropol., Natl. Acad. of Sci., 1948-50. Mem.: Phi Beta Kappa; etc. Author: The Study of Man, 1936; and many others. Contrb. to: Atlantic Monthly; House Beautiful; etc. Ph.D. Dissertation: The Material Culture of the Marquesas Islands, 1924. War Record: Cpl., Battery D., 149th F. A., U. S. Army Rainbow Div., 1917-19. Travel: Madagascar; Polynesia; S. Amer.; S. and E. Africa; Europe. Hobbies: Collecting Primitive Art; Woodcarving. Listed in: Who's Who in Amer.; Internatl. Who's Who.

LINTON, Robert, Dept. of Anthropol., Yale Univ., New Haven, Conn. **SOCIOLOGY AND ANTHROPOLOGY**.

LINTZ, E. H., 42 Heiskell Ave., Wheeling, W. Va. **CERAMICS**.

LIPMANN, Fritz (Albert), Sr. Biochemist, Mass. Gen. Hosp. and Prof. of Biol. Chem., Harvard Med. Schl. at Mass. General Hosp., Fruit St., Boston 14, Mass. **BIOCHEMISTRY**.

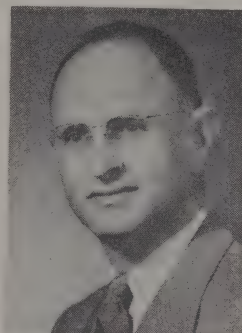


b. Koenigsberg; Germany, June 12, 1899. s. Leopold and Gertrud (Lachmanski) L. Edn.: M.D., Univ. of Berlin, 1922; Ph.D., ibid., 1927. Hon. Deg.: M.D., Univ. of Marseille, 1947; M.A., Harvard Univ., 1949; D.Sc., Univ. of Chicago, 1953. m. Freda Hall, June 21, 1931. c.: Stephen Hall. Exp.: Rsch. Asst., Kaiser Wilhelm Inst., Berlin and Heidelberg, Germany, 1927-30; Rsch. Asst., Kaiser Wilhelm

Institute, Berlin Germany, 1930-32; Rockefeller Fellow, Rockefeller Inst. for Med. Rsch., 1931-32; Rsch. Assoc., Biol. Inst. of Carlsberg Found., Copenhagen, Denmark, 1932-39; Rsch. Assoc., Cornell Med. Schl., N. Y. C., 1939-41; Rsch. Chemist, Sr. Biochemist, Mass. Gen. Hosp., Boston, Mass., 1941—; Prof. of Biol. Chem., Harvard Med. Schl. at Mass. Gen. Hosp., ibid., 1949—. Mem.: Natl. Acad. of Sci.; Soc. of Biol. Chemist; A.A.A.S.;

Amer. Chem. Soc.; Fellow, Danish Royal Soc.; Fellow, N. Y. Acad. of Sci. Contrb. to: Jour. of Biol. Chem.; Jour. of Amer. Chem. Soc.; Fed. Proc.; Jour. of Bacteriol.; Annual Rev. of Biochem.; Archives of Biochem.; Biol. Bulls.; Jour. of Exptl. Med.; Adv. in Enzymol.; Currents of Biochem. Rsch.; Sci.; Cold Spring Harbor Symposia on Quantitative Biol.; Harvey Lectrs.; Jour. of Exptl. and Cellular Physiol.; Nature. Gen. Int.: Awarded the Carl Neuberg Medal, 1948; Mead Johnson and Co. Award for Work on Vitamin B. Complex. Special Int.: Discovery of coenzyme A and its characterization as carrier of "active acetate" (= acetyl CoA) and of other activated organic acids to serve as small bldg. blocks in various biosynthetic reactions, such as synthesis of steroids, fats, some amino acids, and many other cellular constituents.

LIPPMAN, Alfred, Jr., Chf. Engr., Godchaux Sugars, Inc., Reserve, La. **CHEMICAL ENGINEERING**



AND MANAGEMENT OF PLANT OPERATIONS AND OF RESEARCH AND DEVELOPMENT. b. New Orleans, La., Mar. 13, 1908. s. Alfred and Belle (Levy) L. Edn.: B.Eng., Tulane Univ., 1929. m. Dorothy Kahn, Oct. 28, 1934. (Dec.). m. 2nd Janice Trum, Aug. 22, 1953. c.: Alfred Sol; Darryl Rock; Tanya Maureen. Exp.: Research Chemist, Bay Chemical Co., Weeks, La., 1929-31; Sales Rep., Chem. Rubber Co., Cleveland, Ohio, 1931-34; Asst. Assayer,

U. S. Mint, New Orleans, La., 1932-33; Chf. Chemist, Bay Chem. Co., Weeks, La., 1934-51; Gen. Mgr. of Commonwealth Engrng. Co., Dayton, Ohio, 1951-53; Chf. Engr. Godchaux Sugars, Inc., Reserve, La., 1953—. Mem.: Amer. Chem. Soc.; Amer. Inst. of Chem. Engr.; Natl. Farm Chemurgie Coun.; Amer. Mgmt. Assn.; Sigma Alpha Mu; Tau Beta Pi. Contrb. to: Chem. Engrng.; Indus. and Engrng. Chem.; Proc. of La. Engrng. Soc. Special Int.: Management of Production, Rsch. and Development; Most Chem. Engrng. Unit Operations; Mfg. of Inorganic Chem., esp. Salts, Phosphates, Acids, Fertilizers, and Petroleum Cracking Catalysts.

LIPPY, Grace Elizabeth, Assoc. Prof. Zool., Hood Coll., Frederick, Md. **ZOOLOGY**.

LISCHER, Benno Edward, Dean Emer., Wash. Univ., St. Louis, Mo.; 313 N. Rockhill Rd., Webster Groves, Mo. **DENTISTRY**.

LISK, Henrietta, retired, Fort McCoy, Fla. **BACTERIOLOGY**.

LITMAN, Samuel, Assoc. Prof. of Elec. Engrng., Univ. of S. C., Columbia. **S. C. ELECTRICAL ENGINEERING ANALYSIS AND ELECTRONICS**.



b. Boston, Mass., May 11, 1910. s. David and Rosa (Chaplin) L. Edn.: B.S., Univ. of S. C., 1935; M.S., ibid., 1936. m. Judith Greenberg, June 1940. c.: Fern Rosalyn. Exp.: Instr., Dept. of Engrng., Univ. of S. C., Columbia, S. C., 1937-40; Adj. Prof. of Engrng., ibid., 1940-42; Assoc. Prof. of Elec. Engrng., ibid., 1942—; Consultant, L. Greenberg Co., 1944—; Pres., Palmetto Radio Corp., Radio Sta. WNOK-TV, Columbia, S. C., 1947—.

Mem.: A.A.A.S.; Amer. Inst. of Elec. Engrs.; S. C. Acad. of Sci.; Leconte Sci. Soc.; Acad. of Polit. Sci.; Phi Epsilon Pi; Phi Beta Kap-

pa. Author: Expt. in Direct and Alternating Currents, 1940. Contrb. to: A.I.E.E. Special Int.: Electronics; Circuit Analysis.

LITTELL, Frank Bowers, Capt., Corps Prof. Math., U. S. Navy, retired, 3704 Porter St., N. W., Washington, D. C. ASTRONOMY.

LITTLE Clarence Cook, Roscoe B. Jackson Memorial Lab., Bar Harbor, Maine.

LITTLE, E. P. Woods Hole, Mass. PHYSICS.

LITTLE, Homer P., Dean and Prof. of Geol., Clark Univ., Worcester, Mass. GEOLOGY.

LITTLE, James Kenneth, Dir. Student Personnel Services and Registrar, Assoc. Prof. Edn., Univ. of Wis., Madison, Wis.

LITTLE, James Maxwell, Prof. of Pharmacol. and Assoc. Prof. of Physiol., Bowman Gray Schl. of Med., Winston-Salem, N. C. PHARMACOLOGY AND PHYSIOLOGY. b. Commerce, Ga., Dec. 16, 1910. s. Claude and Cora (Quillian) L. Edn.: A.B., Emory Univ., 1932; M.S., *ibid.*, 1933; Ph.D., Vanderbilt Univ., 1941. m. Louise Toepel, Aug. 20, 1934. c.: Paul Gordon; Nancy Claire; John Michael. Exp.: Asst. in Physiol., Emory Univ., Med. Schl., Ga., 1933-35; Asst. Prof. of Physiol. and Pharmacol., Bowman Gray Schl. of Med., Winston-Salem, N. C., 1941-46; Assoc. Prof. of Physiol. and Pharmacol. in Chg. of Pharmacol., *ibid.*, 1946-49; Prof. of Pharmacol. and Assoc. Prof. Physiol., *ibid.*, 1949—. Mem.: Phi Beta Kappa; Amer. Physiol. Soc.; Amer. Chem. Soc.; A.A.A.S.; Soc. for Exptl. Biol. and Med.; Amer. Soc. for Pharmacol. and Exptl. Therapeutics. Contrb. to: Amer. Jour. Physiol.; Jour. of Nutrition; Sci.; Proc. Soc. of Exptl. Biol. and Med.; Amer. Jour. of Pathol., etc. Special Int.: Cardio-vascular Physiology; Renal Physiology; Pharmacol. of Water and Salt Balance.

LITTLE, Noel Charlton, Prof. of Physics, Bowdoin Coll., Brunswick, Maine. ELECTRICITY.

LITTLETON, Jesse Talbot, Vice-Pres. and Dir. of Rsch. and Development, Corning Glass Works, Corning, N. Y. PHYSICS.

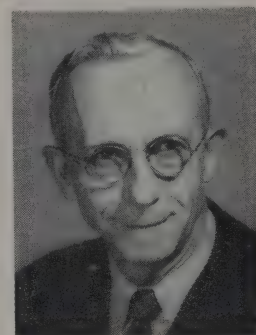
LITTMAN, Maxwell Leonard, Mycologist and Bacteriologist, Mt. Sinai Hosp., N. Y. C. BACTERIOLOGY. b. Dec. 16, 1914, Jersey City, N. J. s. Ida and Edward Littman. Edn.: B.S., 1936, M.S., 1937, Cornell Univ.; Ph.D., Rutgers Univ., 1939; M.D., Tulane Univ., Med. Schl., 1950. m. Mildred Geist of Conn., June 30, 1940. d. David and Anna Geist. c.: Charles Edward; Robert Jacob; Michael Geist. Exp.: Med. Bact. and Lab. Officer, U. S. Army, 1941-45; Instr., Med. Bact. and Mycol., Tulane Univ., Med. Schl., 1945-48; Developed Littman Oxgall Agar for Fungi



and Microculture Slide, 1947; Consultant, Ochsner Clinic and Foundation Hosp., 1948-50; Consultant, Armed Forces Inst. of Pathol., 1948-50; Interne, Walter Reed Gen. Hosp., Wash., 1950-51; Asst. Prof. Bact., N. Y. Med. Coll., N. Y. C., 1951-52; Mycologist, Mt. Sinai Hosp., N. Y. C., 1952—; Internal Med. Practice, Tenafly, N. J., 1952—. Mem.: Adv. Comm., Amer. Type Culture Collection, Soc. Amer. Bacteriol., N. Y. Acad. of Sci.; Soc. of Amer. Bact.; A.A.A.S.; Amer. Soc. of Tropical Med.; A.P.H.A.; Soc. of Milit. Surgs.; Sigma Xi; La. State Bd. of Med. Examiners; Licensure; Phi Kappa Phi; Phi Lambda Kappa. Contrb. to: Sci.; Amer. Jour. Pathol.; Amer. Jour. Clin. Pathol.; Jour. Bact.; J.A.M.A. Ph.D. Dissertation: Carbon and Nitrogen Transformations by Zoogaleal Organisms. War Rec-

ord: Lt. Col., Med. Serv. Corps Res., Five Yrs. Active Duty, W. W. II; Thirty Mos. in Southwest Pacific Area; Asiatic-Pacific Theater Campaign with Two Bronze Stars; Amer. Theatre Campaign; Amer. Defense Service Medal; Philippine Liberation Ribbon with One Bronze Star; Distinguished Unit Medal; W. W. II Victory Medal. Travel: N. Amer.; Australia; New Guinea; P. I. Gen. Int.: Borden Co. Award for Rsch. in Med., 1950. Hobbies: Photography; Family. Listed in: A.M.S.

LIVELY, Charles Elson, Prof. and Chmn., Dept. of Rural Sociol. and Dir., Inst. for Rsch. in the



Sociol Sci., 231 Mumford Hall, Univ. of Mo., Columbia, Mo. SOCIOLOGY (PARTICULARLY RURAL SOCIOLOGY). b. Marshall Co., W. Va., Sept. 29, 1890. s. Milton Alexander and Suzanne Jane (Riggs) L. Edn.: A.B., Univ. of Nebr., 1917; A.M., *ibid.*, 1918; Ph.D., Univ. of Minn., 1931. m. Ethel Dell Johnston, Sept. 21, 1918. Exp.: Farm Laborer, 1905-09; Country Schl. Tch., 1909-10; Schl. Supt., Shickley, 1913-14; Supt. of Schls., Grafton, Nebr., 1914-15; Supt. of Schls., Madison, Nebr., 1918-19; Instr. in Sociol., Univ. of Minn., 1919-21; Assoc. Prof., *ibid.*, 1930-31; Asst. Prof., Ohio State Univ., 1921-31; Assoc. Prof., *ibid.*, 1931-36; Prof., *ibid.*, 1936-38; Rsch. Analyst, F.E.R.A., 1934; Supvr. of Rural Rsch., F.E.R.A. and W.P.A. in Ohio, 1934-38; *ibid.*, Mo., 1938-39; Prof. and Chmn., Dept. of Rural Sociol., Univ. of Mo., 1938—; Dir., Inst. for Rsch. in Social Sci., *ibid.*, 1951—. Hon. Pos.: Pres., Amer. Rural Sociol. Soc., 1942-43; Editorial Bd., 1935-40, and Book Rev. Editor, 1952—, Jour. Rural Sociol.; Fellow, A.A.A.S.; Secy., Advisory Council on Human Relations, A.A.A.S., 1939-44; Amer. Delegate to Internatl. Population Congress, Paris, France, 1937; Rsch. Advisory Com., Health Inf. Foundation, 1950—; Consultant, Puerto Rican Agri. Expt. Station, 1953—; Chmn., Mo. State Com. for Study of Problems of Med. Service for the Indigent. Mem.: Amer. Sociol. Soc.; Amer. Rural Sociol. Soc.; Midwest Sociol. Soc.; A.A.A.S.; Population Assn. of Amer.; Internatl. Union for the Study of Population Problems; Phi Delta Kappa; Alpha Pi Zeta; Alpha Kappa Delta; Gamma Sigma Delta. Author: Readings in Rural Sociol., 1933, Co-author: Rural Migration in the U. S., 1939. Contrb. to: Rural Sociol.; Amer. Jour. Sociol.; Social Forces; etc. Special Int.: Sociol. Aspects of Health and Medical Services; Migration of Population; Regionalism and Homogenous Areas; Sociol. Rsch. Methods.

LIVELY, Chauncey Clinton, Hd. and Prof. of Psychol. and Edn., Waynesburg Coll., Waynesburg, Pa. PSYCHOLOGY, MENTAL TESTS.

LIVERMORE, Josiah Randall, Assoc. Prof. Plant Breeding, Cornell Univ., Ithaca, N. Y. PLANT BREEDING.

LIVINGSTON, A. E. Prof. of Pharmacol. and Hd. Dept., Schl. of Med., Temple Univ., Broad and Ontario Sts., Philadelphia, Pa. PHARMACOLOGY.

LIVINGSTON, Burton Edward, Prof. Emer. Plant Physiol., Johns Hopkins Univ., Baltimore, Md.; Riderwood, Md. PLANT PHYSIOLOGY, ECOLOGY, SOIL SCIENCE.

LIVINGSTON, Ernest M., Asst. Prof., Brooklyn Coll., Brooklyn, N. Y.

LIVINGSTON, Robert Stanley, Prof. of Physical Chem., Univ. of Minn., Minneapolis, Minn. PHYSICAL CHEMISTRY.

LIVINGSTONE, Huberta Mabel, M.D., Formerly Assoc. Prof. and Dir. of Anesthesiol., Univ. of Chicago, 5805 Dorchester Ave., Chicago 37, Ill. **ANESTHESIOLOGY**. b. Hopkinton, Ia., Aug. 1, 1905. d. Dr. Hugh and Hattie (Steward) L. Edn.: M.D., State Univ. of Ia. Coll. of Med., 1928. m. Dr. William E. Adams of Nichols, Ia., June 9, 1928. s. F. A. Adams. c.: Diana Isabella. Exp.: Interne, Presby. Hosp., Chicago, 1928; Asst. in Surg. and Anesthesia, Douglas Smith Fellow, Univ. of Chicago, 1928-32; Instr., Dir. of Anesthesia, Univ. of Chicago, 1932-38; Surg. Interne, Univ. of Chicago, 1935-

36; Asst. Prof., Surg. and Dir., *ibid.*, 1938-44; Assoc. Prof., *ibid.*, 1944-52; Dir. of Anesthesia, *ibid.*, 1929-52. Fellow: A.M.A.; Internatl. Coll. of Anesthetists; Amer. Coll. of Anesthesiologists; A.A.-A.S. Mem.: Sigma Xi; Sigma Delta Epsilon; Dipl. of the Amer. Bd. of Anesthesiology; Nu Sigma Phi; The Fortnightly. Travel: Europe; Mexico; Canada. Hobbies: Music; Stamp and Coin Collecting. Listed in: A.M.S.; Who's Important in Med.; World Biography; Who's Who in Ill.; Amer. Women.

LIWSCHITZ-GARIK, Michael M., Prof. of Elec. Engrng., Consulting Engr., 740 Rugby Rd., Brooklyn 30, N. Y. **ELECTRICAL MACHINERY**. b. Polozk, Russia, June 15, 1883. s. Moisey and Anna (Kalmanowitch) L. Edn.: Dipl. Ing., Inst. of Tech., Karlsruhe, Germany, 1909; Doktor Ingenieur, *ibid.*, 1920. m. Olga Garik, Sept., 1905. c.: Vladimir and Serge. Exp.: Collaborator with Prof. E. Arnold, Karlsruhe, Germany, 1909-11; Mgr. with Siemens-Schuckertwerke, Berlin, Germany, 1912-38; Consulting Engr. with Westinghouse Elec. Corp., E. Pittsburgh, Pa., 1939-52; Consulting Engr., Natl. Elec. Coil Co., Columbus, Ohio, 1941—. Mem.: Sigma Xi; Fellow, A.I.E.E.; Tau Beta Pi; Eta Kappa Nu; Soc. for Promotion of Engrng. Edn.: A.A.A.S. Contrb. to: Archiv für Elektrotechnik; Sci. Publications of the Siemens; Trans. of A.I.E.E. Publ. 7 books on Elec. Mach. Special Int.: Design of Elec. Machines.



LLEWELLYN, Frederick Britton, Consulting Engr., Bell Telephone Lab., 463 West St., N. Y., N. Y. **RADIO ENGINEERING**.

LLOYD, David Pierce Caradoc, Assoc. Mem., Rockefeller Inst. for Med. Rsch., 66th St. and York Ave., N. Y., N. Y. **NEUROPHYSIOLOGY**.

LLOYD, Howard Huntley, Prof. of Chem., Goucher Coll., Baltimore, Md. **INORGANIC CHEMISTRY**.

LOBECK, Armin Kohl, Prof. of Geol., Columbia Univ., 251 Sunset Ave., Englewood, N. J. **GEOLOGY AND GEOGRAPHY**. b. N. Y., N. Y., Aug. 16, 1886. s. Adolph Christian and Celeste Elmiere (Voullaire) L. Ancestors: Father's Parents from Saxony to U. S., 1848; Mother's Parents from Martinique. Edn.: A.B., Columbia, 1911; M.A., *ibid.*, 1913; Ph.D., *ibid.*, 1917. m. Bertha Merrill of Skowhegan, Me., Dec. 25, 1917. d. Edward Newton and Anna Folsom Merrill. c.: Elmiere Merrill; Edward Merrill. Exp.: Instr. in Bot. and Pharm., Phila. Coll. of Pharm., 1911-14; Asst. Prof. of Physiography, Wis., 1919-24; Assoc. Prof. of Physiog., Wis., 1924-29; Prof. of Geol., Columbia, 1929—. Mem.: Geological Soc. of Amer.; Assn. of Amer. Geographers; N. Y. Acad. of Sci.;

A.A.A.S.; Sigma Xi; Trustee, Natl. Parks Assn., 1944-48. Author: Block Diagrams, 1924; Airway of Amer., 1932; Geol. and Physiography of Allegheny State Park, 1927; Geol. and Physiog. of Mammoth Cave Natl. Park, 1928; Geomorphology, 1939; Milit. Maps and Aerial Photographs, 1944. Contrb. to: Sci.; Bull. Geol. Soc. of Amer.; Geog. Rev.; Internatl. Year Book; Sci. Monthly. Ph.D. Dissertation: The Physiography of Puerto Rico. War Record: State Dept., 1917-18; Amer. Comm. to Negotiate Peace, Paris, 1918-19; Consultant, War and State Depts., 1942-44. Travel: Fifteen European Countries; Russia; Siberia; Caucasus; Armenia; West Indies; British Guiana; Panama; Guatemala; Alaska; Mexico; Canada; Bermuda; Japan; China; Philippines; All States in U. S.; Bahamas; Algeria; East, West, and South Africa; New Zealand and Australia. Achievements of Gen. Int.: Founder and Dir., The Geog. Press, 1922—. Listed in: Who's Who in Amer.; A.M.S. Special Int.: Geomorphology and Cartography.

LOCHHEAD, Allan Grant, Chf., Div. of Bacteriol. and Dairy Rsch., Sci. Service, Dept. of Agri., Sci. Service Bldg., Ottawa, Can. **BACTERIOLOGY**. b. Galt, Ont., Can., June 21, 1890. s. William and Lillias (Grant) L. Edn.: B.A., McGill Univ., 1911; M.Sc., *ibid.*, 1912; Ph.D., Univ. of Leipzig, 1914; McGill Univ., 1919. m. Helen Louise Van Wart, Dec. 2, 1919. c.: Douglas Grant; Kenneth Campbell. Exp.: Lectr. in Bacteriol., Macdonald Coll., McGill Univ., Montreal, Can., 1918-19; Bacteriol.-Chem., Can. Milk Products Ltd., Toronto, Ont., Can., 1919-21; Bacteriol. Chem., Malt Prod. Co. of Can. Ltd., Guelph, Ont., 1921-22; Lectr. in Biochem., Univ. of Alberta, Edmonton, Alta., Can., 1922-23; Chf., Div. of Bacteriol., Exptl. Farms Service, Dept. of Agri., Ottawa, Can., 1923-38; Chf., Div. of Bacteriol. and Dairy Rsch., Sci. Service, Dept. of Agri., *ibid.*, 1938—. Mem.: Soc. of Amer. Bacteriol.; Can. Soc. Microbiol.; Soc. of Gen. Microbiol.; Soc. of Appl. Bacteriol.; Can. Pub. Health Assn.; Psi Upsilon; Fellow, Royal Soc. of Can.; Fellow, A.A.A.S. Contrb. to: Jour. of Bacteriol.; Can. Jour. of Rsch.; Sci.; Nature; Food Rsch.; Zentralblatt für Bakteriologie; Trans. of Royal Soc. of Can. Special Int.: Agri. Microbiol.; Osmophilic Yeasts; Microbial Growth Factors, Antagonisms.

LOCKE, Arthur Preston, Rsch. Dir., Zonite Products Corp., Brunswick, N. J. **PHARMACEUTICAL CHEMISTRY**.

LOCKE, Augustus, Consulting Mining Geologist 1275 San Mateo Dr., Menlo Park, Calif. **MINING GEOLOGY**.

LOCKE, Edwin Allen, retired, Wilton, N. H. **MEDICINE**.

LODER, Halsey Beach, Surgeon, 520 Commonwealth Ave., Boston, Mass. **SURGERY**.

LODEWICK, John Elton, Forest Products Analyst, Bonnaville Power Admin., 4014 N. E. Flanders St., Portland, Ore. **WOOD TECHNOLOGY**.

LODHOLZ, Edward, Prof. of Physiol. Emer., Univ. of Pa., 431 S. 45th St., Philadelphia, Pa. **PHYSIOLOGY**.

LOEB, Edwin Meyer, Rsch. Assoc. Ethnogeography, Univ. of Calif., Berkeley, Calif. **ETHNOLOGY**.

LOEB, Frederick Robert, Lambert Prof. Med. and Attending Physician, Coll. Physicians and Surgeons, Columbia Univ., and Assoc. Attending Physician Presbyterian Hosp., N. Y., N. Y. **INTERNAL MEDICINE**.

LOEB, Leo, 40 Crestwood Dr., St. Louis 5, Mo.

LOEB, Leonard Benedict, Prof., Physics, Univ. of Calif., Berkeley, Calif. **PHYSICS**. b. Zurich, Switzerland, Sept. 16, 1891. s. Jacques and Anne (Leonard) L. m. Lora Lane of Eureka, Calif., June 9, 1928, Divorced, Nov. 9, 1940. m. Charlotte Pearson of Alameda, Calif., May 9, 1941. c.: Anne Leonard; Jacqueline Lora; Diana Benedict; Valerie Jean. Edn.: S.B., Chem., Chicago Univ., 1912; Ph.D., Physics, 1916; Natl. Rsch. Fellow, Chicago, 1919-23; Manchester

Univ., England, 1919. Exp.: Asst. Phys., Univ. of Chicago, 1914-16; Lab. Asst. and Asst. Physicist, U. S. Bur. of Standards, 1916-17; 2nd Lt., Air Serv., U. S. Army, A. E. F., 1917-19; Asst., Univ. of Manchester, 1919; Natl. Rsch. Fellow in Physics, 1919-23; Asst. Prof., Physics, Univ. of Calif., 1923-25; Assoc. Prof., 1925-29; Prof., 1929-41, 1941 on Leave of Absence to Active Duty with U. S. Naval Proving Ground, Dahlgren, Va., as Comdr., U.S.N.R.; Recalled to Univ. of Calif., Aug., 1941; (On Leave), 12-Naval Dist., July, 1942 to Sept., 1944, European Theater to Jan., 1945; Asst. to Officer in Chg. of Naval Ord. Lab., Wash., D. C., Jan.-July, 1945; Returned to Univ. of Calif., 1945; Capt., U.S.N.R., Mar., 1943—; In Elect. Inst., Univ. of Mich., Summer, 1937; (Ret. 1951). Cit.: "Useful Citizen" U. Chi., July, 1944. Mem.: 38 Kelvin Lectr. Inst. El. Engrs. London, Apr. 24, 1947; Fellow, Amer. Physics Soc.; Opt. Soc. Amer.; German Phys. Soc.; Fellow, Phys. Soc., London; French Phys. Soc.; Geophysical Union; Franklin Inst.; Philos. Soc., Wash., N. Y. Acad. Scis.; Sigma Xi; Phi Beta Kappa; A.A.A.S.; A.A.U.P.; Scabbard and Blade; U. S. Naval Inst.; Cosmos Club, Wash., D. C. Ph.D. Dissertation: Mobilities of Gaseous Ions in High Electric Fields. Author: Kinetic Theory of Gases, 1927; Nature of a Gas, 1931; Fundamentals of Elec. and Magnetism, 1931; Edn. Physics of Crystals by Joffe, 1928; Develop. of Phys. Thought, 1933; 2nd Edition, Kinetic Theory, 1934; Lab. Manual of Electricity and Magnetism, 1936; Atomic Structure, 1938; 2nd Edition, Fundamentals in Electricity and Magnetism, 1938; Fundamental Processes of Electrical Discharge in Gases, 1939; The Mechanism of the Electrical Spark with J. M. Meek, 1941; 3rd Edition, Fundamentals of Electricity and Magnetism, 1947, Conduction Electricity in Gases Vol. 8, Encyclopedia Britannica, 1947. Contrb. to: Phys. Rev.; Proc. Natl. Acad.; Sci. Jour.; Jour. Franklin Inst.; Sci.; Zeitschrift fur Physik; Ann. der Physik; Jour. Applied Phys. Rev.; Mod. Phys. Special Int.: Electrical breakdown of Gases, Gaseous Electronics; Cooperating Expert on Gaseous Ions Internatl. Critical Tables; Atomic Physics, Kinetic Theory of Gases, Gaseous Electronics.

LOEB, Robert Frederick, 620 W. 168th St., Coll. of Physicians and Surgeons, N. Y. 32, N. Y.

LOEB, Virgil, Lectr. in Stomatology, Schl. of Med., Wash. Univ., St. Louis, Mo. STOMATOLOGY.

LOEFER, John B., Hd. Biol. Div., Foundation Applied Rsch., 1804 Milam Bldg., San Antonio, Tex. BIOLOGY.

LOEWING, Walter Ferdinand, Dean, Grad. Coll., Prof. and Hd. of Bot., State Univ. of Ia., Iowa City, Ia. BOTANY. s. Charles Henry Loehwing and Emily Augusta (Hildebrandt) L. Edn.: B.S., Univ. of Chicago, 1920; M.S., ibid., 1921; Ph.D., ibid., 1925. m. Helen Cromer, Union, Ia., 1936. d. Emory and Lela Cromer. Exp.: Prof. and Hd. of Chem., Dean, Okla. State Schl. of Mines, Miami, Okla., 1921-23; Asst. Prof., Bot., State Univ. of Ia., 1925-28; Assoc. Prof., ibid., 1928-31; Prof., ibid., 1931; Prof. and Hd. of Bot., 1940—; Dean, Grad. Coll., 1950—. Hon. Pos.: Pres., Amer. Soc. Plant Physiol., 1938-39. Mem.: A.S.P.P.; Fellow, A.A.A.S., Vice-Pres., 1947 and Chmn., Sect. G, 1947; Ia. Acad. of Sci., Amer. Soc. Natl. A.C.S.; Amer. Soc. Agron.; Soc. Exptl. Biol. and Med.; Sigma Xi, Pres., Ia. Chapt., 1931-32; Bot. Soc. Amer.; Vice-Pres., 1946-47; Genetics Soc. of Amer.; Gamma Alpha; Acacia; Sigma Xi; Kiwan's; Lt. Gov., Nebr.-Iowa Dist., 1943. Contrb.: Sci.; Plant Physiol.; Amer. Jour. Bot.; Botl. Gaz., Sci. War Record; Field Art., 1917-20, U. S. and A.E.F. Travel: Europe, 1918, 1919, 1935. Achievements of Gen. Int.: U. S. Govt. Delegate, 6th Internatl. Bot. Congress, Amsterdam, 1935; Editor-in-Chief (Jour. of) Plant Physiol., 1945—. Special Int.: Mineral Nutrition, Physiology of Plant Growth and Development.

LOEL, Wayne, Consulting Geologist, 808 Subway Terminal Bldg., Los Angeles, Calif. PETROLEUM, MINING GEOLOGY.

LOEW, Fred Aaron, Prof. of Biol., Huntington Coll., Huntington, Ind. BOTANY.

LOEWEN, Solomon Leppke, Prof. of Biol., Tabor Coll., Hillsboro, Kans. PARASITOLOGY.

LOEWI, Otto. PHARMACOLOGIST.

LOFGREN, Ruth, 1308 Geddes Ave., Ann Arbor, Mich. MEDICAL SCIENCES.

LOFTNESS, Robert Leland, Sci. Attache, American Embassy, Stockholm, Sweden. CHEMICAL ENGI-



NEERING. b. Devils Lake, N. Dak., Feb. 14, 1922. s. George O. and Annette (Monson) L. Edn.: B.S., Coll. of Puget Sound, 1943; M.S., Univ. of Wash., 1947; D.Sc., Swiss Federal Inst. of Tech., 1949. m. Doris Canrobert, Aug. 31, 1946. c.: Stanley L.; Vivian E. Exp.: Rsch. Engr., Univ. of Calif. Radiation Lab., 1943-45; Tchng. Fellow, Univ. of Wash., 1946-47; Fellowship, Internatl. Inst. of Edn., 1947-49; Rsch. Engr., N. Amer. Aviation, Downey, Calif., 1949-51; Sci. Attache, Foreign Service of the U. S., Stockholm, Sweden, 1951—. Mem.: Amer. Chem. Soc.; A.A.A.S.; Foreign Service Assn. War Record: U. S. Army, 1945-46. Special Int.: Phys. Chem.; Chem. Engrng.; Dielectric Properties of Chem. Systems; Corrosion Phenomena; Liquid Metal and High Temperature Chem.; Sci. Liaison and Effect of Scientific Progress on Society.

LOFTON, William Milford, Jr., Asst. Dir., Inst. Industrial Rsch., 3305 Linnet Rd., Louisville, Ky. ORGANIC CHEMISTRY.

LOGAN, Milan Alexander, Prof. of Biochem., Cincinnati Coll. of Med., Edan Ave., Cincinnati, Ohio. BIOCHEMISTRY.

LOGSDON, Mrs. Mayme I., Prof. Emer., Univ. of Chicago; Prof. of Math., Univ. of Miami, Coral Gables, Fla. MATHEMATICS.

LOGUE, Paul, Dir. of Market Development, Phosphate Div., Monsanto Chem. Co., 1700 S. Second St., St. Louis 4, Mo. PHOSPHATES, LEAVENING; WETTING AGENTS, DETERGENTS. b. Hampshire, Tenn., Aug. 12, 1895. s. Samuel Rutledge and Cora Elizabeth (Worley) L. Edn.: A.B., Univ. of Tenn., 1916. m. Mary Wheeler Maury, June 8, 1921. c.: Paul Maury; William Rutledge. Exp.: Foreman, Federal Dyestuffs and Chem. Co., Kingsport, Tenn., 1916-17; Supt., Charleston Chem. Co., Boston, Mass., 1918-21; Inspector, Natl. Aniline and Chem. Co., Buffalo, N. Y., 1922-23; Chem. Dir., Swan Corp., Birmingham, Ala., 1924-35; Vice-Pres., ibid., 1936-37; Dir. of Market Development, Phosphate Div., Monsanto Chem. Co., St. Louis, Mo. 1938—. Mem.: Amer. Chem. Soc.; Amer. Assn. Cereal Chemists; Amer. Inst. of Chem. Engrs.; Inst. of Food Technologists; Phi Kappa Phi. Contrb. to: Chem. Industries; Cereal Chem. Special Int.: Inorganic Phosphates; Chem. Leavening; Synthetic Detergents and Wetting Agents.

LOHMAN, Kenneth Elmo, Sr. Geologist, U. S. Geol. Survey, Washington, D. C. MICROPALaeONTOLOGY.

LOHMAN, Marion Lee, Assoc. Plant Pathologist, Sugar Plant Investigation, Soils and Agri. Engrng., U. S. D. A., Agri. Expt. Sta., Mich. State Coll., East Lansing, Mich. PLANT PATHOLOGY.

LOKENS GARD, Rudolph L., Math. Dept., S. T. C., Winona, Minn. MATHEMATICS. b. September 11, 1902, Madison, Minn. s. Ole Lokensgard and Anna Rontvedt (Lokensgard). Edn.: Public Schl., Hanley Falls, Minn.; B. A., St. Olaf Coll., Northfield, Minn., 1924; M.S., Univ. of Iowa, Iowa City, Iowa, 1932; (grad. work Univ. of Minn., Minneapolis, Minn., 1932-33); Ed.D., Columbia Univ., N. Y., 1939. m. Borghild Larsen, Mauston, Wis., Aug. 13, 1935. d. Lars and Lena.

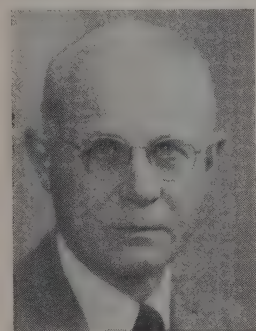
Larsen, c. Solveig, Haakon Erik. Exp.: H. Schl. Prin., Flaxton, N. D., 1924-25; H. S. Prin., Harmony, Minn., 1925-26; H. S. Math. Tchr., Proctor, Minn., 1926-31; Math. Instr., State Tchrs. Coll., Mankato, Minn., 1934-35; Asst. Prof. of Math. and Ed., State Coll., Brookings, S. D., 1937-38; Asst. Prof. of Math. Edn., P. K. Yonge Schl. Univ. of Fla., Gainesville, Fla., 1940-41; Vis. Lectr. in Edn., Ohio Univ., Athens, Ohio, summer, 1941; Dean of Men, Concordia Coll., Moorhead, Minn., 1941-42; Math. S. T. C. Whitewater, Wis., Jan. 1946-Sept. 1946; S. T. C., Winona, Minn., Sept. 1946—. Mem.: A.A.U.P.; Phi Delta Kappa; Kappa Delta Pi; Natl. Edn. Assn.; Minn. Edn. Assn.; Natl. Coun. of Tchrs. of Math.; Math. Assn. of Amer.; Lutheran Brotherhood. Ed.D. Dissertation: The Development of a Background course of Math. for the Prospective Tchr. of Arith. in the Grades. War Record: Lt. (S.). U.S.N.R., March, 1943—; U. S. Naval V-12 Unit, Univ. of N. M., Albuquerque, N. M.; NROTC, Stanford Univ., Calif., Lt. Comdr., Oct., 1945. Released to Inactive Duty, Jan., 1946. Listed in: Amer. Young Men, Vol. III, 1938-39.

LONG, Bayard, 250 Ashbourne Rd., Elkins Park, Philadelphia, Pa.

LONG, Cyril Norman Hugh, Yale Univ., Schl. of Med. 33 Cedar St., New Haven 11, Conn. BIO-CHEMISTRY.

LONG, David Daniel, Chf., Feed and Fertilizer Rsch., Internatl. Minerals and Chemical Corp., 20 N. Wacker Dr., Chicago, Ill. PLANT NUTRITION.

LONG, Esmond R(ay), Dir. Henry Phipps Inst., Univ. of Pa.; Dir., Med. Rsch., Natl. Tuberculosis Assn., Phila., 47, Pa. TUBERCULOSIS-PATHOLOGY, b. June 16, 1890, Chicago, Ill. s. John Harper and Catherine (Stoneman) L. Edn.: A.B., Univ. of Chicago, 1911; Ph.D., ibid., 1919; M.D., 1921; Med. Coll. Univ. of Chicago, 1926; Hon. Sc.D., Univ. of Pa., 1948. m. Marian E. Boak of Denver, Colo., June 17, 1922. d. Mr. and Mrs. I. I. Boak. c.: Judith Baird (Mrs. John Pin-cus); Esmond R., Jr. Exp.: Instr. to Prof. of Pathol., Univ. of Chicago, 1919-32; Prof. of



Pathol., Univ. of Pa., 1932—; Dir., Henry Phipps Inst., 1935—; Dir. Lab., ibid., 1932-35; Pres., Wistar Inst. of Anat. and Biol., 1939-42; Chmn., Div. of Med. Sci., N. R. C., 1936-39. Mem.: A.C.P.; A.A.P.; A.A.P.B.; A.A.H.M.; Amer. Philos. Soc.; A.P.H.A.; Natl. Tuberculosis Assn.; Natl. Acad. of Sci.; Beta Theta Pi; Nu Sigma Nu; Sigma Xi; Phi Beta Kappa; Alpha Omega Alpha. Author: Chem. of Tuberculosis (with H. G. Wells), 1923; 2nd. Ed., 1932; A Hist. of Pathol., 1928; Selected Readings in Pathol., 1929. War Record: Lt. Col., Med. Corps, 1942-43; Col., Med. Corps, 1943-46; Army of U. S.; Serv. U. S. A. and Mediterranean and European Theatres of Operations; Chf. Consultant on Tuberculosis in Army. Gen. Int.: Rsch. on Tuberculosis. Listed in: A.M.S.; Who's Who in Amer.

LONG, James Scott, Chem. Dir., Devco and Raynolds Co., Inc., Box 328, Louisville, Ky. CHEMISTRY; PAINT AND VARNISH. b. York, Pa., Aug. 11, 1892. s. William Lawrence and Anna Jane (Wellensick) L. Edn.: Ch.E., Lehigh Univ., 1914; M.S., ibid., 1915; Ph.D., Johns Hopkins Univ., 1922. m. Harriet Wilkinson (dec). 2nd m. Grace Foster, July 23, 1949. c.: James Scott, Jr.; Harriet Jane. Exp.: Instr., Lehigh Univ., 1914-16; Asst. Prof., ibid., 1916-20; Assoc. Prof., ibid., 1920-25; Prof., ibid., 1925-34; Chem. Dir., Devco and Raynolds Co., Inc., 1934. Mem.: Amer. Chem. Soc.; Fellow, Amer. Soc. Chemists; Amer. Concrete Soc.; Electrochem. Soc.; British Oil and Color Chem. Assn.; Federation Paint and Varnish Production Clubs; Tau Beta Pi; Sigma Xi; Theta Xi. Author: Chem. Calculations, 1918. Contrb. to: Jour. Indus. and Engrng. Chem.; Jour. Oil and Color Chem. Assn.

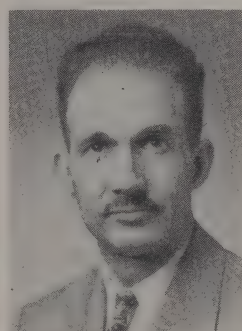
of Great Britain; etc. Special Int.: Drying Oils; Paint and Varnish.

LONG, Louis, Asst. Prof., Div. Testing and Guidance, Amsterdam and 138th Sts., Coll. City of N. Y., N. Y., N. Y. PSYCHOLOGY.

LONG, Norman O., Head of Chem. Dept., Evansville Coll., Evansville, Ind. CHEMISTRY.

LONG, Perrin H., Prof. of Preventive Med., Schl. of Med., Johns Hopkins Univ., Baltimore, Md. MEDICINE.

LONG, Sam, Chem. Engr., Reasor-Hill Corp., Jacksonville, Ark. CHEMICAL ENGINEERING. b. Kent, Ohio. b. Feb. 24, 1915. s. Jeremiah I. and Erna (Hahn) L. Edn.: B.S., Kans. State Coll., 1937; M.S., ibid., 1939. Exp.: Job Analyst, U. S. Employment Service, 1940-41; In Chg., Penicillin Fermentation, Lederle Labs., Pearl River, N. Y., 1946-48; Prod. Engr., J. T. Baker Chem. Co., Phillipsburg, N. J., 1948-49; Self Employed, 1949-50; Salesman, Plant Supt., Zehrung Chem. Co., Portland, Ore., 1950-52; Chem. Engr. Chem. Corps, U. S. Army Arsenal, Ark., 1952-53; Chem. Engr., Reasor-Hill Corp., Jacksonville, Ark., 1953—. Mem.: Amer. Chem. Soc.; Phi Lambda Upsilon; Sigma Xi. Special Int.: Production.



LONG, William Henry, retired, 1028 N. Sixth St., P. O. Box 1478, Albuquerque, N. Mex. TAXONOMIC FUNGI.

LONGLEY, Albert Edward, Rsch. Botany, Cytologist, U. S. D. A., Calif. Inst. of Tech., Pasadena, Calif. CYTOLOGY, GENETICS.

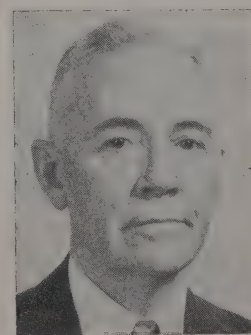
LONGNECKER, William Mayne Prof. of Biol., Southern Methodist Univ., Dallas, Tex. BOTANY.

LONGSTREET, Rupert James, Supvng. Prin., Seabreeze H. S., 610 Braddock Ave., Daytona Beach, Fla. EDUCATION.

LONGSWORTH, Lewis Gibson, Rockefeller Inst. for Med. Rsch., 66th St. and York Ave., N. Y. 21, N. Y.

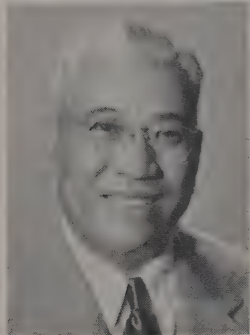
LONSDALE, John Tipton, Dir., Bureau Econ. Geol., Univ. of Tex., Austin, Tex. GEOLOGY.

LONGWELL, Chester Ray, Prof. of Geol., Yale Univ., New Haven, Conn. STRUCTURAL GEOLOGY. b. Spalding, Mo., Oct. 15, 1887. s. John Kilgore and Julia (Megown) L. Edn.: A.B., Univ. of Mo., 1915; A.M., ibid., 1916; Ph.D., Yale Univ., 1920. Hon. Deg.: LL.D., Univ. of Mo., 1940. m. Irene Moffat, June 18, 1935. c.: Flora May; Ray Megown. Exp.: Asst. Geologist, Okla. Geol. Survey, 1916; Instr., Yale Univ., 1916-17; Capt., Field Artillery, A.E.F., 1917-19; Asst. Prof., Yale Univ., 1920-26; Assoc. Prof., ibid., 1926-29; Henry Barnard Davis Prof. of Geol., ibid., 1929—; Chmn., Dept. of Geol., ibid., 1938-46; Asst. Geologist to Geologist, U. S. Geol. Survey, 1921—; Editor, Amer. Jour. Sci., 1949—. Hon. Pos.: Chmn., Div. of Geol. and Geog., Natl. Rsch. Council, 1937-40; Vice-Pres., Section E, A.A.A.S., 1942; Pres., Geol. Soc. Amer., 1949; Com. Mem., Rsch. and Development Bd., Dept. of Defense, 1946-48. Mem.: A.A.A.S.; Geol. Soc. of Amer.; Amer.



Geophys. Union; Seismolog. Soc. Amer.; Amer. Assn. Petroleum Geologists; Natl. Acad. Sci.; Amer. Philos. Soc.; Societe Geologique de Belgique; Socdad Mexicana d Geografia y Estadistica; Phi Beta Kappa; Sigma Xi; Gamma Alpha; Delta Sigma Rho. Co-author: Geol. from Original Sources, 1929; Physical Geol., 1932, 1939, 1948; Outlines of Physical Geol., 1934, 1941. Contrb. to: Amer. Jour. Sci.; Jour. Geol.; Sci.; Geol. Soc. of Amer. Bull.; etc. War Record: Capt., Field Artillery, World War I. Special Int.: Geologic Structure of Central Conn.; Field Studies of Geologic Structure in Southern Nev. and Northwestern Ariz., from 1919 to present.

LOO, Y. Sann, retired, Pharmacist for Queen's Hospital and People Drug Co., 1402 Lusitana St., Honolulu 13, Hawaii.



PHARMACEUTICAL CHEMISTRY AND PHARMACY. b. Honolulu, Oahu, T. H., May 5, 1895. s. P. S. Loo and Wahsoy Lum. Edn.: Ph.G., Ph.C., Valparaiso Univ., m. Helen T., July 17, 1917. c.: Kirby, Katherine. Exp.: Chemist, Reid, Murdoch Co., Chicago, Ill., 1921; Manager, Kaimuki Drug Co., Honolulu, T. H., 1922; Pharmacist for Queen's Hospital and People Drug Co., Honolulu 13, Hawaii, 1922-37; Owner of Loo's Drug Stores, Honolulu, Hawaii, 1923-51. Hon. Pos.: Pres. Mills Alumni Assn.; Pres. Precinct Club Republican Party; Commander, Kau-Tom Post., Amer. Legion. Mem.: A.Ph.A.; A.A.A.S.; Amer. Chem. Soc.; Hawaii Pharmaceutical Soc.; Hawaii Chinese Civic Assn.; Lions Club. Gen. Int.: Manufacturer of COFANCOL, Z-OLENE and other patent Medicines.

LOO, Yen Hoong, Rsch. Biochemist, Eli Lilly and Co., Indianapolis, Ind. **BIOCHEMISTRY.** b. Honolulu, Hawaii, Dec. 19, 1914. d. Loo Goon and Luke (Sun) L. Edn.: B.A., Barnard Coll., 1937; M.A., Univ. of Mich., 1938; Ph.D., ibid., 1943. Exp.: Postdoctorate Fellow, Univ. of Tex., 1943-44; Rsch. Asst., Univ. of Ill., 1944-51; Biochemist, Natl. Heart Inst., 1951-52; Rsch. Biochemist, Eli Lilly and Co., Indianapolis, Ind., 1952—. Mem.: Amer. Chem. Soc.; A.A.A.S.; Sigma Xi; Phi Kappa Phi. Contrb. to: Jour. Bacteriol.; Arch. Biochem.; Jour. Biol. Chem.; Jour. Amer. Chem. Soc. Special Int.: Antibiotics; Biochem. of Micro Organisms.



LOOFBOUROW, John Robert, Prof. of Biophysics and Exec. Officer, Dept. of Biol. Mass. Inst. of Tech., Cambridge, Mass. **BIOPHYSICS.**

LOOMIS, Alfred Lee, The Loomis Lab., Rm. 2420, 14 Wall St. N. Y. 5, N. Y.

LOOMIS, Frances Wheeler, 804 W. Illinois St., Urbana, Ill.

LOOMIS, Frederic, retired, 516 Park Way, Piedmont, Calif. **OBSTETRICS, GYNECOLOGY.**

LOOMIS, Harold Frederick, Sr. Agronomist in Chg., U. S. Plant Introduction Garden, Coconut Grove, Fla. **TROPICAL HORTICULTURE.**

LOOMIS, Walter Earl, Prof. of Botany and Rsch. Prof. of Botany and Plant Pathol., Iowa State Coll., Agri. Expt. Sta., Ames, Iowa. **PLANT PHYSIOLOGY.**

LOONEY, Joseph Michael, Endocrinologist, Veterans Admin. Hosp., 75 Park St., West Roxbury, Mass. **ENDOCRINOLOGY.**

LOOS, Hendricus G., Rsch. Fellow in Jet Propulsion, Calif. Inst. of Tech., Pasadena, Calif. **FLUID MECHANICS.** b. Amsterdam, The Netherlands, Dec. 18, 1925. s. Fredrick W. and Alida W. (Haarms) I. Edn.: B.S., Univ. of Amsterdam, 1950; M.S., ibid., 1951; Ph.D., Inst. of Tech., Delft, The Netherlands, 1952. m. Jansje Roos, May 21, 1952. Exp.: Rsch. Asst., Natl. Aeronautical Rsch. Inst., Amsterdam, The Netherlands, 1946-50; Rsch. Engr., ibid., 1950-52; Rsch. Fellow in Jet Propulsion, Calif. Inst. of Tech., Pasadena, Calif., 1952—. Contrb. to: Jour. of Aeronautical Sci.; Verslagen en Verhandeligen Van het NLL; Verslageneers Votheadeligen Gen Van Bet National; Applied Mechanics Reviews. Special Int.: Aerodynamical Interference Problems, Internal Aerodynamics.

LOOSANOOF, Victor L., U. S. Fish and Wildlife Service, Milford, Conn. **OYSTER BIOLOGY.**

LOOSLI, J. K., Lab. of Animal Nutrition, Cornell Univ., Ithaca, N. Y. **ANIMAL NUTRITION.**

LOPEZ, Victor M., Exec., Industrias Unidas, S. A.; Saico, S. A., Instalaciones Industriales; Apartado 3585, Caracas, Venezuela. **GEOLOGY.** b. Apr. 17, 1905, Valencia, Venezuela.



s. Eudoro and Rafaela (Ortega) L. Edn.: B.S., Mining Engr., Columbia Univ., N. Y., 1930; Mont. State Schl. of Mines, 1925-27; Engr. of Mines, Columbia, 1930; M.S., Geol., M. I. T., 1937; Ph.D., ibid., 1938; Engr. of Mines, Universidad Central de Venezuela, 1941; Geol., ibid., 1941. m. Esther Lazo of Caracas, Venezuela, 1939. d. Eusebio and Ismenia Medina Lazo. c.: Victor José; Alvaro Leopoldo; Rafael Ernesto; Milagros

Victoria. Exp.: Anaconda Copper Mining Co., 1925-27; Chile Exploration Co., Chile, 1930-36; Geol., Dir. del Servicio Tecnico de Minería y Geología, Ministerio de Fomento, Caracas, Venezuela, 1937-47; Consultant, Engr. and Exec. Officer, Banco Ind. de Venezuela, Indust. Unidas, S. A., 1948-50; C. A., S.A.I.C.O.; Dean of the Schl. of Geol., Universidad Central de Venezuela, 1938-43; Prof., Ad-Honorem, Schl. of Geol., Universidad Central de Venezuela. Mem.: A.I.M.M.E.; Soc. de Ingenieros del Peru; Sociedad Minera de Chile; Colegio de Ingenieros de Venezuela; Fellow, Geog. Soc. of Amer. Soc. Ecol. Geol.; Mineralol. Soc. of Amer., Fellow; Fellow, Geol. Soc. of London; Academia de Ciencias Fisicas, Mathematicas y Naturales de Venezuela; etc. Author: The Primary Mineralization at Chuquicamata, Chile, 1939; Econ. Geol., Vol. 34, No. 6; Atomic Packing Models of Some Silicate Structures (Co-author), 1938; Geol. of Island Gran Roque, 1938; Exploracion de la Gran Sabana, 1939; etc. Ph.D. Dissertation: The Primary Mineralization at Chuquicamata, Chile. War Record: Citation of Med. of Freedom with Bronze Palm, War Dept., U. S. A. Travel; U. S.; Mexico; Central Amer.; Antillas and S. Amer. Gen. Int.: Medal of Honor of Pub. Edn., by Venezuelan Govt.; Medal of Order of Petion de Bolivar, Republic of Haiti; Gold Medal for Sci. Work from Sociedad de Ciencias Naturales de Venezuela. Hobbies: Photography; Gunnery. Listed in: Who's Who in Engrng.; Who Knows—and What; A.M.S.

LORANGER, William Farrand John, Rsch. Chemist, Box 8599, Wright Air Development Center, Wright-Patterson Air Force Base, Ohio. **X-RAY DIFFRACTION AND SPECTROMETRY, INSTRUMENTAL ANALYSIS.** b. Detroit, Mich., Nov. 6, 1925. s. Edward Joseph and Winifred (Terteling) L. Edn.: B.A., Denison Univ., 1947; M.S., Univ. of Ill., 1950; Ph.D., ibid., 1952. Exp.: Rsch. and Development, Fabricators, Inc., Detroit, Mich., 1944; Rsch. Lab. Div., G.M.C., Detroit, Mich., 1945-46; Rsch. Asst., Ill. State Geol. Survey, Urbana, Ill.,

1947-49; Tchng. Fellow, Univ. of Ill., 1949-51; Rsch. Chemist, Wright-Patterson Air Force Base, Ohio, 1951—. Mem.: Amer. Chem. Soc.; Ill. State Acad. of Sci.; A.A.A.S.; Sigma Xi; Scientific Rsch. Soc. of Amer.; Kappa Sigma; Phi Lambda Upsilon; Omicron Delta Kappa; Pi Delta Epsilon. Contrb. to: Jour. of Amer. Chem. Soc.; Jour. of Scientific Labs.; Analytical Chem. Special Int.: Quantitative X-Ray Spectrometry; Lubrication Phenomena; X-Ray Diffraction and Small Angle Scattering; Cerate Oxidimetry; Use of Perchloric Acid.

LOPEZ-INIGO, Maria A., Instr. in Chem., Coll. of Sci., Univ. of Puerto Rico, 1804 Fdez. Juncos Ave., Apt. 51, Santurce, Puerto Rico. **BIOCHEMISTRY.** b. Anasco, Puerto Rico, Mar. 22, 1916. d. Juan B. López and Julia Iñigo de López. Edn.: B.S. Univ. of Puerto Rico, 1936. Exp.: Tch. of Chem. and Physics. H. S. Lares, Puerto Rico, 1936-38; Instr. in Chem., Coll. of Engrng., Univ. of Puerto Rico. Mayagüez, Puerto Rico, 1946-49; Instr. in Chem., Coll. of Sci., *ibid.*, 1949—. Mem.: Amer. Chem. Soc. Special Int.: Assay of Vitamin B₁₂ in Milk; Binding of Radioactive Thyroxine



by Serum Proteins and Other Proteins.

LORD, Erskine D., Supt., J. S. Barnet and Sons, Inc., 128 Boston St., Lynn, Mass. **CHEMISTRY.**

LORD, George Ross, Prof. of Mech. Engrng., Univ. of Toronto, Toronto, Ont., Can. **HYDRAULICS; FLUID MECHANICS; WATER POWER; FLOOD CONTROL.** b. Peterborough, Ont., Can., Feb. 2, 1906. s. Edward Everet and Katherine (Manser) L. Edn.: B.A., Univ. of Toronto, 1929; S.M., Mass. Inst. of Tech., 1932; Ph.D., Univ. of Toronto, 1939. m. Catherine Nancy Wilson, Sept. 10, 1932. c.: Nancy Anne; David; Robert; Douglas; John; Barbara. Exp.: Consultant on Mine Ventilation, McIntyre, Lakeshore, Macassa, Falconbridge Mines, 1936-40; Water Power Engrng., Hydro Elec. Power Commn. of Ont., 1937-53; Flood Control, Dept. of Planning and Development, Govt. of Ont.; Lectr., Univ. of Toronto, 1934; Asst. Prof., *ibid.*, 1939; Assoc. Prof., *ibid.*, 1944-50; Prof., *ibid.*, 1951—. Mem.: Amer. Soc. Mech. Engrs.; Engrng. Inst. Can.; Assn. Professional Engrs. of Ont.; Engrs. Club of Toronto. Special Int.: Fluid Mechanics; Water Power; Flood Control.

LORD, R. C., Prof., Dept. of Chem., Mass. Inst. of Tech., Cambridge, Mass., **SPECTROSCOPY.**

LORENSEN, R. G., Shell Development Co., Emeryville, Calif. **LUBRICATION.**

LORENTE de NO, Rafael, Rockefeller Inst. for Med. Rsch., 66th St. and York Ave., N. Y. 21, N. Y.

LORENZ, Egon, Argonne Natl. Lab., Chicago, Ill. **RADIOBIOLOGY.**

LORENZ, Rolland Carl, Sr. Plant Pathologist, Office Foreign Agri. Relations, U. S. D. A., Washington, D. C. **FOREST PATHOLOGY.**

LORGE, Irving, Prof. of Edn., Tehrs. Coll., Columbia Univ., N. Y., N. Y. **PSYCHOLOGY.**

LORING, Blake Marshall, Lt., U.S.N., Tech. Officer, 4044 2nd St., S. W., Washington 20, D. C. **PHYSICAL METALLURGY.** b. Belmont, N. H., Mar. 21, 1914. s. Arthur and Berth May (Hutchinson) L. Edn.: S.B., Mass. Inst. of Tech., 1937; Sc.D., *ibid.*, 1940; M.A., George Washington Univ., 1945. m. Clara Marion, 1942. c.: Richard Blake; Marion Evans; Marguerite Alice. Exp.: Rsch. Asst., Mass. Inst. of Tech., Cambridge, Mass., 1937-40; Asst. to Sr. Metallurgist, Hd. of Nonferrous Branch, U. S. Naval Rsch. Lab., Washington, D. C., 1940-50; Active Duty as Lt., U.S.N., U. S. Naval Ord. Lab., Washington, D. C., 1951—. Mem.: Amer. Soc. for

Metals; Amer. Inst. of Mining and Metallurgical Engrs.; British Inst. of Metals; Amer. Foundrymen's Soc.; Mason. Contrb. to: Trans. of Amer. Inst. of Mining and Metallurgical Engrs.; Trans. of Amer. Foundrymen's Soc. and Metal Progress. Special Int.: Heat Treatment of Steel; Special Alloy Steels; Nonferrous Alloys; Titanium; Magnesium; Aluminum.

LORING, Ralph Alden, Prof. and Hd., Dept. of Physics, Univ. of Louisville, Louisville, Ky. **SPECTROSCOPY.**

LORY, Charles Alfred, Pres. Emer., Colo. State Coll. A. and M., Fort Collins, Colo.; Box 546, Estes Park, Colo. **EDUCATION, ENGINEERING, IRRIGATION.**

LOTHROP, Samuel Kirkland, Peabody Museum, Harvard Univ., Cambridge 38, Mass.

LOTKA, Alfred James, Asst. Statistician, Metropolitan Life Ins. Co., 1 Madison Ave., N. Y., N. Y. **MATHEMATICAL STATISTICS.**

LOUD, Oliver Schule, Assoc. Prof. of Physical Sciences, Antioch Coll., Yellow Springs, Ohio. **SCIENCE IN GENERAL EDUCATION.**

LOUDERBACK, George Davis, Prof. Emer. Geol., Univ. of Calif., 107 Ardmore Rd., Berkeley, Calif. **GEOLOGY.**

LOUGEE, Flora Marion, Prof. of Chem., Keuka Coll., Keuka Park, N. Y. **CHEMISTRY.**

LOUGHRIDGE, Gasper A., Prof. of Biol., Davis and Elkins Coll., Elkins, W. Va. **BOTANY.** b. N. Vernon, Ind., Nov. 7, 1900. s. Arthur J. and Mary Emma (Blair) L. Edn.: B.A., Ind. Univ., 1925; Ph.D., Rutgers Univ., 1931. Exp.: Agronomist, Soil Conservation Ser., Upper Darby, Pa., 1935-42; Prof. of Biol., Davis and Elkins Coll., Elkins, W. Va., 1947—. Mem.: Sigma Xi; Chi Beta Phi. Ph.D. Dissertation: Nature and development of the tracheids in the Ophioglossaceae. War Record: Lab. Technician, Med. Section, U. S. Air Corps, 1942-45. Hobbies: Prints; Stamps. Listed in: A.M.S.

LOVE, Harry H., Prof. and Hd., Dept. of Plant Breeding, Cornell Univ., Ithaca, N. Y. **PLANT BREEDING, GENETICS.**

LOVE, Theodore Arceola, Prof. of Math. and Hd. Dept., Tenn. A. & I. State Univ., Nashville, Tenn.



MATHEMATICS. b. Columbus, Ga., May 25, 1909. s. Miledge and Mary (Lockhart) L. Edn.: A.B., Talladega Coll., 1929; M.A., Univ. of Mich., 1932; Ph.D., N. Y. Univ., 1951. m. Mabel Robinson, Apr. 27, 1943. Exp.: Dir. of Academic Dept., Instr. in Math. and Sci., Southern Normal Schl., Brewton, Ala., 1929-34; Instr. in Math., Lab. H. S., State Tehrs. Coll., Montgomery, Ala., 1934-38; Prin., *ibid.*, 1938-42; Prof. of Math. and Edn., *ibid.*, 1946-51; Prof. of Math. and Hd. of Dept., Tenn. A. & I. State Univ., Nashville, Tenn., 1951—. Mem.: Phi Delta Kappa; Beta Kappa Chi; Kappa Delta Pi; Amer. Math. Soc.; Omega Psi Phi. War Record: Capt., Corps of Engrs., World War II, 1942-46. Special Int.: Statistics; Problem Solving.

LOVE, J. Grafton, Neurological Surgeon, Mayo Clinic, Rochester, Minn. **NEUROLOGICAL SURGERY.** b. Elizabeth City, N. C., Oct. 7, 1903. s. William Thomas and Mary (Ball) L. Edn.: B.A., Wake Forest Coll., 1925; M.D., Univ. of Pa., 1927; M.S., Univ. of Minn., 1932. Hon. Deg. Sc.D. Wake Forest Coll., 1952. m. Mary Elizabeth Terry, June 29, 1933. c.: Benjamin Terry; J. Grafton, Jr.; David Milton, II; Rebecca. Exp.: Fellow in Surgery, Mayo Found., 1929-32; Transferred to Neurological Surg.,

ibid., 1933; Assoc. in the Section on Neurological Surgery, ibid., 1934—; Instr. in Neurosurgery, Univ. of Minn. Grad. Schl., 1933-35; Asst. Prof., ibid., 1936-41; Assoc. Prof., ibid., 1942-50; Prof., ibid., 1951—. Hon. Pos.: Diplomate, Amer. Bd. of Psychiatry and Neurology; Diplomate, Amer. Bd. of Neurological Surgery. Mem.: Sigma Xi; Theta Kappa Psi; Omicron Delta Kappa; Phi Beta Kappa; Alumni Assn. of Mayo Foundation; A.M.A.; Central Surgical Assn.; Harvey Cushing Soc.; Soc. Neurol. Surgeons; Amer. Coll. of Surgeons; Internatl. Coll. of Surgeons. Contrb. to: Proc. Staff Meetings Mayo Clinic; Jour. Pediatrics; The Laryngoscope; Surgery, Gynecology and Obstetrics; Arch. of Neurol. and Psychiatry; N. C. Med. Jour.; Minn. Med.; etc.

LOVEJOY, Arthur Oncken, Prof. Emer. of Philos., Johns Hopkins Univ., 827 Park Ave., Baltimore, Md. **PHILOSOPHY, HISTORY OF SCIENCE.**

LOVELL, Harvey Bulfinch, Prof. of Biol., Univ. of Louisville, 3011 Meade Ave., Louisville 13, Ky. **BIOLOGY.** b. June 9, 1903, Waldoboro, Me. s. John H. and Lottie (Magune) L. Edn.: Lincoln Acad., Me., 1920; A.B., Bowdoin Coll., 1924; A.M., Harvard Univ., 1927; Ph.D., ibid., 1933; Woods Hole Marine Biol. Lab., summers, 1927-28. m. Ethel Weeter of Louisville, Ky., Nov. 25, 1933. d. Mr. and Mrs. Wm. Weeter. c.: John H., II; Eleanor Jane. Exp.: Asst. in Bot. Zool. and Psychol., Bowdoin C., 1923-24; Tchr. and Coach, Fryeburg Acad., Me., 1924-25; Austin Tehng. Fellow, Harvard Univ., 1927-29; Asst. Prof., Assoc. Prof., Prof., Biol., Univ. of Louisville, 1929—. Mem.: Ky. Acad. of Sci.; Amer. Soc. Zool.; Wilson Ornithol. Club; Amer. Ornithol. Union; Ky. Ornithol. Soc.; Ed., Ky. Warbler, 1945—; Ky. Soc. of Nat. Hist.; Soc. Mammalog.; Ecol. Soc.; So. Appal. Bot. Club; Phi Beta Kappa; Gamma Alpha; Sigma Nu; A.E.D. Author: Hist. and Bibliog. of Ky. Ornithol., 1949. Contrb. to: Amer. Bee Jour.; Auk; Wilson Bull.; Rhodora, Bees; Bird-Banding; Ky. Acad. of Sci. Trans.; Ky. Warbler; Sci.; Gleanings in Bee Culture. Ph.D. Dissertation: The Innervation and Function of Grafted Hind Limbs in Amblystoma Punctatum. Hobbies: Mtn. Climbing; Photography. Listed in: A.M.S.; Who Knows—and What; Who's Who in the South and Southwest. Special Int.: Breeding birds of Ky., embryology of salamanders, pollination of flowers.

LOVELL, William Vail, retired, Rt. 1, Box 37, Sanford, Fla. **ELECTRO-MAGNETISM.**

LOVERING, Thomas S., 8001 W. 17th Ave., Lakewood, Colo.

LOVETT, Edgar Odell, Pres. Emer., Rice Inst., P. O. Box 1892, Houston, Tex. **MATHEMATICS.**

LOVING, Robert Edward, Prof. and Hd., Dept. of Physics, Univ. of Richmond, Richmond, Va. **PHYSICS.**

LOVVORN, Roy Lee, Prof. of Agron., N. C. State Coll. and Agronomist, U. S. D. A., Raleigh, N. C. **FORAGE CROP ECOLOGY.**

LOW, Allan Winthrop, Dir. Engr., Plastic Div., Monsanto Chem. Co., 44 Burbank Rd., Longmeadow, Mass. **CHEMICAL ENGINEERING.** b. Newburyport, Mass., Oct. 30, 1913. s. Moses Melvin and Anna Elizabeth (Baumgartner) L. Edn.: B.S., Univ. of N. H., 1936. m. Elizabeth Winthrop Hersey, May 27, 1939. c.: Allan Winthrop, Jr.; Susan Alice. Exp.: Prod. Supvr., Resch. Chem. Engr. Asst. Mgr., Development Div., Gen. Chem. Div., Allied Chem. and Dye, N. Y. C., 1936-42; Tech. Supt., Asst. Plant Mgr., W. Va. Ordn. Works, Gen. Chem. Defense Corp., 1942-45; Tech. Supvr., ibid., 1946-48 Gen. Supt., Tech. Supt., Asst.



Supvr., ibid., 1946-48 Gen. Supt., Tech. Supt., Asst.

Div. Engr., Div. Engrng., Plastics Div., Monsanto Chem. Co., Springfield, Mass., 1948—. Mem.: Amer. Inst. of Chem. Engr.; Amer. Chem. Soc.; Lambda Chi Alpha; Alpha Chi Sigma; Scabboard and Blade; Ch. of C. Hon. Pos.: Chmn., West. Mass. Sect., Amer. Inst. of Chem. Engr.; Adv. Coun., Dept. of Chem. Engrng., Univ. of Mass.; Registered Prof. Engr. Special Int.: Chem. Engrng., Process and Plant Design Heavy Chem. and Plastics; Engrng. Rsch. of High Polymer Chem.; Organization and Trng. Engrng. Groups; Engrng. Mgmt. and Admin.

LOWAN, Arnold N., Prof. of Phys., Yeshiva Univ., 312 Schnectady Ave., Brooklyn 13, N. Y. **PHYSICS AND APPLIED MATHEMATICS.** b. June 10, 1898, Jassy, Roumania. s. Moses and Ida (Greenberg) L. Edn.: Ch.E., Poly. Inst., Bucharest, Roumania, 1924; M.S., N. Y. Univ., 1929; Ph.D., Columbia Univ., 1934; Fellow, Inst. for Advanced Study, Princeton, N. J., 1933-34. m. Bertha Amerling of Brooklyn, N. Y., Feb., 1926. d. Max and Rachel Amerling. Exp.: Prof. of Phys., Yeshiva Univ., 1934—; Dir., Computation Lab., Natl. Bur. of Standards, 1938-49; Lectr. in Math., Brooklyn Coll., 1935-40; Rsch. Physicist, Combustion Utilities Corp., Linden, N. J., 1928-31; Consultant: Natl. Bur. of Standards; Ballistic; Resch. Lab., Naval Ord. Lab. Mem.: Amer. Phys. Soc.; Amer. Math. Soc. A.A.A.S., Fellow. Author: Articles in Jour. of Amer. Phys. Soc.; Bull., Amer. Math. Soc.; Philos. Mag.; Jour. Math. and Phys. Ph.D. Dissertation: On the Application of the Laplace Transformation to Certain Problems in Heat Conduction Gen. Int.: Received Naval Ordnance Development Award and Certificate of Office of Sci. Rsch. and Development. Listed in: A.M.S.; Who's Who in the East. Special Int.: Numerical Analysis.



LOWBEER, Leo, Pathol.-in-Chief, Dir. of Lab., Hillcrest Mem. Hosp., Tulsa 5, Okla. **PATHOLOGY.** b. May 30, 1901, Vienna, Austria. s. Alfred Loew-Beer and Paula (Sobotka) Loew-Beer. Edn.: M.D., Univ. of Vienna, Schl. of Med., Austria, 1927. m. Gertrude Neuhut of Vienna, Austria, Sept. 28, 1940. c.: Carol Ann. Exp.: First Asst. to Prof., Jakob Erdheim, Dept. of Pathol., Vienna Municipal Hosp., Vienna, Austria, 1927-32; Res., Dept. of Med., Prof. C. V. Noorden, ibid., 1932-33; Sr. Res., Dept. of Med., Prof. Muller-Dehman, Geriatrics Div., ibid., 1933-37; Chief



Pathol., Dir. Lab., Hillcrest Mem. Hosp., Tulsa, Okla., 1939—; Visiting Lectr., Dept. Pathol., Univ. of Okla. Med. Schl.; Past Pres., Okla. Assn. of Pathol.; Assoc. Mem.: A.S.E.B.M.; A.M.A.; Fellow, Coll. Amer. Pathologists; Fellow, Amer. Soc. Clin. Pathologists; Diplomate, Amer. Bd. of Pathology; Internatl. Assn. Med. Museums; A.A.A.S. Author: Med. Papers on Pathol. of Bone Diseases, Brucellosis and Other Subjects. Travel: Europe; S. Amer. Gen. Int.: Original Work on Pathol. Anat. and Histol. of Brucellosis, Particularly Brucellic Osteomyelitis. Hobbies: Photography; Skiing; Tennis; Piano. Listed in: A.M.S. Special Int.: Pathologic Anatomy of Brucellosis, particularly Brucellic osteomyelitis.

LOWEKE, George Paul (William), Assoc. Prof., Wayne Univ., Detroit 1, Mich. **MATHEMATICS.** b. Feb. 5, 1902, Detroit, Mich. s. Herman

Frederick and Martha (Zieske) L. Edn.: Univ. of Chicago, 1926; A.B. (with Distinction), Univ. of Mich., 1931; M.A., *ibid.*, 1932; Ph.D., Univ. of Berlin, 1936; M.M.E., Chrysler Inst. of Engrng., 1939. m. Lolamae (Weians) L. of Salina, Kans., June 22, 1937. d. Mr. and Mrs. Samuel N. Weians. c.: Joan Virginia; Lowell Paul. Expn.: Hd., Dept. of Math., Kans. Wesleyan Univ., 1936; Commodity Ed., Babson's Statistical Organization, 1936-37; Instr., Chrysler Inst. and Project Engr., Chrysler Corp., 1937-42; Instr., Engrng. Mech., Wayne Univ., 1942-45; Asst. Prof., 1945-51. Mem.: Mich. Acad. of Sci.; A.S.M.E.; A.S.E.E.; M.A.A.; N.E.A. Contrb. to: Math. and Engrng. Jours. Ph.D. Dissertation: Ueber die Darstellung der Bahnen im System der Kleinen Planeten. Travel: Europe; England; N. Amer. Gen. Int.: Won Simion Mandehaun Scholarship, 1931 (\$300). Listed in: Who's Who in the Midwest; A.M.S.; Internatl. Blue Book, London. Special Int.: Mechanical Vibrations, Fluid Mechanics, Celestial Mechanics.

LOWELL, Frances Erma, Clinical Psychologist, Cleveland Bd. of Edn., 1380 E. Sixth St., Cleveland, Ohio. **PSYCHOLOGY**.

LOWENRACH, Hans., Prof. of Psychiatry, Acting Chmn., Department of Psychiatry, Duke Hosp., Durham, N. C. **PSYCHIATRY**. b. Duisburg, Germany, Jan. 31, 1905. s. Julius L. and Hilda (Neuhaus) L. Edn.: M.D., Univ. of Hamburg, 1930. m. Ottilie Tusler, Dec. 7, 1941. c.: Christine H.; Torry and Trude S. Expn.: Asst., Dept. of Med., Univ. of Freiburg, Germany, 1929-30; Asst. Physiology, *ibid.*, 1930-32; Asst., Dept. of Med., Univ. of Cologne, Germany, 1932-33; Asst., Dept. of Neurophysiol., Inst. for Brain Rsch., Berlin, Germany, 1933-35; Fellow in Psychiatry, Nansen Fund, Oslo, Norway, 1935-36; Ship's Surgeon, Whaling Exmed., 1936-38; Rsch. Asst. in Psychiatry, Johns Hopkins Univ., Baltimore, Md., 1938-40; Asst. and Assoc. Prof. of Psychiatry, Duke Univ., Schl. of Med., Durham, N. C., 1940—. Hon. Pos.: Acting Chmn., Dept. of Psychiatry, Duke Hosp., Durham, N. C., 1952-53. Mem.: A.A.A.S.; A.M.A.; Amer. Psychiat. Assn.; N. C. Acad. of Sci.; Amer. Physiol. Soc.; Assn. for Rsch. in Nerv. and Mental Diseases; Amer. E.F.G. Soc.; Sigma Xi. Contrb. to: Amer. Jour. of Psychiat.; Jour. of Neurophysiol.; Psychiatric Quarterly; Jour. of Neurothol. and Exptl. Neurol.; Jour. Nerv. and Mental Disease; Annals of Allergy; Milit. Record; Lt. Col., A.U.S., 1949-51. Special Int.: Psychiatry, Neurophysiol. as Applied to Psychiatry, Farming.

LOWER, William Edgar, Founder, Cleveland Clinic Foundation, and Chf., Dept. Urology, Cleveland Clinic, 2020 E. 93rd St., Cleveland, Ohio. **UROLOGY**.

LOWIE, Robert Harry, Univ. of Calif., Berkeley 4, Calif.

LOWRY, Homer Hiram, Dir., Coal Rsch. Lab., Carnegie Inst. of Tech., Pittsburgh, Pa. **CHEMISTRY**.

LOWRY, Welles Norwood, Prof. and Chmn., Dept. of Physics, Bucknell Univ., Lewisburg, Pa. **PHYSICS**.

LUBBEN, Renke Gustav, Assoc. Prof. Pure Math., Univ. of Tex., Austin, Tex. **MATHEMATICS**.

LUBOVICH, Vladimir Paul, Assoc. Prof. of Physics, Univ. of Colo., Boulder, Colo. **PHYSICS**.

LUBOWE, Nathaniel Reinhart, Chmn., Gen. Sci., Thomas Knowlton Jr. H. S., 760 Grand Concourse, Bronx, N. Y. **BOTANY**.

LUCAS, James Burleigh, Prof. of Chem., Va. Poly. Inst., 1010 S. Main St., Blacksburg, Va. **ORGANIC CHEMISTRY**. b. Childress, Va., Mar. 30, 1888. s. James and Nannie (Cecil) L. Edn.: B.S., V. P. I., 1910; M.S., *ibid.*, 1913; M.S., Univ. of Ill., 1931. m. Frankie Davis of Roanoke, Va., Nov. 27, 1917. d. J. G. Davis. c.: Fay; Frankie; Gray; Laura. Expn.: Grad. Student and Asst., Univ. of Ill., 1914-15; Prof. of Chem. and Physics, Davis and Elkins Coll., 1915-16; Div. Supt. of Co. Schls., Montg. Co., Va., 1917-20; V. P. I., 1916—; Div.

Supt. of Pub. Schls., Montgomery County, Va. (Part-time), 1917-20. Mem.: Amer. Chem. Soc.; Va. Acad. of Sci.; Phi Lambda Upsilon; Mason. Author: Int. to Qual. Analysis. Hobbies: Gardening; Fishing. Special Int.: Distribution and Estimation of the Rare Earth Elements in Plant and Animal Matter.

LUCAS, Howard J., Prof. Organic Chem., Crellin Lab., Calif. Inst. of Tech., Pasadena, Calif. **ORGANIC CHEMISTRY**.

LUCE, Robert Harding, Prof. and Hd., Dept. of Biol., Rensselaer Poly. Inst., Troy, N. Y. **INDUSTRIAL MICROBIOLOGY**.

LUCK, J. Murray, Prof. of Biochem., Stanford Univ., Stanford Univ., Calif. **BIOCHEMISTRY**.

LUCKE, Balduin, Prof. of Pathol., Univ. of Pa., Philadelphia, Pa. **PATHOLOGY**.

LUCKE, John Becker, Hd., Dept. of Geol. and Geographv, Univ. of Conn., Storrs, Conn. **GEO-MORPHOLOGY**.

LUCKEY, Bertha Musson, Chf. Psychologist, Cleveland Public Schls., 1380 E. Sixth St., Cleveland, Ohio. **PSYCHOLOGY**.

LUCKEY, George Paul, Vice-Pres., Hamilton Watch Co., 211 S. President Ave., Lancaster, Pa. **PHYSICS**.

LUCKHARDT, Arno B., Distinguished Service Prof. of Physiol., Univ. of Chicago, 951 E. 58th St., Chicago, Ill. **PHYSIOLOGY, MEDICINE**.

LUCKIESH, Matthew, Dir., Lighting Rsch. Lab., General Electric Co., Nela Park, Cleveland, Ohio. **LIGHT, RADIANT ENERGY**.

LUDLUM, John Charles, Assoc. Prof. of Geol., W. Va. Univ., Morgantown, W. Va. **STRUCTURAL AND ECONOMIC GEOLOGY**. b. Chevy Chase, Md., Feb. 2, 1913. s. Samuel Sayre and Clarissa M. (Larman) L. Edn.: B.S., Lafayette Coll., 1935; M.S., Cornell Univ., 1939; Ph.D., *ibid.*, 1942. m. Mildred J. Wells, June 8, 1940. Exp.: Staff, Secony Vacuum Oil Co., Philadelphia Div., 1935-37; Staff, Amerada Petroleum Corp., 1937; Teaching Assistant, Geol. Dept., Cornell Univ., 1937-40; Instr., *ibid.*, 1940-42; U. S. Army and A.A.F., 1942-46; Asst. Prof. of Geol., W.

Va. Univ., Morgantown, W. Va., 1946-50; Assoc. Prof. of Geol., *ibid.*, 1950—. Hon. Pos.: Regional Program Com., A.I.M.M.E. Industrial Minerals Div., 1951; Dir., W. Va. State Sci. Talent Search, 1951-52. Mem.: Fellow, Geol. Soc. Amer.; A.I.M.M.E.; Soc. Econ. Geologists; Amer. Assn. Petroleum Geologists; Assn. Geol. Tchrs.; Sigma Xi; Kappa Delta Rho; Phi Beta Kappa; Phi Kappa Phi; Sigma Gamma Epsilon; Rotary Internatl. Contrb. to: Bull. Geol. Soc. of Amer.; Jour. Geol. Sci.; Proc. W. Va. Acad. of Sci. Special Int.: Soil Trafficability Rsch.; Geol. of State Parks of W. Va.; Structure and Econ. Geol. of W. Va.

LUDWIG, Daniel, Assoc. Prof. of Biol., N. Y. Univ., N. Y. **INSECT PHYSIOLOGY**.

LUDY, Llewellyn V., retired, 600 Russell St., West Lafayette, Ind. **HEAT POWER ENGINEERING**.

LUETH, Harold Charles, Dean and Prof. of Med., Univ. of Nebr., 42nd St. and Dewey Ave., Omaha, Nebr. **MEDICINE**.

LUGINBILL, Phillip, Entomologist, U. S. Bureau Entomol. and Plant Quarantine, Washington, D. C. **ENTOMOLOGY**.



LUECK, Roger H., Gen. Dept., Amer. Can Co., 100



co, ibid., 1945-50; Gen. Mgr., Rsch. and Tech. Dept., ibid., 1950—. Mem.: Amer. Chem. Soc.; A.A.A.S.; Inst. of Chemists; Inst. of Food Tech.; Sigma Xi. Contbr. to: Jour. Amer. Chem. Soc.; Indus. and Engrng. Chem.; Jour. of Electrochem. Soc.; Food Tech. Special Int.: Corrosion of Tinplate; Canning Tech.; Reaction Kinetics.

LUGN, A. L., Prof. of Geol., Univ. of Nebr., Lincoln, Nebr. GEOLOGY, GROUND WATER STRATIGRAPHY.

LUKENS, Herman T., 102 E. Jacoby St., Norristown, Pa.

LUKENS, Hiram Stanhope, Dir., Dept. of Chem. and Chem. Engrng., Univ. of Pa., Philadelphia, Pa. ELECTROCHEMISTRY.

LUMLEY, Frederick E., Prof. Emer., Ohio State Univ., Columbus, Ohio; Union Ont., Can. SOCIOLOGY.

LUND, Elmer Julius, Prof. of Physiol., Univ. of Tex., Austin, Tex. BIOPHYSICS, PHYSIOLOGY.

LUND, Everett Eugene, Biologist in Chg. Disease Rsch., U. S. Rabbit Expt. Sta., Bureau Animal Indus., U. S. D. A., Fontana, Calif. PROTOZOOLOGY, PARASITOLOGY.

LUND, Horace Odin, Prof. of Entomol., Univ. of Ga., Athens, Ga. ENTOMOLOGY.

LUNDBERG, George, Univ. of Wash., Seattle, Wash. SOCIOLOGY.

LUNDBERG, Hans Torkel Fredrik, Mining Engr., Pres. and Mgr., Lundberg Explorations Ltd., and Hans Lundberg Ltd., 80 Richmond St., West, Toronto 1, Ont., Can. HEAD OF AN ORGANIZATION OF CONSULTING GEOLOGISTS AND GEOPHYSICISTS TO CARRY OUT INVESTIGATIONS AND SURVEYS (AIRBORNE MAGNETIC, ELECTRICAL AND RADIOACTIVE SURVEYS IN PARTICULAR). b. Malmo, Sweden, July 22, 1893. s. Carl T. and Emma (Bong) L. Edn.: M.E., Royal Inst. of Tech., 1917. m. Signe Sjöberg, Jan. 5, 1919. c.: Torkel Torkelson; Sten Torkelson. Exp.: Asst. Prof. in Mining and Surveying, Dept. of Mining Sci., Royal Inst. of Tech., Sweden, 1917-19; Working on Development of Electrical Prospecting for Finding Mineral deposits in Sweden, Finland, Belgium, France, Germany, Spain, U. S., Mex., Can. and Newfoundland, 1919-24; Field Mgr., Swedish Amer. Prospecting Corp., 1924-27; Vice-Pres. and Mgr., Swedish Amer. Prospecting Co. of Can., Ltd., 1927-31; Consulting Geophysicist, 1931-34; Scientific Conf. on Conservation and Utilization of Resources, 1949; Specializing in Airborne Geophysical Surveys with Electric, Magnetic and Radioactive Methods, 1945—; Mining Engr., Pres. and Mgr., Lundberg Explorations Ltd., and Hans Lundberg Ltd., Toronto, Ont., Can. Mem.: Can. Inst. Mining Metallurgical Engrs.; Mining Metallurgical Soc. of Amer.; Soc. Econ. Geols.; Can. Geol. Assn.; Soc. Exptl. Geophysicist; Amer. Inst. Mining and Metallurgical Engrs.; Swedish Geol. Soc.; Royal Swedish Acad. Engrng. Sci.; A.A.A.S.; Engrs. Club of N. Y.; Mining of N. Y.; Engrs. Club of Toronto;

Granite Club of Toronto. Contbr. to: The Geol. Survey of Sweden-Year Book; Mining and Metallurgy: The Mining Congress Jour.; Can. Mining and Metallurgical Bull.; The Mining Magazine, London, Eng.; De Tekniska Vetenskaperna, Sweden; Can. Mining Jour.; Quarterly of the Colo. Schl. of Mines; The Oil and Gas Jour.; World Petroleum; Oil in Can. Gen. Int.: Awarded Gold Medal by Royal Swedish Acad. of Engrng. Sci. for Meritorious Work on Elec. Prospecting, 1925; John Ericson Medal for outstanding Work in Engrng., 1944.

LUNDELL, Cyrus Longworth, Prof. of Botany, Southern Methodist Univ., Dallas, Tex. ECONOMIC AND SYSTEMATIC BOTANY.

LUNDHOLM, Helge, Duke Univ., Durham, N. C. PSYCHOLOGY.

LUNDIN, C. A. Robert, Optical Consultant and Mgr., Optical Dept., Warner and Swasey Co., 5701 Carnegie Ave., Cleveland, Ohio. OPTICAL WORK.

LUNDQUIST, G. R., Prof. of Oral Pathol., Northwestern Univ. Dental Schl., 311 E. Chicago Ave., Evanston, Ill. PERIODONTIA, DENTISTRY.

LUNT, Herbert Arthur, Assoc. Forest Soils Rsch., Conn. Agri. Expt. Sta., New Haven, Conn. FOREST SOILS.

LURIA, S. E., Univ. of Ill. Urbana, Ill. VIROLOGY.

LURIE, Max Bernard, Assoc. Prof. Exptl. Pathol., Henry Phipps Inst., Univ. of Pa., Seventh and Lombard Sts., Philadelphia, Pa. RESEARCH TUBERCULOSIS.

LUSH, Jay Laurence, Prof. of Animal Husbandry, Iowa State Coll., Ames, Iowa. GENETICS.

LUTHER, Chester Francis, Dean, Coll. of Liberal Arts and Prof. of Math., Willamette Univ., Salem, Ore. MATHEMATICS.

LUTMAN, Benjamin Franklin, Emer. Prof. Plant Pathol., Univ. of Vt., 111 N. Prospect St., Burlington, Vt. PLANT PATHOLOGY.

LUTZ, Brenton Reid, Prof. of Biol., Boston Univ., 688 Boylston St., Boston, Mass. PHYSIOLOGY.

LUTZ, Harold John, Forestry Prof., Yale Univ., New Haven, Conn. FORESTRY.

LUYET, Basile Joseph, Prof. of Biol., St. Louis Univ., St. Louis, Mo. BIOLOGY.

LUYTEN, Willem J., Prof. of Astron., Univ. of Minn., Minneapolis, Minn. ASTRONOMY.

LYERLY, Paul J., Cotton Breeder, Tex. Agri. Expt. Sta., Substn. 17, Ysleta, Tex. PLANT BREEDING, PRODUCTION.

LYFORD, C. Allan, Rsch. Chemist, Natl. Aniline Div., Allied Chemical and Dye Corp., Buffalo, N. Y. ORGANIC CHEMISTRY.

LYLE, Aaron K., 21 Cumberland Rd., W. Hartford 7, Conn. CERAMICS.

LYLE, Clay, Dean, Schl. of Agri., Miss. State Coll.; Dir., Miss. Exptl. Sta. and Agril. Ext. Service, State Coll., Miss. ENTOMOLOGY. b. Lux, Miss., Jan. 25, 1894. s. James Madison and Sallie (Hendrix) L. Edn.: B.S., Miss. State Coll., 1917; M.S., ibid., 1931; Ph.D., Iowa State Coll., 1937. m. Annie Laurie McKay of State Coll., Miss., July 7, 1930. d. Prof. and Mrs. A. B. McKay. c.: Sarah Ann. Exp.: Agriculturist, Tate A.H.S., 1917-18; Gen. Insp., State Plant Bd. of Miss., 1921-31; Assoc. Prof., Zool. and Entomol., Miss. State Coll., 1927-31; Hd., Dept. of Zool. and Entomol., Miss. State Coll., 1931-51; Entomologist, Miss. Exptl. Sta., 1931-51; Exec. Officer, State Plant Bd. of Miss., 1931-51; Ext. Entomol., Miss. State Coll. Ext. Serv., 1943-46; Dean, Schl. of Sci., Miss. State Coll., 1945-51; Dean, Schl. of Agri., ibid., Dir., Agri. Expt. Sta. and Agri. Ext. Service, State Coll., Miss., 1951—. Hon. Pos.: President, Cotton States Entomologists, 1936; President, Amer. Assn. of Ec. Entomologists, 1946; Mem., Nat. Plant

Bd. 1941-51; Sec., Sou. Plant Bd., 1937-41; Sec., Apiary Insp. of Amer., 1937-41. Mem.: Amer. Assn. of Ec. Entomologist; A.A.A.S.; Entomol. Soc. of Amer.; Sigma Xi. Contr. to: Jour. of Ec. Entomology; Gleanings in Bee Culture. Ph.D. Dissertation: The Crawfishes of Miss. with Spec. Reference to the Biol. and Control of Injurious Species. War Record: Corps of Engrs., 1918-19. Listed in: A.M.S.; Who's Who in Amer.; Who's Who in the South West; Who's Who in Methodism; Who Knows—and What; Formerly in Amer. Young Men.

LYLE, Eldon W., Plant Pathologist, Tex. Rose Rsch. Foundation, Box 123, Rt. 1, Tyler, Tex. **PATHOLOGY.**

LYLE, Samuel Patterson, Chf., Agri. Section, Extension Service, U. S. D. A., Washington, D. C. **AGRICULTURAL ENGINEERING.**

LYMAN, Ernest McIntosh, Assoc. Prof. of Physics, Univ. of Ill., Urbana, Ill. PHYSICS.

LYMAN, Rufus Ashley, Dean Emer., Coll. of Pharmacy, Univ. of Nebr., 1649 S. 21st, Lincoln, Nebr. PHARMACY.

LYMAN, T. L., Prof. Emer., Harvard Univ., 109 Heath St., Brookline, Mass. ULTRAVIOLET SPECTROSCOPY.

LYMAN, Theodore, Rsch. Lab. of Physics, Harvard Univ., Cambridge 38, Mass.

LYNCH, Clara Julia, Rockefeller Inst. for Med. Rsch., N. Y., N. Y. ZOOLOGICAL SCIENCES.

LYNCH, John Joseph, Dir., Seismic Obs., Fordham Univ., N. Y. 58, N. Y. SEISMOLOGY. b. London, England, Dec. 6, 1896. s. Patrick Francis and Marianne (Hayden) L. Edn.: A.B., Woodstock Coll., 1919; A.M., ibid., 1920; Ph.D., N. Y., Univ., 1939. Exp.: Instr., Physics and Dir. Seismic Obs., Fordham Univ., 1920-23; Dir., Seismic Obs., ibid., 1928—; Prof. Physics, ibid., 1940—. Mem.: A.G.U.; S.S.A.; S.E.G.; A.I.M.E.; Amer. Phys. Soc.; Franklin Inst.; Sigma Xi; A.A.U.P.; A.A.O.T.; Fellow: N. Y. Acad. Sci.; Royal Astronomical Soc.; Amer. Geographical Soc.; A.A.A.S. Author: Gen. Physics, 1933; Our Trembling Earth, 1940. Contr. to: Trans., Amer. Geophys. Union; Bull., Seismol. Soc. of Amer.; Sci., etc. Special Int.: Frontal Microseisms.

LYNCH, Ruth Stocking, Asst. Zool., Univ. of Calif., Los Angeles, Calif. GENETICS.

LYNCH, Sylvester John, Production Mgr., Fla. Lime and Avocado Growers, Princeton, Fla. TROPICAL HORTICULTURE.

LYNCH, William Aloysius, Prof. of Physics and Asst. Dir., Seismic Observatory, Fordham Univ., N. Y., N. Y. GEOPHYSICS.

LYNN, William Gardner, Assoc. Prof. Biol., Catholic Univ. of Amer., Washington, D. C. EMBRYOLOGY.

LYNCH, William Francis, Prof. of Biol., St. Ambrose Coll., Davenport, Ia. EMBRYOLOGY. b. Grand Mound, Ia., Dec. 7, 1905. s. Thomas and Elizabeth (Martin) L. Edn.: A.B., St. Ambrose, 1928; A.M., Cath. Univ., 1932; S.T.B., ibid., 1931; M.S., Fordham, 1941; Ph.D., N. Y. Univ., 1946. Exp.: Instr. in Physics, St. Ambrose Acad., 1933-39; Grad. Asst., N. Y. Univ., 1943-44; 1945-46; Asst. Prof., Biol., St. Ambrose, 1946-47; Assoc., ibid., 1948-51; Prof., ibid., 1951—. Mem.: A.A.A.S. Amer. Micr. Soc.; N. Y. Acad. Sci.; Sigma Xi; Beta Lambda Sigma. Contr. to: Amer. Micr. Soc., 1944; Biol. Bull., 1947-49; Jour. Exp. Zool., 1949. Ph.D. Dissertation: The Behavior and Metamorphosis of *Bugula Neritona*. Hobbies: Constructing Electrical Demonstration Outfits. Listed in: Who's Who in the Midwest.

LYON, Channing Bruce, Administrative Asst., Plantations, Hawaiian Pineapple Co., P. O. Drawer

3380, Honolulu, T. H. **PHYSIOLOGY.** b. Elmgrove, N. Y., Feb. 14, 1915. s. Channing Bruce and Olive (Auchter) L. Edn.: B.S., Univ. of Nebr., 1938; M.S., Univ. of Chicago, 1939; Ph.D., ibid., 1941. m. Jacqueline Fuller, Sept. 1, 1939. c.: Barbara Jean. Exp.: U. S. Regional Soil Salinity Lab., Riverside, Calif., 1940; Staff, U. S. Plant, Soil and Nutrition Lab., Ithaca, N. Y., 1941-44; Staff, Hawaiian Pineapple Co., Ltd., Honolulu, T. H., 1944—. Mem.: Sigma Xi; Agril. Soc. of Horticultural Sci.; Botanical Soc. Amer.; Amer. Soc. Plant Physiol.; A.A.A.S.; Sigma Chi. Special Int.: Plant Nutrition; Genetics; Hormones.

LYON, Eric Ross, Assoc. Prof. of Physics, Kan. State Coll., Manhattan, Kans. ELECTRODYNAMICS. b. May 8, 1893, Greencastle, Ind. s. Oliver Lincoln and Etna Letrissa (Place) L. Edn.: A.B., Phillips Univ., Enid, Okla., 1911; M.S., ibid., 1923; Subsequent Grad. Work, Univ. of Colo. Exp.: Instr. in E. E. and Radio, Highland Park Coll., Des Moines, Ia., 1916-17; Instr. in U. S. Naval Radio Schl., Harvard Univ., 1917-19; Physics, Kans. State Coll., Manhattan, Kans., 1921—. Mem.: Sigma Xi; Amer. Physical Soc.; Amer. Assn. of Physics Tchrs.; A.A.A.S.; Kans. Acad. of Sci. Contr. to: Physical Review; Amer. Jour. of Physics; Popular Science. War Record: World War I, 1917-19; U.S.N.R.F., Warrant Gunner Radio, Instr. Duty at Harvard. Hobby: A Problem in Theoretical Physics. Listed in A.M.S. Special Int.: Nuclear and Atomic Applications of Electrodynamics.

LYON, James Adair, Prof. Astron. and Dir., Cuning Law Observatory, Tulane Univ., New Orleans, La. ASTRONOMY.

LYON, Kenneth C., Rsch. Labs., Armstrong Cork Co., Lancaster, Pa. CERAMICS.

LYON, Leslie Walter, Tchr. of Physics and Program Admin., Soldan-Blewett H. S., St. Louis, Mo. PHYSICS. b. July 5, 1887, Catherine, N. Y. s. Walter E. and Evangeline F. (Fulkerson) L. m. Viola Weis of Dayton, Ohio, June 20, 1912. c.: Gaylord B.; Kathryn D. Edn.: Wheaton Coll., Ill., A.B., 1909; Completed Res. Work for Master's Univ. of Wis., 1915; Wash. Univ., St. Louis, Grad. Work. Exp.: Prin. H. S., Cresco, Ia., 1909-10; Hd. Coll. Prep Dept., Interlaken Schl., Rolling Prairie, Ind., 1910-11; Hd. Dept. of Phys. Sci., H. S. Burlington, Ia., 1911-15; Tchr. of Phys., Soldan-Blewett H. S., St. Louis, 1915-52; Retired Jan., 1953; Dir. and Founder, Minne-Wonka Lodge, Three Lakes, Wis., 1921—. Mem.: Natl. Sci. Tchrs. Assn.; Amer. Camping Assn.; N.E.A.; Wis. Assn. of Private Camps; Pres., St. Louis Camping Assn., 1940-41. Contr. to: Camping Mag.; Schl. Sci. and Math.; Popular Mechanics; Amer. Photography; Field and Stream.

LYONS, John Bartholomew, Prof. of Geol., Dartmouth, 7 Pleasant St., W. Lebanon, N. H. STRUCTURAL GEOLOGY AND PATHOLOGY. b. Quincy, Mass., Nov. 22, 1916. s. Lawrence and Anna (Reardon) L. Edn.: A.B., Harvard, 1938; A.M., ibid., 1939; Ph.D., ibid., 1942. m. Mary Johnson of Boston, Mass., Nov. 4, 1945. d. Alexander M. and Helena Johnson. c.: Rosemary Anne. Exp.: 1939-41, Tehng. Fellow, Harvard Univ.; 1941-45, Geol. U. S. Geol. Survey; 1942-45, Capt., U. S. Air Force; 1945-46; Asst. Prof. Geol., Dartmouth Coll., Hanover, N. M., 1946-52; Prof. Geol., ibid., 1952—. Mem.: Phi Beta Kappa; Sigma Xi; Geol. Soc. of Amer. Contr. to: Geol. Soc. Amer. Bull.; Jour. Geol. Ph.D. Dissertation: Igneous Geol. of the Northern Big Belt Range, Mont. War Record: Capt., U. S. Air Force; bomber pilot, 12th Air Force. Travel: Europe. Listed in: A.M.S.

LYONS, William James, Sr. Rsch. Physicist, Rsch. Labs., Firestone Tire and Rubber Co., Akron, Ohio. PHYSICS.

LYTHGOE, Hermann Charles, retired, 36 Fair Oaks Ave., Newtonville, Mass. FOOD CHEMISTRY.

LYTLE, W. Orland, Rsch. Engr., Pittsburgh Plate Glass Co., Creighton, Pa. RESEARCH ENGINEERING GLASS.

MA, Roberta, P. O. Box 825, Berwyn, Md. BOTANICAL SCIENCES.

MacANDREWS, Aubrey Hunter, Hd., Dept. of Forest Entomology, State Univ. of New York, Coll. of Forestry, Syracuse, 10, New York. FOREST INSECT ECOLOGY.



b. March 16, 1897, St. John, N. B., Canada. s. Fred A. and Charlotte (Gough) MacA. Edn.: Univ. of N. B. Forest Schl., Fredericton, N. B., Can., 1918-19; Truro Agril. Coll., Truro, N. S., Can., 1920-22; B.S., Coll. of Forestry, Syracuse, N. Y., 1925, M.S., 1926, Univ. of Minn., 1926. m. Dorothy Dodd of Syracuse, N. Y. c.: Audrey Lee. Exp.: Exper. State Asst., Dept. of Agri., Ottawa, Can., 1921; Jr. Ent., Forest Insect Division, Dept. Agri., ibid., 1923; Jr. Ent., Forest Insect Div., Dept. Agri., Wash., D. C., 1925; Instr. Forest Entomol., Coll. of Forestry, Syracuse, N. Y., 1927; Asst. Forest Entomol., ibid., 1932; Assoc. Forest Entomol., ibid., 1937; Hd. of Dept., ibid., 1938; Prof. of Entomol., ibid., 1945. Mem.: Amer. Assn. Econ. Entomologists; Ontario Entomological Soc.; Soc. Amer. Foresters; Amer. Rose Soc.; Amer. Dahlia Soc.; Amer. Delphinium Soc.; Amer. Primrose Soc.; New Eng. Gladiolus Soc.; Alpha Xi Sigma; Phi Kappa Phi; Sigma Xi; Pres., Syracuse Rose Soc.; Dir., Empire State Gladiolus Soc.; Dir., Penn. Dahlia Soc. War Record; Canadian Art., 12th C.S.B. Gunner, 1916-17. Hobbies: Flower Judge at Horticultural Shows; Maintenance of Rose Test Gardens for Commercial Growers; Garden Club Lecturer; Collector of Tropical Butterflies; Kodachrome Photography. Listed in: A.M.S.; Naturalists Dir.

MacARTHUR, C. G., Bowmansville, N. Y. CHEMISTRY, MEDICINE.

MacARTHUR, Edith Helena, Prof. and Chmn., Dept. Home Econ., Skidmore Coll., Saratoga Springs, N. Y. NUTRITION, CHEMISTRY.

MacCARTHY, Gerald Raleigh, Prof. of Geol. and Geophysics, Univ. of N. C., Chapel Hill, N. C. GENERAL GEOLOGY, GEOPHYSICS.

MacCLINTOCK, Paul, Knox Taylor Prof. of Geography, Princeton Univ., Princeton, N. J. GLACIAL GEOLOGY.

MacCORQUODALE, Donald William, Hd. Biochemical Rsch., Abbott Labs., North Chicago, Ill. BIOCHEMISTRY.

MacDANIELS, Laurence Howland, Prof. of Horticulture, Hd. Dept. of Floriculture, Cornell Univ., Ithaca, N. Y. PLANT ANATOMY, FLORICULTURE.

MacDONALD, Donald Craig, Physicist, U. S. Rubber Co., General Labs., Passaic, N. J. PHYSICS.

MacDONALD, Eugene T., SPEECH AND HEARING.

MacDONALD, Thomas H., U. S. Comm. of Public Roads, General Services Bldg., Washington, D. C. CHEMISTRY AND HIGHWAY ADMINISTRATION.

MacDOUGAL, Daniel Trembley, Dir., Dept. Botanic Rsch., Carnegie Inst. of Wash., Washington, D. C. PLANT PHYSIOLOGY.

MacDOUGALL, Frank H., Chf. Div. and Prof. of Physical Chem., Univ. of Minn., Minneapolis, Minn. PHYSICAL CHEMISTRY.

MacDOUGALL, Mary Stuart, Prof. and Chmn. Dept., Agnes Scott Coll., Decatur, Ga. ZOOLOGY, CYTOLOGY, PROTOZOOLOGY.

MacDOWELL, Charles Henry, retired, 1300 College Point, Winter Park, Fla. AGRICULTURAL CHEMICALS.

MacDOWELL, Edwin Carleton, Geneticist, Dept. of Genetics, Carnegie Inst. of Wash., Cold Spring Harbor, N. Y. GENETICS.

MacDUFFEE, Cyrus Colton, Prof. of Math., Univ. of Wis., Madison, Wis. ALGEBRA.

MACELWANE, James Bernard, S. J., 221 N. Grand Blvd., St. Louis 3, Mo.

MacFARLAND, Frank Mace, Prof. Emer. Histology, Stanford Univ., Santa Ynez St., Stanford Univ., Calif. ANATOMY, TAXONOMY, OPISTHOBRANCH MOLLUSCA.

MACFARLANE, Eileen W. Erlanson, Box 468, Palm Beach, Fla. CYTOLOGY.

MACFARLANE, Jean Walker, 2739 Bancroft Way, Berkeley, Calif. PSYCHOLOGY.

MACFARLANE, Wallace, Div. Mgr., Pacific Guano Co., 4522 Worth St., Los Angeles, Calif. SOILS.

MacGILLIVRAY, John Henry, Assoc. Prof. Truck Crops and Olenculturist, Truck Crops Div., Univ. of Calif., Davis, Calif. VEGETABLE PHYSIOLOGY.

MacGREGOR, Charles W., Univ. of Pa., Philadelphia, Pa. BEHAVIOR OF ENGINEERING MATERIALS.

MACHEAD, Collin, New York Univ. Med. Schl., N. Y., N. Y. BACTERIOLOGY.

MACHT, David I., Rsch. Pharmacologist and Physiologist, Sinai Hosp., 3420 Auchenoroly Terrace, Baltimore, Md. PHARMACOLOGY, PHYSIOLOGY.

MACHT, Stanley Howard, Director, Dept. Radiology, Washington County Hospital, Hagerstown, Md.

RADIOLOGY. b. September 3, 1914, Crewe, Virginia. s. Harry E. and Jeanette (Rubin) M. Edn.: B.S., Univ. Va., 1934; M.D., Dept. Med., ibid., 1939. m. Naomi Newman of Danville, Va., July 1, 1941. d. Dr. S. Newman and Ida Newman. c.: Jay; Harold; Maury. Exp.: Intern, U. S. P. H. S., 1939-40; Gen. Practice, Crewe, Va., 1940-42; Fellow, in Roentgenol., Harvard, Peter Bent Brigham Hosp., Boston, 1942; Res., Jefferson Hosp., Phila., 1943-44; Asst. in Radiol., Jefferson Med. Coll., 1944-46; Dir., Dept. of Radiol., Baltimore City Hosp., 1946-50; Asst. Prof. Roentgenol., Univ. of Md., Med. Schl., 1946-50; Consultant Roentgenol., Henryton, T. B. San., 1949-50; Dir., Dept. Radiol., Wash. Co. Hosp., Hagerstown, Md., 1950—. Mem.: Wash. Co. Med. Soc.; Med. and Chir. Faculty, Md. and Baltimore City Med. Soc.; Fellow, A.M.A.; A.C.R.; Radiol. Soc. of N. Amer.; Phila. Roentgen Ray Soc.; Amer. Roentgen Ray Soc.; Phi Alpha; Kiwanis; Torch Club. Author: Science Publications in Medical and Science Jours. Hobbies: Stamps; Bees; Model Gas Planes. Listed in: A.M.S.; Dir., A.M.A. Special Int.: Radiation Effects on Geentics

MacINNES, Duncan Arthur, Rockefeller Inst. for Med. Rsch., 66th St. and York Ave., N. Y. 21, N. Y.

MacINTIRE, Walter Hoge, Hd., Dept. of Chem., Agri. Expt. Sta., Univ. of Tenn., Knoxville, Tenn. CHEMISTRY OF SOILS AND FERTILIZERS.

MacIVER, Robert M., Columbia Univ., New York, N. Y. SOCIOLOGY.

MACKAY, Donald Sage, Prof. of Philos., Univ. of Calif., Berkeley, Calif. PHILOSOPHY.

MacKAY, Eaton McLeod, Dir. of Rsch., Scripps Metabolic Clinic, La Jolla, Calif. MEDICINE.

MACK, Pauline Beery, Dean, Coll. of Household Arts and Sciences, Tex. State Coll. for Women, Denton, Tex. CHEMISTRY AND BIOLOGY. b. Dec. 19, 1891, Norborne, Mo. d. John Perry and Dora (Woodford) Beery. Edn.: A.B., Mo. State Univ., 1913; A.M., Columbia Univ., 1919; Ph.D., Pa. State Coll., 1932. Hon. Deg.: Sc.D., Moravian Coll. for Women, 1952; Sc.D., Western Coll., 1952. m. Dr. Warren B. Mack of Easton, Pa., December 27, 1923. s. Oscar and Anna (Lockard) Mack. Exp.: Sci. Tchr., Norborne H. S., 1913-15; Sci. Tchr., Webb City, Mo., H. S., 1915-18; Sci. Tchr., Springfield, Mo., H. S., 1918-19; Faculty, Pa. State Coll., 1919—; Dir., Ellen H. Richards Inst., 1940-52; Dir. of the Pa. Mass. Studies in Human Nutrition, 1925-32; Dir. of the Philadelphia Mass Studies in Human Nutrition, 1940-47; Co-director, Center for Research in Child Development, Graduate Schl. of Med., Univ. of Pa., 1947; Dean Coll. of Household Arts and Sci., Tex. State Coll. for Women, Denton, Tex., 1952—. Mem.: Recipient of Distinguished Daughters of Pa. Medal, 1949; Recipient of 1950 Garvan Medal, Awarded by A.C.S.; Phi Beta Kappa; Phi Beta Kappa Associates; Phi Kappa Phi; Sigma Xi; Iota Sigma Pi; Pres., Natl. Coun. of Iota Sigma Pi, 1945-48; Sigma Delta Epsilon; Beta Sigma Phi; Beta Sigma Phi (Internatl. Hon. Mem.); Omicron Nu. Author: Chem. Applied to Home and Community (Textbook), 3rd Ed. in Preparation; Stuff—the Sci. of Materials in the Service of Man. Contrb. to Sci. Publications in Chem., Textile Chem. and Nutrition. War Record: Dir. of Nutrition for Pa. State Coun. of Defense. Listed in: Who's Who in Amer.; A.M.S.; Who's Who in the East; Chem. Who's Who; Current Biography (1950).



MACKAY, Elizabeth Linn, Asst. Prof. of Botany, Purdue Univ., Lafayette, Ind. CYTOLOGY.

MackEE, George Miller, Prof. Emer. Clinical Dermatology, Columbia Univ., N. Y., N. Y.; Haviland Rd., Stamford, Conn. DERMATOLOGY.

MACKELL, James Francis, Prof. of Physics and Chmn., Dept. of Sci., Ind. State Tehrs. Coll., Terre Haute, Ind. PHYSICS.

MACKENSEN, Otto, Assoc. Apiculturist, U. S. D. A., Southern States Beeculture Lab., Univ. Station, Baton Rouge, La. HONEYBEE BREEDING.

MACKENZIE, George M., Div. Labs. and Rsch., N. Y. State Dept. of Health, Albany, N. Y. INTERNAL MEDICINE.

MACKENZIE, Kenneth G., Asst. to Vice-Pres., Tex. Co., 135 E. 42nd St., N. Y., N. Y. PETROLEUM.

MACKIE, Thomas Turlay, Chmn., Div. of Med. and Prof. of Preventive Med., Bowman Gray Schl. of Med., Wake Forest Coll., Winston-Salem, N. C. TROPICAL MEDICINE.

MACKIE, W. W., 1050 San Pablo Ave., c/o Glenn Denny, Albany, Calif. AGRICULTURE.

MACKINNEY, Gordon, Prof. of Food Technol., 333 Hilgard Hall, Univ. of Calif., Berkeley, Calif. AGRICULTURAL CHEMISTRY. b. London, England, May 28, 1905. s. Frederick W. and Minnie L. (Brenchley) M. Edn.: B.S.A., Univ. of Toronto, 1926; Ph.D., Univ. of Calif., 1933. m. Marion A. Esdale, May 18, 1928. c.: John G. Exp.: Soil Chemist, United Fruit Co., Honduras, 1927-30; Fellow, Natl. Rsch. Council, 1933-35; Instr., Asst. Prof., Assoc. Prof., Prof., Food Technol., Univ. of Calif., 1936—, Mem.: A.A.A.S.; Amer. Chem. Soc.; Amer. Soc. Plant Physiologists; Inst. Food Tech.; Sigma Xi; Calif. Acad. Sci. Contrb. to Jour. Amer. Chem. Soc.; Jour. Biol. Chem.; Food Tech.; Proc. Natl.

Acad. Sci. Special Int.: Natural Coloring Matters; Deterioration of Foodstuffs on Storage.

MacKINNON, Donald Wallace, Prof. of Psychol., Univ. of Calif., Berkeley, Calif. PSYCHOLOGY.

MACKLIN, Charles C., Dept. of Anatomy, Faculty of Med., Univ. of Western Ontario, London, Ont., Can. MEDICAL SCIENCES, ZOOLOGICAL SCIENCES.

MACKLIN, Madge Thurlow, Sr. Rsch. Fellow, Dept. of Zool., Ohio State Univ., Columbus, Ohio. HUMAN GENETICS.

MacKNIGHT, Franklin Colleser, Dept. of Geol., Evansville Coll., Evansville, Ind. PETROLEUM GEOLOGY.

MacLANE, Saunders, Univ. of Chicago, Chicago 37, Ill.

MacLATCHY, Josephine, Rsch. Assoc., Bur. Ednl. Rsch., Ohio State Univ., 2095 Iuka Ave., Columbus, Ohio. EDUCATIONAL RESEARCH.

MacLEAN, J. D., Forest Products Lab., Univ. of Wis., Madison, Wis. ENGINEERING, MATHEMATICS.

MACLEOD, Annie Louise, Dean, Syracuse Univ., Syracuse, N. Y. CHEMISTRY.

MACLEOD, Archibald Garrard, Dir. of Med. Publications, The Upjohn Co., 301 Henrietta St., Kalamazoo, Mich. CARDIOLOGY, MEDICAL WRITING, ELECTROCARDIOGRAPHY, ELECTROPHYSIOLOGY, MEDICAL EDITING AND MEDICAL PUBLIC RELATIONS. b. Leavettsburg, Ohio, Apr. 10, 1898. s. George D. and Minnie E. (Garrard) M. Edn.: A.B., Western Reserve Univ., 1920; M.A., ibid., 1922; M.D., ibid., 1924. m. Margaret Davis, June 14, 1930. c.: Garrard, Robert; David; George. Exp.: Instr. in Chem., Schl. of Pharmacy, Western Reserve Univ., 1920; Demonstrator of Biochem., Schl. of Med., ibid., 1920-21; Tchng. Fellowship in Biochem., Schl. of Med., ibid., 1921-22; Intern in Med., Lakeside Hosp., Cleveland, Ohio, 1925-26; Rsch. Asst. in Cardiol., Schl. of Med., Univ. of Mich., Ann Arbor, Mich., 1926-32; Instr. in Med., Schl. of Med., ibid., 1930-32; Assoc. Rockefeller Inst. for Med. Rsch., N. Y. C., 1932-39; Sr. Med. Staff, The Upjohn Co., Kalamazoo, Mich., 1941—. Mem.: Amer. Soc. of Clin. Investigation; Central Soc. for Clin. Rsch.; Amer. Heart Assn.; Amer. Soc. for Adv. of Sci.; Nu Sigma Nu; Alpha Omega Alpha; Sigma Xi. Contrb. to: Jour. of Biol. Chem.; Amer. Heart Jour.; Proc. Soc. for Exptl. Biol. and Med. Special Int.: Metabolism of Purines, Theory of Electrocardiogram; Production of Heart Sounds; Pharmacol. of Cardiac Glucosides; Med. Writing.



MacLEOD, Colin Munro, Prof. and Chem., Dept. of Bacteriol., N. Y. Univ. Coll. of Med., 477 First Ave., N. Y., N. Y. BACTERIOLOGY.

MacLEOD, Donald John, Pathologist-in-Chg., Dominion Lab. Plant Pathol., Fredericton, N. B., Can. VIRUS DISEASES.

MacLEOD, Florence Louise, Prof. of Nutrition, Univ. of Tenn., Knoxville, Tenn. NUTRITION.

MacLEOD, Grace, 106 Morningside Dr., N. Y., N. Y. CHEMISTRY, MEDICAL SCIENCES.

MacMAHON, Andrew Merritt, Consulting Physicist, 820 Union Natl. Bank Bldg., Houston, Tex. PHYSICS.

MacMAHON, Harold Edward, Prof. of Pathol. and Bacteriol., Tufts Coll. Med. Schl., Boston, Mass. **PATHOLOGY**.

MacMASTERS, Majel Margaret, Chemist, Starch Granule Section, Starch and Dextrose Div., Northern Regional Rsch. Lab., U. S. D. A., Peoria, Ill. **PHYSICAL CHEMISTRY**.

MacMILLAN, Howard Gove, 1725 Fifth Ave., Los Angeles, Calif. **BOTANICAL SCIENCES**.

MacMULLIN, Robert B., Consulting Chem. Engrng., 8249 Troy Ave., Niagara Falls, N. Y. **CHEMICAL ENGINEERING**.

MacNAUGHTON, Edgar, Prof. of Mech. Engrng., Tufts Coll., Medford, Mass. Address: 61 Ravine Rd., W. Medford 55, Mass. **POWER AND DESIGN**. b. May 4, 1887, Argyle, N. Y. s. James and Emma (Bain) M. Edn.: M.E., Cornell Univ., 1911. m. Mary A. Ross of Argyle, N. Y., Aug. 30, 1915. d. Theodore and Anna Miller Ross. Exp.: Gen. Elect. Co., 1911-14; Instr., Tufts Coll., 1911-14; Instr., S.A.T.C., Summer, 1914; Assoc. in Mech. Engrng., Univ. of Ill., 1918-19; Asst. Prof. of M.E., Tufts Coll., 1919-23; Prof., 1923—; in Chg. of Dept., Summer Work, United Shoe Machinery Co., Boston Elevated Co., Amrad Co., Gen. Elect. Co., Westinghouse Elec. and Mfg. Co.; Past Chmn., Boston Sect., A.S.M.E., and Design Sect., S.P.E.E. Mem.: A.S.M.E.; Amer. Soc. of Engrng. Edn.; Eng. Soc. of N. England; Soc. of Professional Engrs.; Licensed Engr. in Mass.; Tau Beta Pi; Pi Tau Sigma; Delta Upsilon; Sigma Xi; Cornell Club. Author: Elem. Steam Power Engrng., 1923, Revised, 1948. Travel: N. Amer.; Europe. Gen. Int.: Church Work. Hobbies: Golf; Raising Dahlias; Mem., N.A.F.O. Listed in: Who's Who in New England; Who's Who in Engrng.; Who's Who in Mass.



MacNEISH, Harris F., Chmn., Dept. of Math., Brooklyn Coll., Bedford Ave. H., Brooklyn, N. Y. **MATHEMATICS**.

MacNIDER, William de Berniere, Kenan Rsch. Prof. of Pharmacol., Univ. of N. C., Chapel Hill, N. C. **PHARMACOLOGY**.

MACORMAC, Alfred Ridner, Textile Technologist, Textile Book Publishers, 303 Fifth Ave., N. Y., N. Y. **TEXTILE CHEMISTRY**.

MacSWAIN, J. W., Dept. of Entomol., Univ. of Calif., Berkeley, Calif. **ENTOMOLOGY**.

MacTAVISH, W. C., Prof. and Chmn. Dept., Wash. Square Coll. of Arts and Sci., N. Y. Univ., N. Y., N. Y. **CHEMISTRY**.

MACY-HOUBLER, Icie Gertrude, Dir., Rsch. Lab., Children's Fund of Mich., 660 Frederick St., Detroit, Mich. 660 Frederick St., Detroit, Mich. **CHEMISTRY**.

MADDEN, Archie Hugh, Entomologist, Bureau Entomol. and Plant Quarantine, Washington, D. C. **ENTOMOLOGY**.

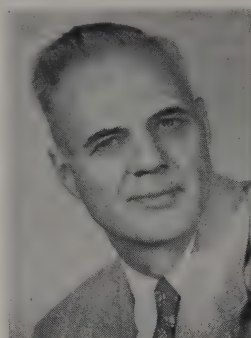
MADER, Erich Otto, Asst. Prof., Div. Plant Pathol. and Botany, Univ. Farm, St. Paul, Minn. **PLANT PATHOLOGY**.

MADISON, Harold Lester, Field Ex., Audubon Soc. of Rhode Island, 22 Keene St., Providence, R. I. **ZOOLOGY**.

MAGATH, Thomas Byrd, Prof. of Pathol. and Parasitology, Univ. of Minn., Mayo Foundation, 521 14th Ave., S. W., Rochester, Minn. **CLINICAL PATHOLOGY**.

MAGEE, Conway Stone, Physician, Gordon Bldg., Lake Charles, La. **PEDIATRICS**.

MAGISTAD, Oscar Conrad, Mgr. of Rsch., Libby, McNeill and Libby, Box 1140, Honolulu, T. H. **PINEAPPLE PRODUCTION AND CANNING, TROPICAL CROPS, SALINE SOILS**. b. Forestville, Wis., Sept. 8, 1900. s. Gilbert and Marie (Hovi) M. Edn.: B.S., Univ. of Wis., 1922; M.S., ibid., 1923; Ph.D., ibid., 1924. m. Lila A. Simon, Aug. 24, 1926. c.: John. Exp.: Soil Chemist, United Fruit Co., Tela, Honduras, 1924-27; Assoc. Prof. Agril. Chem. and Assoc. Chemist, Univ. of Ariz., Tucson, Ariz., 1927-30; Chemist Pineapple Expt. Sta., Honolulu, T. H., 1930-35; Dir., ibid., 1935-38; Dir. U. S. Gional Salinity Lab., U.S.D.A., 1938-40; Asst. Chf., Bur. of Plant Indus., 1940-41; Mgr. of Rsch., Libby, McNeill and Libby, Honolulu, T. H., 1945—. Mem.: Amer. Chem. Soc.; Amer. Soc. of Plant Physiol.; A.A.A.S.; Amer. Soc. of Agron.; Amer. Soc. Sci. Soc.; Hawaii Acad. of Sci.; Hawaii Botanical Soc.; Int. of Food Tech.; Food Indus. Sanitarians; Alpha Zeta; Phi Kappa Phi; Phi Lambda Upsilon; Sigma Xi. Special Int.: Pineapple Prod. and Canning Problems; Bananas Prod.; Saline Soils and Reclamation.



MAGNESS, J. R., Horticultural Field Sta., Beltsville, Md. **CHEMISTRY, BOTANICAL SCIENCES**.

MAGOON, Charles A., Special Asst. to Agri. Rsch. Administrator, U. S. D. A., Washington, D. C. **FOOD TECHNOLOGY**.

MAGOUN, H. W., Pro. of Anatomy, Univ. of Calif., Los Angeles 21, Calif. **MICROSCOPIC ANATOMY**.

MAHLER, Ernst, Kimberly-Clark Corp., Neenah, Wis. **PULP AND PAPER TECHNOLOGY**.

MAHONEY, John F., 125 Worth St., N. Y., N. Y. **DERMATOLOGY, BIOCHEMISTRY**.

MAIER, Curtis Eugene, Gen. Mgr. of Rsch., Continental Can Co., Inc., 4645 W. Grand Ave., Chicago 39, Ill. **RESEARCH AND DEVELOPMENT DIRECTION AND MANAGEMENT**. b. Allentown, Lehigh Co., Pa., June 10, 1906. s. George R. and Buhleau M. (Trexler) M. Edn.: Chem. Engr., Lehigh Univ., 1928. m. Rosalia L. Hartung June 19, 1929. c.: Curtis E., Jr.; Joanne L.; Rosalie H.; Carol E. Exp.: Chem. Engr., Hazel-Atlas Glass Co., Wheeling, W. Va., 1928-31; Asst. Dir. of Rsch., ibid., 1931-35; Dir. of Rsch., ibid., 1935-37; Mgr., Mfg. Rsch. Continental Can Co., Inc., Chicago, Ill., 1937-43; Dir., Container Rsch., ibid., 1943-45; Asst. to Vice-Pres. in Chg. of Rsch. and Engrng., ibid., 1945-49; Gen. Mgr. of Rsch., ibid., 1949—. Hon. Pos.: Chmn., Food Engrng. Council, Ill. Inst. of Tech. Mem.: Amer. Chem. Soc.; Inst. of Food Tech.; A.A.A.S.; Indus. Rsch. Inst.; Assoc. Food and Container Inst. Author: A Survey of the German Can Industry During the Second World War, 1945; The Effect of War Developments on the Metal Container of the Future, 1945; Corrosion on Metal Food Containers, 1944; Metal Containers—Protective and Camouflage Coatings, 1944. Contrb. to: The Glass Packer. War Record: Mem. of Tech. Indus. Intelligence Comm. under F.E.A. to Make Survey of German Can Industry, 1945; Mem. of Mission of Economic Affairs



to Give Allied Countries Report on U.S.A. Developments in Mfg. Indus. During W. W. II, 1945. Special Int.: Metal, Glass, Plastic Containers and Closures and Materials Used in Their Mfg. and Use. Gen. Int.: Several Patents.

MAIER, Norman Raymond Frederick, Prof. of Psychol., Univ. of Mich., Ann Arbor, Mich. EXPERIMENTAL PSYCHOLOGY.

MAIL, George Allen, Rsch. Entomologist, Boyle-Midway Inc., Amer. Home Products Corp., 257 Cornelison Ave., Jersey City, N. J. ENTOMOLOGY.

MAIN, Rolland John, Med. Editor, Kresewetter, Welteran and Baker, Consulting Physiologist, Eaton Labs., Inc., Norwich, N. Y. PHYSIOLOGY.

MAINLAND, Donald, Prof. of Anatomy, Dalhousie Univ., Halifax, N. S., Can. HUMAN ANATOMY.

MAIS, Walter Henry, Asst. Prof. of Physics, Brooklyn Coll., Brooklyn, N. Y. PHYSICS, MODERN.

MAISON, George L., Vice-Pres. and General Mgr., Riker Labs., P. O. Box 3157, Terminal Annex, Los Angeles 54, Calif. PHARMACOLOGY AND PHYSIOLOGY. b. Frankfort, Ky., Oct. 13, 1911. s. Louis and Louise (Bear) M. Edn.: B.A., Northwestern Univ., 1930; M.S., *ibid.*, 1934; M.D., *ibid.*, 1935. m. Elizabeth Jane Platt, July 26, 1935. c.: Susan; Sally. Exp.: Instr. in Physiol., St. Louis Univ., 1937-40; Asst. Prof. of Physiol., Wayne Univ. Schl. of Med., 1940-42; Chf. Acceleration Unit, Aeromed. Lab., U.S.A.F., 1942-45; Assoc. Prof. of Physiol., Boston Univ. Schl. of Med., 1945-46; Prof. and Hd., Dept. of Pharmacol., *ibid.*, 1946-52; Dir. of Rsch., Riker Labs., Los Angeles, Calif., 1952—. Mem.: A.M.A.; Mass. Med. Soc.; Amer. Physiol. Soc.; Amer. Soc. Pharmacol. and Exptl. Therapeutics; A.A.A.S.; Soc. Exptl. Biol. and Med.; N. Y. Acad. Sci.; Aeromed. Assn.; Sigma Xi; Alpha Omega Alpha. Contrb. to: Amer. Jour. Physiol.; Jour. Pharm. and Exptl. Therap.; Proc. Soc. Exptl. Biol. and Med.; etc. Special Int.: Physiol. of Muscle, Aviation, Autonomic Reflexes; Pharmacol. of Cardiovascular-Active Drugs.

MAJOR, Randolph Thomas, Dir. of Rsch., Merck and Co., Inc., Rahway, N. J. CHEMISTRY.

MALING, Harriet Florence Mylander, Asst. Rsch. Prof. of Pharmacol., George Washington Univ. Med. Schl., 1335 H St., N. W., Washington 5, D. C. PHARMACOLOGY. b. Baltimore, Md., Oct. 2, 1919. d. Walter Conrad and Matilda Augusta (Hopf) Mylander. Edn.: A.B., Goucher Coll., 1940; A.M., Radcliffe Coll., 1941; Ph.D., *ibid.*, 1944. m. Henry Forbes Maling, Jr., Sept. 1, 1943. c.: Joan Mathilde; Walter Henry; Anne Elizabeth; Charles Edward. Exp.: Elizabeth Avery Colton Fellow, A.A.U.W., Radcliffe Coll. (Harvard Med. Schl.), 1943-44; Asst. in Pharmacol., Harvard Med. Schl., 1944-45; Instr. in Pharmacol., *ibid.*, 1945-46; Asst. Prof. in Pharmacol., Geo Washington Univ. Med. Schl., 1951-52; Asst. Rsch. Prof. of Pharmacol., *ibid.*, 1952—. Hon. Pos.: Pres., Annapolis Br. A.A.U.W., 1952-53. Mem.: Amer. Soc. Pharmacol. Exptl. Therap.; Phi Beta Kappa; Sigma Xi; N. Y. Acad. Sci.; A.A.U.W.; etc. Contrb. to: Jour. Pharmacol. and Exptl. Therapeutics; Amer. Jour. Physiology; Jour. Neurophysiol. Special Int.: Inhibition of Spinal Reflexes; Postural Activity of Decerebrate Cats, after d-amphetamine; Action of Erythrophileum Alkaloids upon the Heart-lung Preparation; Metabolic Studies on E. coli strain B-bacteriophage T2r⁺ System.

MALLERY, Thomas Dwight, Rubber Plant Investigations, Plant Indus. Sta., Beltsville, Md. HEVEA RUBBER CULTURE.

MALLEY, Henry A., Jr., Pres., Deady Chem. Co., 1316 St. Louis, Kans. City, Mo. CORROSION AND WATER TREATING. b. Kans. City, Mo., Mar. 24, 1915. s. Henry A. and Dora F. (Grogman) M. Edn.: Rockhurst Coll., 1932-34. m. Kathlenn Leary, Oct. 14, 1939. c.: Thomas H.; Robert C.; John P. and Michael J. Exp.: Lab. Tech., Deady Chem. Co., Kans. City, Mo., 1934-35; Field Service Engr., *ibid.*, 1936-40; Dir. of Service,

ibid., 1940-43; Asst. to Gen. Mgr., *ibid.*, 1943-46; Pres., *ibid.*, 1946—. Mem.: Engrs. Assn. of Kans. City; Amer. Soc. of Mech. Engrs.; Amer. Chem. Soc.; Serra Club; C. of C. Special Int.: Corrosion; Waterside.

MALLINCHRODT, Edward, Jr., Chmn. of Bd., Mallinckrodt Chemical Works, St. Louis, Mo. CHEMISTRY.

MALLMANN, Walter LeRoy, Prof. of Bacteriol. and Public Health, Mich. State Coll., East Lansing, Mich. BACTERIOLOGY.

MALLON, Marguerite Genevieve, Asst. Prof. of Home Econ., Univ. of Calif., Los Angeles, Calif. NUTRITION.

MALONE, Edward Fall, retired, 153 Cortland Ave., Winter Park, Fla. NEUROLOGY.

MALONE, Kemp, Prof. of English, Johns Hopkins Univ., Baltimore, Md. LINGUISTICS.

MALONE, Robert Emmick, Horticulturist, 2520 W. Walnut St., Louisville, Ky. AGRICULTURE.

MALOTT, Clyde Arnett, Prof. of Geol., Ind. Univ., Bloomington, Ind. GEOLOGY.

MALOY, Arthur Lee, Hd. of Catalyst Labs., Carbide and Carbon Chem. Co., 2122 Superior Ave., S. Charleston, W. Va. INORGANIC AND PHYSICAL CHEMISTRY. b. Charleston, W. Va., Aug. 23, 1915. s. Arthur Lafayette and Lila Creig (Dulaney) M. Edn.: B.S., Morris Harvey Coll., 1947. m. Bettie Chandler, Mar. 9, 1936. c.: Arthur Lee, Jr. Exp.: Lab. Tech., Pure Oil Co., Cabin Creek, W. Va., and Muskogee, Okla., 1933-37; Engr. in Water Treating Plant, Westvaco Chlorine Prod. Corp., S. Charleston, W. Va., 1937-41; Tech. Chemist, Carbide and Carbon Chem. Co., S. Charleston and Inst., W. Va., 1941—. Mem.: Amer. Chem. Soc.; Zeta Kappa; Chi Beta Phi (Natl. Pres.). Special Int.: Catalytic Synthesis of Organic Chem.; Phys. and Chem. Analyses of Metals and Minerals Particularly Using Instrument Methods.



MALPICA, José Mireles, Investigador Científico, Instituto Politécnico Nacional, Sierra Nevada No. 225, Mexico 10, D. F., Mex. HIGH VOLTAGE FENOMENA; ELECTROSTATICS; ELECTRICAL TRANSFORMATIONS. b. Cosautlan, Ver., Mex., Feb. 15, 1905. s. Bernardo Mireles and Zenaida Malpica. Edn.: M.S., Union Coll., 1932. m. Betty Mary Holbrook Diamond. c.: Bernardo; Philip. Exp.: Lab. Asst., Gen. Engrng. Lab., Gen. Electric Co., Schenectady, N. Y., 1925-32; Development Work, *ibid.*, 1932-42; Dir. of Rsch. Lab., Fabrica Nacional de Polvora, Santa Fe, D. F., Mex., 1943-45; Consulting Work in Phys. and Tchn. in the Escuela Superior de Ingenieria Mecanica y Electrica, 1945—; Investigator Científico, Instituto Politécnico Nacional, 1947—. Mem.: Amer. Soc. for Metals; Optical Soc. of Amer.; Amer. Phys. Soc.; A.A.A.S.; Amer. Inst. of Elec. Engrs.; Sociedad Mexicana de Fisica; Asociacion Mexicana de Ingenieros Mecanicos y Electricistas. Contrb. to: General Electric Rev.; Elec. Engrng.; Rev. Scientific Instruments, Ingenieria Electrica. Gen.



Int.: Since 1947 have developed the Electrostatic Transformer of Direct Current: Built a 300 Kilovolt, D. C. Electrostatic Transformer, using 50 Kilovolts in the Primaries; Generalized the Concept of Electric Transformation. Special Int.: Electrical Transformations; Applications of the Electrostatic Transformer; Design and Construction of Scientific Instruments.

MALTANER, Frank, 388 New Scotland Ave., Albany, N. Y. MEDICAL SCIENCES.

MAN, Evelyn Brower, Asst. Prof. (Biochem.), Dept. of Med., Yale Med. Schl., 179 Linden St., New Haven Conn. CLINICAL MICRO-BIOCHEMISTRY. b. October 7, 1904, Lawrence, Long Island, N. Y. d. Edward Man and Mary (Hewitt). Edn.: A.B., Wellesley Coll., 1925; Ph.D., Physiol. Chem., Yale Univ., 1932. Exp.: Asst. and Instr., Conn. Coll. for Women, 1925-27; Tech. Med., Yale Schl. of Med., 1928-29; Asst. Rsch. Med., *ibid.*, 1929-30-32-33; Mary Pemberton Nourse Memorial Fellow, A.A.U.W., 1933-34; Asst. Rsch. (Biochem.), Dept. of Psychiatry and Mental Hygiene, Yale, 1934-35; Instr., *ibid.*, 1935-39; Asst. Prof., 1940-49; Dept. of Med., 1949—. Mem.: Phi Beta Kappa; Sigma Xi; Amer. Soc. of Biol. Chem.; Fellow, A.A.A.S.; A.A.U.W. Author: Articles on Lipemia and Iodemia, Pub. in Jour. of Biol. Chem. and Clin. Invest. Ph.D. Dissertation: The Relation of Hyperlipemia to the Nutrition and Metabolism of Diabetic Patients. Special Int.: Serum iodine and lipids in relation to thyroid function and metabolic disorders.

MANCILL, Julian Dossy, Prof. of Math., Univ. of Ala., Univ. Ala. MATHEMATICS. b. Escambia Co., Ala., Jan. 21, 1904. s. Battle Calvin and Alice (Clements) M. Edn.: A.B., Univ. of Ala., 1926; M.A., *ibid.*, 1927; Ph.D., Univ. of Chicago, 1934. m. Dora Mae Dalee, Sept. 2, 1929. c.: Julianne; Alice Louise; Marilyn. Exp.: Asst., Dept., Univ. of Ala., 1925-27; Instr., *ibid.*, 1927-33; Asst. Prof. of Math., *ibid.*, 1933-39; Assoc. Prof., *ibid.*, 1939-46; Prof. of Math., *ibid.*, 1946-51; Mathematician and Grad. Trng. Coordinator, Redstone Arsenal, Huntsville, Ala., 1951-52; Mathematician and Dir., RSA Graduate Inst., *ibid.*, 1952—. Mem.: Amer. Math. Soc.; Math. Assn. Amer.; A.A.U.P.; Sigma Xi; Phi Beta Kappa; Pi Mu Epsilon; Kappa Delta Pi; Scabbard and Blade. Contrb. to: Amer. Math. Monthly; Amer. Jour. of Math.; Bull. of Amer. Math. Soc.; Duke Jour. of Math.; Revista Universidad Nacional del Tucuman; Actas de la Academia Nacional de Ciencias de Lima. Special Int.: Unilateral Extrema in Calculus and Calculus of Variations.

MANDEL, Harold George, Assoc. Prof. of Pharmacology, George Wash. Univ., 1335 H. St., N. W., Wash. 5, D. C. CHEMICAL PHARMACOLOGY. b. Berlin, Germany, June 6, 1924. s. Ernest A. and Else (Crail) M. Edn.: B.S., Yale Univ., 1944; Ph.D., *ibid.*, 1949. Exp.: Lab. Instr., Yale Univ., New Haven, Conn., 1944, 1947-49; Rsch. Assoc., George Washington Univ. Schl. of Med., Wash., D. C., 1949-50; Asst. Rsch. Prof., *ibid.*, 1950-52; Assoc. Prof., *ibid.*, 1952—. Mem.: Amer. Soc. of Biological Chemists; Sigma Xi; Amer. Chem. Soc.; New York Acad. of Sci. Contrb. to: Jour. Amer. Chem. Soc.; Jour. Biol. Chem.; Jour. Pharmacol. and Exptl. Therapeutics; Jour. Amer. Pharm. Assn. Special Int.: Drug Metabolism; Biochemistry of Nucleic Acids and Relation to Cancer; Mechanism of Drug Action.

MANDELBAUM, Hugo, Asst. Prof., Dept. of Geology, Wayne Univ., Detroit, Mich. GEOPHYSICS; OCEANOGRAPHY. b. Sommerhausen, Germany, October 18, 1901. s. Phillip and Rachel (Berlinger) M. Edn.: M.A., Univ. Hamburg, 1930; Ph.D., Univ. Hamburg, 1934. m. Sophie Fraenkel of Munich, 1931. d. Leopold and Charlotte Fraenkel. c.: Noa; Uriel; Shoshana; Yehuda Naftali; Rahel Mir'ian. Exp.: High Schl., Hamburg, 1930-38; Beth Yehuda Elementary and High Schl., Prin., 1940-48; Wayne Univ., Instructor, 1948—. Mem.: Amer. Geophys. Union; A.A.A.S.; Sigma Xi; Math. Assn. of Amer.; Indus. Math. Soc. Author: Landscape of Palestine, 1938. Ph.D. Dissertation: Gezeiten-und Reststrome bei Borkum-Riff Feuerschiff auf Grund von Beobachtungen der Jahre, 1924-28; Table for Comput. Thickness of strata measured in a traverse or encountered in a bore hole. Co-author, John T.

Sanford Bull. of the Geol. Soc. of Amer., Vol. 63 pp. 766-776, 1952. Travel: Germany; Sweden; Italy; Palestine. Hobbies: Metal Work. Special Int.: Ocean Tides and Currents.

MANDELBAUM, Malvin R., Assoc., Kenyon and Kenyon, 165 Broadway, N. Y., N. Y. PETROLEUM REFINING.

MANGELSDORF, Paul Christoph, Botanical Museum, Harvard Univ., Cambridge 38, Mass.

MANN, Frank Charles, Univ. of Minn., Rochester, Minn.

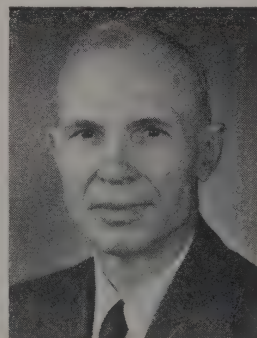
MANN, Harvey Blount, Pres. and Chmn. of Bd. of Dirs., Amer. Potash Inst., 1102 16th St., N. W., Washington, D. C. AGRONOMIST. b. Lake Landing, N. C., Aug. 29, 1898. s. Thomas Jefferson and Ella Mae (Gibbs) M. Edn.: B.S., N. C. State Coll., 1920; M.S., *ibid.*, 1925; Ph.D., Cornell Univ., 1929. m. Margaret Emma Mann, Dec. 29, 1922. c.: Harvey B. Jr. Exp.: Asst. Agronomist, N. C. State Coll., 1920-29; Agronomist, *ibid.*, 1929-36; Asst. Southern Mgr., Amer. Potash Inst., Atlanta, 1936; Southern Mgr., *ibid.*, 1937-48; Vice-Pres., *ibid.*, 1948-49; Pres. and Chmn. Bd. of Dirs., *ibid.*, 1949—. Mem.: Fellow, A.A.A.S.; Amer. Soc. Agron.; Soil Sci. Soc. of Amer.; Internatl. Soil Sci. Soc.; Soil Sci. Soc. of Fla.; Sigma Xi; Sigma Pi; Alpha Zeta; Mason; Cosmos. Special Int.: Fertilizers and Plant Nutrition.

MANN, Mary Lee, c/o Mrs. Luis J. Phelps, 3222 Klingler Rd., N. W., Washington, D. C. PLANT PHYSIOLOGY.

MANNING, Henry Parker, Brown Univ., Providence, R. I. MATHEMATICS.

MANNING, Paul De Vries, Vice-Pres. Chg. Rsch., Internatl. Minerals and Chem. Corp., 20 N. Wacker Dr., Chicago, Ill. RESEARCH ADMINISTRATION.

MANNING, Wayne Eyer, Assoc. Prof. of Bot., Bucknell Univ., Lewisburg, Pa. BOTANY. b. Toledo, Ohio, Apr. 12, 1899. s. Rollo G. and Clara (Smith) M. Edn.: A.B., Oberlin Coll., 1920; Ph.D., Cornell Univ., 1926. m. Margaret Sheldon, June 11, 1924. d. Rev. and Mrs. Harry D. Sheldon. c.: Alan S.; Grace Clara (dec.). Exp.: Asst. in Bot., Cornell Univ., 1921-24; Instr., *ibid.*, 1924-27; Instr., Univ. of Ill., 1927-28; Asst. Prof. of Bot., Smith Coll., 1928-36; Assoc., *ibid.*, 1936-42; Asst., Bucknell Univ., 1945-47; Assoc., *ibid.*, 1947—. Hon. Pos.: Chmn., Dept.



of Bot., Smith Coll., 1938-41. Mem.: Bot. Soc. of Amer.; Torrey Bot. Club; A.A.A.S.; New Eng. Bot. Club; Pa. Acad. of Sci.; Amer. Soc. Plant Taxonomists; Natl. Assn. of Biol. Tchrs.; Sigma Xi. Author: Contrb. to M. L. Fernald, Gray's Manual of Bot., 1950. Contrb. to: Amer. Jour. of Bot.; Jour. of Arnold Arboretum; Rhodora; Bull. Torrey Bot. Club. Ph.D. Dissertation: The Morphology and Anatomy of the Flowers of the Juglandaceae. War Record: Pvt., S.A.T.C., Oberlin Coll., World War I, 1918. Travel: Calif.; Wash. State; Fla.; Me.; Can. Hobbies: Collecting Plants; Collecting Postage Stamps; Study of Walnut Family of the World. Listed in: Who's Who in Mass.; Who Knows—and What; A.M.S. Special Int.: Taxonomy of Vascular Plants; Walnut Family of World.

MANNIS, Thomas Franklin, Plant Pathologist, Soil Bacteriologist and Hd., Dept. of Plant Pathol., Del. Agri. Expt. Sta., Univ. of Del., Newark, Del. PLANT PATHOLOGY, SOIL BACTERIOLOGY.

MANSFIELD, Ralph, Tehr. of Math., Chicago Tehrs. Coll., 10226 S. Hoyne, Chicago 43, Ill. AUTOMOTIVE ELECTRICAL TESTING EQUIPMENT. b. Aug. 21, 1912, Chicago, Ill. s. Hyman and Molly

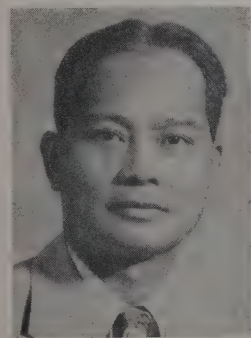
(Friedman) M. Edn.: Univ. of Chicago; Lewis Inst.; S.B., Univ. of Chicago, 1935; S.M., *ibid.*, 1937; Grad. Study, Univ. of Chicago, 1937-41; Ill. Inst. of Tech., 1943-48. m. Hilda Blum, Sept. 23, 1940. c.: Karen Lee; Diane Ethel; Richard Steven; Pamela Jean. Exp.: Adler Panetarium, 1930-37; Member, Chicago Eclipse Expedition, 1932; Lectr., Adult Edn., Central Y.M.C.A., 1935; Summer Instr., Math., Lewis Inst., 1936; Evening Instr., Math., Armour Inst., 1937; Instr., Math., Armour Inst., 1938; Tchr. Math., Chicago Tchrs. Coll., 1938-44; Evening Instr., Math., Ill. Inst. of Tech., 1939—; Evening Instr., Math., Abraham Lincoln Schl., Asst. Chf. Engr., Jos. Weidenhoff, Inc., 1944-47; Vice-Pres., Engineering Auto-Test, Inc., 1947—. Hon. Pos.: Vice-Pres., Coll. Functional Group of Chicago Tchrs. Union, 1944. Mem.: Hon. Mem., Eugene Field Soc.; Hon. Mem., Internatl. Mark Twain Soc.; Sigma Xi; A.A.A.S.; Amer. Math. Soc.; Math. Assn. of Amer.; Math. Assn. of Eng.; Inst. of Math. Stat.; Inst. of Radio Engrs.; Soc. of Amer. Milit. Engrs. Author: Plane Trigonometry. Contrb. to: Math. Tchr. Jour. of Edn. Rsch.; Schl. Sci. and Math. Ph.D. Dissertation: Differential Systems Involving K. Point Boundary Conditions. Gen. Int.: Lectr., Consultant in Statistics and Electrical Engineering. Hobbies: Fishing; Photography; Handicraft; Estivation. Listed in: A.M.S.; Who Knows—and What.

MANSON, M. E., Box 1480, Palm Springs, Calif. CERAMICS.

MANTER, Harold Winfred, Prof. of Zool., Univ. of Nebr., Lincoln, Nebr. PARASITOLOGY, HELMINTHOLOGY.

MANTER, Jerauld Armington, Assoc. Prof. of Entomol., Univ. of Conn., Storrs, Conn. ENTOMOL-OGY.

MANUEL, Canuto Guevarra, Chf., Div. of Zool., Natl. Museum, Manila, Philippines. ORINTHOLOGY.



b. Pasay, Rizal, Philip-pines, Jan. 19, 1902. s. Ciriaco and Juliana (Guevarra) M. Edn.: B.Agr., Univ. of P. I., 1924; B.S., *ibid.*, 1925; M.S., Univ. of Mich., 1929; Sc.D., *ibid.*, 1932. m. Natividad Hemedes, Jan. 7, 1934. c.: Ernesto; Oscar; Arturo; Enrique; Amado; Erlinda. Exp.: Asst. in Entomol., Univ. of Phil., 1924-28; Asst. Curator of Birds, Univ. of Mich., Ann Arbor, Mich., 1928-29; Hinsdale Fellow, *ibid.*, 1929-30; Rsch. Asst. in Fisheries, *ibid.*, 1930-32; Ornithol., Bur.

of Sci., P. I., 1932-39; Tech. Asst. in Fisheries, *ibid.*, 1939-40; Scientist, Natl. Hist. Museum, Dept. of Agri. and Comm., *ibid.*, 1940-42; 1945-47; Chf., Div. of Zool., Natl. Museum, *ibid.*, 1947—. Mem.: Sigma Xi; Mich. Acad. of Sci.; Buffalo Soc. of Natural Sci.; Natl. Rsch. Council; Amer. Assn. of Museums; Internatl. Coun. of Museum; A.A.A.S.; Lions Club. Author: Album of Philippine Birds, 1936. Special Int.: Systematic and Econ. Studies of Philippines Birds.

MANUEL, Herschel Thurman, Prof. of Ednl. Psychol. and Dir., Testing and Guidance Bureau, Univ. of Tex., Austin, Tex. EDUCATIONAL PSYCHOL-OGY.

MANUEL, William Asbury, Hd., Dept. of Chem., Ohio Wesleyan Univ., 50 Forest Ave., Delaware, Ohio. CHEMISTRY.

MANVILLE, Ira Albert, Assoc. Clinical Prof. of Med. and Dir., Nutrition Rsch. Lab., Univ. Ore. Med. Schl., Portland, Ore. PHYSIOLOGY, NU-TRITION.

MANVILLE, Richard, Dept. of Zool., Mich. State Coll., E. Lansing, Mich. MAMMALOGY.

MANWARING, Wilfred Hamilton, Prof. Emeritus of Bacteriol. and Exptl. Pathol., Stanford Univ., 364

Kingsley Ave., Palo Alto, Calif. IMMUNOLOGY AND EXPERIMENTAL PATHOLOGY. b. Ashland, Va., Sept. 14, 1871. s. Theodore Perry and Mary Frances (Griswold) M. Edn.: B.S., Univ. of Mich., 1895; M.D., Johns Hopkins Univ., 1904. m. Ava Mautner, June 14, 1917. c.: John Hamilton; Fred-erick Wolcott. Exp.: Asst. Pathol., Univ. of Chica-go, 1904-06; Assoc. Prof. of Pathol. and Bacteriol., Ind. Univ., 1905-07; Traveling Fellow and Asst. in Pathol. and Bacteriol., Rockefeller Inst., 1907-13; Prof. of Bacteriol. and Exptl. Pathol., Stanford Univ., Calif., 1913-37; Emeritus Prof., *ibid.*, 1937—. Hon. Pos.: Pres., Amer. Assn. Immunologists, 1926. Mem.: Soc. Exptl. Pathol.; Amer. Assn. for Pathol-ogists and Bacteriologists; Soc. for Exptl. Biol. and Med.; Soc. Amer. Bacteriologists; Sigma Xi. Special Int.: Exptl. Pathol.

MANZER, Charles W., 10 Sheridan Sq., N. Y., N. Y. PSYCHOLOGY.

MARAMOROSCH, Karl Assoc. in Plant Pathol., Rockefeller Inst. for Med. Rsch., 66th and York Ave., N. Y. 21, N. Y. PLANT PATHOLOGY; PLANT VIRUS DISEASES; STUDY OF VIRUSES WHICH MULTIPLY BOTH IN PLANTS AND ANIMALS. b. Vienna, Austria, Jan. 16, 1915. s. Jacob and Stephanie Olga (Schlesinger) M. Edn.: Ph.D., Columbia Univ., 1949. m. Irene Ludwinow-ska, Nov. 15, 1938. c.: Lydia Ann. Exp.: Rsch. Fellow, Agri. Rsch. Inst., Bucharest, Rumania, 1944-46; Rsch. Fellow, Brooklyn Bot. Gard., N. Y., 1947-48; Rsch. Fellow, Amer. Cancer Soc., 1948-49; Asst., Plant Pathol., Rockefeller Inst., N. Y. C., 1949-53. Mem.: Amer. Phytopathol. Soc.; A.A.A.S.; Torrey Bot. Club; Sigma Xi; Growth Soc.; N. Y. Acad. of Sci.; L. I. Biol. Assn. Contrb. to: Phytopathol.; Proc. Soc. of Exptl. Biol. and Med.; Sci.; Nature. Special Int.: Biol. Transmission of Viruses by Insect Vectors.

MARBAKER, Edward E., Mellon Inst., Oakland Sta., Pittsburgh 13, Pa. CERAMICS.

MARBLE, John Putnam, Chmn., Dom. Measure-ment Geologic Time, Div. Geol. and Geography, Natl. Rsch. Council, 2101 Constitution Ave., N. W., Washington, D. C. GEOCHEMISTRY.

MARCEAU, Eugene Theodore, Consltg. Chem. Engr., retired., 1828 B. 20th. Ave., North. St. Petersburg 2, Fla. ENGINEERING. b. Grande Ligne, Prov. of Quebec, Can., Jan. 16, 1890. s. Prof. James H. and Mary G. (Joubert) M. Edn.: B.S., M.I.T., 1912. m. Sadie M. Ingram, Oct. 16, 1922. c. Mary; Nancy; Jeann. Exp.: Instr., M.I.T., Cambridge, Mass., 1913; Control Chem., 1914, Factory Mgr., 1918, Chem. Dir., N. K. Fairbank Co., Chicago, 1918-23; Chem. Dir. 1923-25; Gold Dust Corp., Mgr. Mfg. Dept., Gold Dust Corp., New York City, 1925-37; Dir. of Rsch. Dev., Hecker Prods. Corp., 1937-39; General Supervisor of Rsch., Lever Bros. Co., Cambridge, Mass., 1939-46; Consulting Chem. Engr., Boston, Mass., 1946-47; Retired, St. Petersburg, Fla., 1947—. Mem.: A.C.S.; Amer. Oil Chem. Soc.; A. I. Chem. Engr.; The Chemist Club of N. Y.

MARCH, Herman William, Prof. of Math., Univ. of Wis., Madison, Wis. APPLIED MATHEMA-TICS.

MARCOU, Rene Joseph, Prof. of Math., Boston Coll., Chestnut Hills, Mass. MATHEMATICS.

MARCOVITCH, Simon, Entomologist, Univ. of Tenn., Knoxville, Tenn. ENTOMOLOGY.

MARCUS, Alexander, Prof. of Physics, Coll. of the City of N. Y., 139th St. and Convent Ave., N. Y., N. Y. ELECTRO-PHYSICS.

MARCUS, Joseph Kneats, Scientific Dir., Paulel Coll., 114 E. 32nd St., N. Y., N. Y. ORGANIC CHEMISTRY.

MARCUS, Stanley, Assoc. Prof. of Bact., Coll. of Med., Univ. of Utah, Salt Lake City, Utah. BAC-TERIOLOGY AND IMMUNOLOGY. b. N. Y., N. Y., Jan. 20, 1916. s. I. L. and Rae (Tow) M. Edn.: B.A., Brooklyn Coll., 1937; M.S., Univ. of Mich., 1939; Ph.D., *ibid.*, 1942. m. Hawriet Lynn

of N. Y., 1939. d. Charles and Minna Kaplan. c.: Charles J. and Rand T. Exp.: Rsch. and Tehng. Asst., Dept. of Bacteriol., Univ. of Mich., 1939-42; Capt., Sanitary Corps, A.U.S., 1943-46; Res. Assoc. Horace Rackham Arthritis Res. Unit, Univ. of Mich., 1947-48; Assoc. Prof. of Bacteriol., Univ. of Utah, 1949—; Consultant Bacteriologist, L.D.S. Hosp., Salt Lake City. Mem.: Phi Sigma; Sigma Xi; A.A.A.S.; Soc. of Amer. Bacteriol.; Soc. of Exptl. Biol. and Med.; Amer. Assn. of Immunology; N. Y. Acad. of Sci. Ph.D. Dissertation: Some Aspects of the Kahn Reaction with Animal Sera and Non Syphilitic Human Sera. War Record: Capt., Sanitary Corps, A.U.S., 1943-46. Listed in: A.M.S. Special Int.: Serology of Syphilis; Host Factors in Resistance to Infection; Antimycotic Drugs; Antibiotic Action.

MARDEN, John W., Asst. Dir. of Rsch., Westinghouse Lamp Co., Bloomfield, N. J. **CHEMISTRY, METALLURGY.**

MARDEN, Morris, Prof. of Math., Univ. of Wis., Milwaukee 11, Wis. **MATHEMATICAL ANALYSIS**



AND APPLIED MATHEMATICS. b. Boston, Mass., Feb. 12, 1905. s. Abraham and Fannie (Lieberman) M. Edn.: A.B., Harvard, 1925, magna cum laude and highest honors in Math.; A.M., ibid., 1927; Ph.D., ibid., 1928. m. Miriam Goldman of Newton, Mass., Sept. 11, 1932. d. Albert and Julia Goldman. c.: Albert; Philip. Exp.: Instr. in Math., Harvard Univ., 1925-27; Natl. Rsch. Fellow, 1928-30, Univ. of Wis.; Princeton Univ.; Swiss Fed. Tech. Univ. Zurich.

Switzerland; Univ. of Paris (France); Asst. Prof. of Math., 1930-39; Assoc. Prof. of Math., 1939-46; Prof. of Math., Univ. of Wis., 1946—; Chf. Mathematician, Control Instrument Co., Brooklyn, N. Y., 1945; Consultant, ibid., 1946; Consultant, Allis Chalmers Co., 1948—. Mem.: Amer. Math. Soc.; Math. Assn. of Amer.; Amer. Assn. Univ. Prof.; Fellow, Amer. Assn. Adv. Sci.; Phi Beta Kappa; Sigma Xi; Chaos Club; Harvard Club. Author: The Geometry of the Zeros of a Polynomial in a Complex Variable, 1949. Contrb. to: Transactions of the Amer. Math. Soc.; Bull. of the Amer. Math. Soc.; Proceedings of the Amer. Math. Soc.; Amer. Math. Monthly; Annals of the Math.; Proceedings of the Natl. Acad. of Sci.; Amer. Jour. of Math. Ph.D. Dissertation: On the Zeros of the Derivative of a Rational Function and of the Jacobian of Two Binary Forms. Asst. Ed., Bull. of Amer. Math. Soc., 1942-45; Sr. Fellow, Brown Univ. Grad. Schl. of Adv. Mechanics, Summers, 1943, 1944; Consultant, Allis Chalmers Mfg. Co., Milwaukee, Wis., 1948—. War Record: Chief Mathematician for the Control Instrument Co., Brooklyn, N. Y., During the War in Conjunction with a U. S. Navy Contract held by this Co. Travel: Canada; Switzerland; France; Germany; Italy; England; Austria; Belgium; Czechoslovakia. Hobby: Gardening. Listed in: A.M.S. Special Int.: Zeros of Polynomials; Mathematical Theory of Turbomachines.

MARGENAU, Henry, Prof., Sloane Physics Lab., Yale Univ., New Haven, Conn. **SCIENTIFIC PHILOSOPHY, THEORETICAL PHYSICS.**

MARGOLIS, Herbert I., Prof. Clinical Orthodontics and Dir., Dept. of Grad. Orthodontics, Tufts Coll. Dental Schl., Boston, Mass.

MARGULIS, Aaron Edwin, Pathologist, Santa Fe Clinic, Inc., Coronado Bldg., Santa Fe, N. Mex. **PATHOLOGY AND CLINICAL PATHOLOGY.** b. N. Y., N. Y., Sept. 7, 1905. s. Jacob and Sophie (Wechsler) M. Edn.: A.B., Columbia Coll., 1926; M.D., Coll. of Physicians and Surgeons, Columbia Univ., 1929. m. Elizabeth Stayer, Oct. 20, 1944. c.: Peter Stayer New; Elizabeth Stayer New. Exp.: Asst. Prof. of Pathol., N. Y. Post-Grad. Med. Schl., Columbia Univ., 1944-47; Prof. of Bacteriol., ibid.,

1947; Asst. Attending Pathologist, ibid., 1944-47; Attending Bacteriologist and Exec. Hd. of Bacteriol., N. Y. Post Grad. Med. Schl., ibid., 1947; Pathologist, Santa Fe Clinic, Inc., 1947—; Pathologist, St. Vincent, Espanola and Embudo Hosp., 1947—; Consulting Pathologist to V. A. Hosp., Albuquerque, N. Mex., 1947—; Consulting Pathologist, Los Alamos Med. Center, Los Alamos, N. Mex., 1950—; Consulting Pathologist, U. S. Indian Hosp., Santa Fe, N. Mex., 1947—. Hon. Pos.: Bd. of Dirs., N. Mex. Chapter, Amer. Cancer Soc.; Pres., Bd. of Dirs., Santa Fe Community Concert Assn.; Vice-Pres. of Staff, Espanola Hosp.; Pres., N. Mex. Assn. of Radiologists and Pathologists; State Counselor, Amer. Soc. of Clinical Pathol.; Coll. of Amer. Pathologists, Fellow; Amer. Assn. Pathol. and Bacteriol.; A.A.A.S., Fellow; Amer. Coll. Physicians, Fellow; A.M.A.; N. Mex. Med. Assn.; Phi Beta Kappa; Phi Delta Epsilon. Contrb. to: Med. Physics; Amer. Rev. Tuberculosis; Jour. Lab. and Clinical Med.; Annals of Internal Med.; Arch. of Diseases of Children. Special Int.: Tumor Pathol.

MARGOLIS, Otto Schwarz, Pres., Amer. Acad. of Embalming and Mortuary



Rschn., 1974 Broadway, N. Y. 23, N. Y. **GENETICS; BACTERIOLOGY AND PUBLIC HEALTH.** b. July 12, 1907, Constantinople, Turkey. s. Herman and Cecile (Schwarz) M. Edn.: A.B., Western Reserve Univ., 1929; M.A., ibid., 1930; Ph.D., N. Y. Univ., 1934. m. Leona Weiss of Cleveland, Ohio, Sept. 9, 1930. d. David and Annie Weiss. c.: James A.; Donald L. Exp.: Grad. Asst., Biol., Western Reserve Univ., 1929-30; Tehng. Fellow, Biol., N. Y. Univ., 1930-34; Instr., Biol., ibid., and Univ. of Newark,

1934-36; Instr., Bacteriology and Pathol., Cleveland Coll. of Mortuary Sci., 1936-39; Instr., Bacteriol. and Pathol., Pittsburgh Inst. of Mortuary Sci., 1939-50; Dean of Students, ibid., 1945-50; Pres., Natl. Assn. of Coll. of Mortuary Sci., 1949-50, 1950-51; Dean, Amer. Acad. of Embalming and Mortuary Rsch., N. Y., N. Y., 1951—. Mem.: Fellow, A.A.A.S.; Genetics Soc. of Amer.; Human Genetics Soc.; A.A.U.P.; Sigma Xi. Contrb. to: Genetics; Amer. Naturalist. Ph.D. Dissertation: The Effect of the Gene Vestigial on Facet Number in the Bar Series of *Drosophila m.* Listed in: A.M.S.

MARIN, Joseph, Prof. of Engrng. Mech. and Res. Prof. of Engrng. Materials, Dept. of Engrng.



Mechanics, Pa. State Coll., State Coll., Pa. MECHANICS AND MATERIALS. b. N. Y. C., June 7, 1905. s. Aristodemo G. and Mabel (Lunardelli) M. Edn.: B.S., Univ. of British Columbia, 1928; M.S., Univ. of Ill., 1930; Ph.D., Univ. of Mich., 1936. m. Jean Brunton, June 24, 1939. Exp.: Instr. and Asst. Prof., Rutgers Univ., New Brunswick, N. J., 1930-39; Assoc. Prof., Ill. Inst. of Tech., Chicago, Ill., 1939-42; Prof. and Ref. Prof., Pa. State Coll., State Coll., Pa.,

1942—; Part-time Consult. for Curtiss Wright Corp., 1942—. Mem.: A.S.M.E.; A.S.C.E.; S.E.S.A.; A.S.E.E.; I.A.S.; A.P.S.; A.S.T.M.; Sigma Xi; Tau Beta Pi; Chi Epsilon; Phi Kappa Phi. Author: Working Stresses, 1939; Mech. Props of Materials and Design, 1942; Strength of Materials, 1948; Engrng. Materials, 1952. Contrb. to: Proc. of Amer. Soc. of Engrng. Edn.; Amer. Soc. for Testing Mat.; Trans., Amer. Soc. of Metals; About 100 Papers. Special Int.: Engrng. Mechanics and Materials.

MARINE, David, Assoc. Prof. Exptl. Med., Western Reserve Univ., retired, 18 Baltimore Ave., Rehoboth, Del. **PATHOLOGY**.

MARING, Karl A., Loyola Univ., New Orleans, La. **PHYSICS, MATHEMATICS**.

MARISIC, M. M., 841 Douglas Ave., Elgin, Ill. **PETROLEUM**.

MARK, Clara Gould, retired, 270 S. State St., Westerville, Ohio. **BOTANY, HISTORIC GEOLOGY**.

MARK, Herman, Brooklyn Poly. Inst., Brooklyn, N. Y. **CHEMISTRY**.

MARKLE, Millard S., Hd., Dept. of Biol., Earlham Coll., Earlham, Ind. **BOTANY**.

MARKLEY, Alton L., Prof. and Chmn., Dept. of Chem., Skidmore Coll., Saratoga Springs, N. Y. **ANALYTICAL CHEMISTRY**.

MARKLEY, Klare Stephen, Prin. Chemist and Hd., Oil Fat and Protein Div., Southern Regional Rsch. Lab., 2100 Robert E. Lee Blvd., New Orleans, La. **CHEMISTRY**.

MARKLEY, Max C., Minneapolis Grain Exchange, Minneapolis, Minn.; 1486 Hythe St., St. Paul, Minn. **CHEMISTRY**.

MARKS, Lewis Hart, Vice-Pres., Publicker Industries, Inc., 1429 Walnut St., Philadelphia, Pa. **INDUSTRIAL CHEMISTRY**.

MARKS, Lionel S., Gordon McKay Prof. Emer. Mech. Engrng., 215 Pierce Hall, Harvard Univ., Cambridge, Mass. **MECHANICAL ENGINEERING**.

MARKUS, Richard Louis, Rsch. Chemist, White Labs., Inc., 35 Lloyd Rd., Montclair, N. J. **ORGANIC CHEMISTRY**. b. Budapest, Hungary, Feb. 6, 1917. s. Alexander and Rose (Frost) M. Edn.: M.S., Zuerich, Switzerland, 1939; Ph.D., ibid., 1943. m. Alice Marie Lisibach, Nov. 3, 1945. Exp.: Instr., Fed. Poly. Inst., Zuerich, Switzerland, 1943-48; Assoc. in Biochem. Cancer Rsch., Tufts Coll., Med. Schl., Boston, Mass., 1948-49; Fellow in Organic Chem. Rsch., Harvard Univ., Cambridge, Mass., 1949-50; Rsch. Chemist, White Labs., Inc., Kenilworth, N. J., 1950—. Mem.: Amer. Chem. Soc.; Swiss Chem. Soc.; Assn. of Harvard Chemists. N. Y. Acad. Sci.; Chem. Soc.; Soc. of Chem. Industry; The Faraday Soc. Contrb. to: Helvetic Chimica Acta; Amer. Jour. of Med. Sci.; Arch. of Biochem.; Jour. Amer. Pharm. Assn. Special Int.: Terpehe and Steroid Chem.; Synthetic Antimalarials; Ion Exchange Resins; Polymer Chem.

MARKWARDT, Lorraine Joseph, Asst. Dir., U. S. Forest Products Lab., Madison 5, Wis. **ENGINEERING RESEARCH IN FOREST PRODUCTS**. b. Lansing, Iowa, Nov. 26, 1889. s. Joseph F. and Louisa (Besch) M. Edn.: B.S., Univ. of Wis., 1912; C.E., ibid., 1922. m. Lula May Starks, June 21, 1917. Exp.: Asst. City Engr., Madison, Wis., 1912; Instr. in Drawing, Descriptive Geometry Engrng. Coll., Univ. of Wis., Madison, Wis., 1915-17; Rsch. Engr., U. S. Forest Products Lab., Madison, Wis., 1912-14; Asst. Chf., Div. of Timber Mech., ibid., 1917-39; Chf., ibid., 1939-43; Asst. Dir., ibid., 1943—. Mem.: Soc. of Amer. Foresters; A.A.A.S.; Forest Products Rsch. Soc.; Amer. Soc. of Civil Engrs.; Amer. Ry. Engr. Assn.; Past Pres., Amer. Soc. for Testing Materials; Mem. Comm. on Mechanical Wood Technology, Food and Agr. Organ. of U. N.; Tau Beta Pi; Chi Epsilon; Sigma Xi; Rotary. Author: Descriptive Geometry, with Millar and Maclin, 1919. Contrb. to: Civil Engrng.; Amer. Soc. for Testing Mat. Bull.; Jour. of Forestry. Special Int.: Wood, Properties and Uses; Timber Mechanics; Methods of Testing Wood; Forest Products; Timber.

MARLATT, Charles Lester, 1521 16th St., N. W., Washington, D. C. **ENTOMOLOGY**.

MARLIES, Charles A., Asst. Prof. Chem. Engrng., City Coll., Convent Ave. and 140th St., N. Y., N. Y. **CHEMICAL ENGINEERING**.

MARMER, Harry Aaron, Asst. Chf., Div. Tides and Currents, Coast and Geodetic Survey, 7106 Seventh St., N. W., Washington, D. C. **TIDES**.

MARMORSTON, Jessie, Asst. Prof. of Med., Univ. of Southern Calif., Los Angeles, Calif. **ENDOCRINOLOGY**.

MARON, Samuel Herbert, Prof. of Phys. Chem., Case Inst. of Tech., Univ. Circle, Cleveland 6, Ohio. **PHYSICAL CHEMISTRY**. b. Warsaw, Poland, May 28, 1908. s. Harry Bertha (Zellin) M. Edn.: B.S., Case Inst., 1931; M.S., ibid., 1933; Ph.D., Columbia Univ., 1938. m. Pearl Weinstein of Rochester, N. Y., 1936. d. Harris and Anna Weinstein. c.: Linda Anne. Exp.: Instr., Chem., Case Inst., 1931-37; Asst. Prof., ibid., 1938-42; Assoc., ibid., 1942-45; Prof. of Phys. Chem., ibid., 1945—; Dir. of Rsch. Proj. for Office of Synthetic Rubber, RFC, 1943—. Hon. Pos.: Latex Advisory Comm., Office of Synthetic Rubber, RFC; Mem. Latex Specif. and Test Methods Subcomm., A.S.T.M. Mem.: Amer. Chem. Soc.; A.A.A.S.; Amer. Inst. Chem. Engrs.; Sigma Alpha Mu; Tau Beta Pi; Sigma Xi; Phi Lambda Upsilon; Alpha Chi Sigma. Author: Fundamental Principles of Phys. Chem. Contrb. to: Jour. Amer. Chem. Soc.; Jour. Chem. Phys.; Analytical Chem.; Indus. Engrng. Chem.; J. Appl. Physics; J. Colloid Science; Ann. N. Y. Acad. Sci. Ph.D. Dissertation: Kinetics of Neutralization of Pseudocacids in H₂O and D₂O. Travel: Europe. Gen. Int.: Licensed Chem. Engr., State of Ohio. Listed in: Who's Who in Engrng.; Who Knows—and What; A.M.S. Special Int.: Solution Kinetics, Thermodynamics of Gases, Physical Chem. of Rubber Latex.

MARQUARDT, C. E., 343 E. Hamilton Ave., State College, Pa.

MARQUETTE, William George, Wm. Grosvenor Lab., Inc., 50 E. 41st St., N. Y., N. Y. **CELLULAR PHYSIOLOGY AND MICROSCOPY**.

MARQUIS, Donald G., Prof. of Psychol., Univ. of Mich., Ann Arbor, Mich. **PSYCHOLOGY**.

MARQUIS, Robert Houghton, Prof. of Math., Ohio Univ., Athens, Ohio. **MECHANICS, MATHEMATICS**.

MARRIOTT, Ross W., Prof. of Math. and Astron., Swarthmore Coll., Swarthmore, Pa. **ASTRONOMY**.

MARSH, Daniel L., Pres., Boston Univ., 688 Boylston St., Boston, Mass. **UNIVERSITY ADMINISTRATION**.

MARSH, Franklin Winter, 5711 Colorado Ave., N. W., Washington, D. C. **SOIL MICROBIOLOGY**.

MARSH, Gordon, Assoc. Prof. of Zool., Univ. of Iowa, Iowa City, Iowa. **BIOPHYSICS**.

MARSH, Hadleigh, Hd., Mont. Veterinary Rsch. Lab., Mont. Agri. Expt. Sta., Bozeman, Mont. **VETERINARY PATHOLOGY**.

MARSH, Herbert E., Prof. Emer. Physics, Univ. of Redlands, 940 Campus Ave., Redlands, Calif. **PHYSICS**.

MARSHALL, C. E., Univ. of Mo., Columbia, Mo. **COLLOID CHEMISTRY**.

MARSHALL, Eli Kennerly, Jr., Prof. of Pharmacol. and Exptl. Therapeutics, Johns Hopkins Schl. of Med., 710 N. Washington St., Baltimore 5, Md. **PHYSIOLOGY AND PHARMACOLOGY**. b. Charleston, S. C., May 2, 1889. s. Eli Kennerly and Julia Irene (Brown) M. Edn.: B.S., Coll. of Charleston, 1908; Ph.D., Johns Hopkins Univ., 1911; M.D., ibid., 1917; LL.D., Coll. of Charleston, 1941. m. Alice Berry Carroll, Sept. 17, 1917. c.: Katharine (dec.); Julia (Mrs. Wm. Manchester); Richard. Exp.: Asst. Physiol. Chem., Johns Hopkins Schl. of Med., Baltimore, Md., 1911-13; Assoc. Physiol. Chem., ibid., 1913-14; Assoc. in Pharmacol., ibid., 1914-17; Assoc. Prof., ibid., 1917-19; Prof., Washington Univ., St. Louis, Mo., 1919-21; Prof. of Physiol., Johns Hopkins Schl. of Med., Baltimore, Md., 1921-32; Prof. of Pharmacol. and Exptl. Thera-

peutics, *ibid.*, 1932—. Hon. Pos.: Pres., Amer. Soc. for Pharmacol. and Exptl. Therapeutics, 1942. Mem.: Amer. Physiol. Soc.; Amer. Soc. Biol. Chemists; Amer. Soc. of Pharmacol. and Exptl. Therapeutics; Assn. of Amer. Physicians; Natl. Acad. of Sci.; Amer. Phil. Soc.; Gamma Alpha; Phi Beta Pi; Fellow, A.A.A.S. War Record: Capt., Med. Corps, World War I, 1918.

MARSHALL, Hamilton L. J., Pres., Internatl. X-ray, Inc., P. O. Box 961, Mobile, Ala. RESEARCH (CHEMICAL, ELECTROCHEMISTRY, RADIOLOGICAL AND ELECTRONIC). b. Athens, Greece, Aug. 15, 1882. Edn.: Ph.D., Univ. of Athens, 1901; M.D., Univ. of Berlin, 1906. m. Martha Dorn. c. Louis, Milton Nelson. Exp.: Consultant & Researcher for Nikola Tesla Inc., N. Y., Rsch. for Postal Tel. Co. Chicago; Western Electric, Chicago; Kellogg Switchboard Co., Chicago, Western X-ray Coil Co., Chicago Consultant to Dr. Edmund Kells; rsch. and development in Radiology. Private rsch. in electrochemistry & Radiology, 1907-17; Southern Scientific Lab. Atlanta, Inst. in Radiology, Grady Hospital, Radiological Instr. & Consultant, 1917-29; Part owner & Radiologist, Edge Hospital Troy, Ala., Pres., Marshall Rsch. Inc. Troy, Ala., Montgomery & Birmingham, Pres., Internatl. X-ray Rsch. Co., Troy, Ala. & Houston, Tex., 1929-39; Technical consultant, Pres. International X-ray Inc., Rsch. Dir. Paterson Plastics & Chemical Co., Mobile, Ala., 1939—; Pres. Fertrox Associates, Mobile, Ala., 1952—. Mem.: A.A.A.S.; Amer. Chem. Soc. Award: The Martha D. Marshall Chem. Award, 1952.



MARSHALL, Max S., Prof. Bacteriol., Univ. of Calif. Med. Center, San Francisco, Calif. BACTERIOLOGY.

MARSHALL, Milton, Prof. of Physics, Brigham Young Univ., Provo, Utah.

MARSHALL, Roy Edgar, Asst. Dir., Mich. Agril. Expt. Sta., East Lansing, Mich. FOOD TECHNOLOGY. HANDLING, STORAGE AND PROCESSING OF FRUITS AND VEGETABLES. b. Arlington, Nebr., Feb. 28, 1890. s. Robert C. and Mollie (Sharp) M. Edn.: B.S., Univ. of Nebr., 1913; M.S., Ore. State Coll., 1915; Ph.D., Univ. of Minn., 1931. m. Irene Telford of Cambridge, Mass., June 15, 1917. d. Robert and Tancred Telford. c.: Kenneth Telford. Exp.: Instr., Univ. of Nebr., 1913; Tchng. Fellow and Instr., Ore. State Coll., 1913-16; Ext. Hort., Va. Polytech. Inst., 1916-20; Assoc. Prof. of Hort., Mich. State Coll., 1920-34; Assoc. Prof. of Hort., Univ. of Minn., 1928-29; Prof. and Rsch. Prof. of Hort., Mich. State Coll., 1934-50; Acting Hd., Dept. of Hort., Wash. State Coll., 1935-36; Asst. Dir., Mich. Agril. Expt. Sta., 1950—. Mem.: A.A.A.S.; Amer. Soc. for Hort. Sci.; Int. of Food Tech.; Amer. Soc. of Refrigerating Engrs.; Farm House; Alpha Zeta; Sigma Xi; Phi Kappa Phi; State Coll. Faculty Club. Author: Cherries and Cherry Products. Ph.D., Dissertation: The Pruning of the Peach as Influenced by Pruning Practices. Listed in: A.M.S.



MARSHALL, Roy Kenneth, Dir. Fels Planetarium, Franklin Inst. and Assoc. Dir., Franklin Inst. Museum, Philadelphia, Pa. ASTROPHYSICS.

MARSHALL, Rush P., Dir., Bartlett Tree Rsch. Labs., 44 Pickwick Rd., New Haven, Conn. PATHOLOGY.

MARSHALL, Ruth, Prof. Zool. Emer., Rockford Coll., Rockford, Ill.; Wisconsin Dells, Wis. ZOOLOGY.

MARSHALL, Stewart M., Consulting Engr., 430 Nevada Ave., Palo Alto, Calif. ENGINEERING.

MARSLAND, Douglas Alfred, Assoc. Prof. of Biol., N. Y. Univ., Wash. Square, N. Y., N. Y. CELLULAR PHYSIOLOGY.

MARSTELLER, Ross Perry, Dean, Schl. of Veterinary Med., Tex. A. and M. Coll., College Station, Tex. VETERINARY MEDICINE.

MARSTON, Leslie Ray, Bishop Free Methodist Church and Pres., Free Methodist Church Comm. Christian Edn., 311 N. Prairie St., Greenville, Ill. CHILD PSYCHOLOGY.

MARTELL, Arthur E., Clark Univ., Worcester 10, Mass. CHEMISTRY.

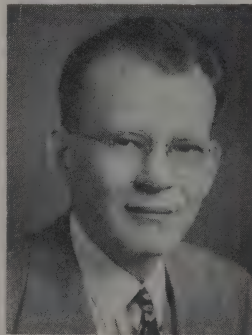
MARTH, Ella Carolyn, Prof. Math., Chmn. Div. Math. and Bus. Edn., Wilson Tchrs. Coll., Washington, D. C. b. Aug. 21, 1909, Alton, Ill. d. Louis G. and Elizabeth (Krauskopf) M. Edn.: A.B., Edn., Harris Tchrs. Coll., 1930; M.S., St. Louis Univ., 1935; Ph.D., Math., St. Louis Univ., 1944. Exp.: Tch., St. Louis Pub. Schls., 1930-44; Instr. in Math., Southeast Mo. State Coll., 1944; Asst. Prof., Math., Harris Tchrs. Coll., 1945-47; Consultant in Arith., St. Louis Pub. Schls., 1945-49; Dean of Women, Harris Tchrs. Coll., 1947-52; Assoc. Prof., 1949-52;



Lectr. in Edn., St. Louis Univ., Summers, 1945-47; Prof. of Math. and Chmn. of the Div. of Math and Bus. Edn., Wilson Tchrs. Coll., Washington, D. C., 1952—. Mem.: Central Assn. of Sci. and Math. Tchrs.; A.M.S.; M.A.A.; Natl. Council of Tchrs. of Math.; N.E.A.; A.A.A.S.; A.C.E.I.; Assn. for Supvn. and Curr. Develop.; A.A.U.P.; Sigma Xi; Pi Mu Epsilon; Theta Sigma Upsilon; Acad. of Sci. of St. Louis. Ph.D. Dissertation: Further Properties of Garvin's F-Series. Travel: N. Amer. Hobbies: Golf; Music. Listed in: A.M.S.

MARTIN, A. C., Fish and Wildlife Service, Patuxent Refuge, Laurel, Md. WILDLIFE MANAGEMENT.

MARTIN, Albert, Jr., Prof. of Biol., 1155 Murrayhill Ave., Pittsburgh 17, Pa. GENETICS AND BIOPSYCHOLOGY. b. Camden, N. J., Dec. 10, 1916. s. Albert and Mary Louise (Schwartz) M. Edn.: B.S., Univ. of Pittsburgh, 1942; M.S., *ibid.*, 1946; Ph.D., *ibid.*, 1947. m. Phyllis Cook of Sewickly, Pa., Dec. 29, 1939. d. Alice and Henry Cook. c.: Ralph K.; Patricia Ann; Richard A. Exp.: Mount Mercy Coll., 1946-53; Pa. Coll. for Women, 1952—; Editor of the Proc. of the Pa. Acad. of Science, 1953—; Assoc. Mem. of the Grad. Schl. Faculty, Univ. of Pittsburgh, 1951—; Lectr. in Biol., Univ. of Pittsburgh, 1946—; LCDR, U.S.N.R., 1942—; Rsch., Woods Hole, Mass 1940-42. Mem.: Sigma Xi; Phi Sigma; Kappa Phi Kappa Rsch. Soc. of Amer.; Pa. Acad. of Sci.;



A.A.U.P.; Human Genetic Soc.; Genetic Soc. of Amer.; A.A.A.S. Author: An Introduction to the Genetics of *Habrobracon juglandis*, 1947. Co-Author: Whom God Hath Joined, 1953. Contrb. to: Genetics; The Science Counselor; Pa. Acad. of Sci. Ph.D. Dissertation: The Present Dynamics of the Linkage Groups in *Habrobracon juglandis* Ashmead. War Record: Lt., U.S.N.R., 1942-45. Travel: Pacific Islands; Hawaii; Iwo Jima; Saipan; Alaska. Listed in: A.M.S.; Who Knows—and What; A.A.-A.S. Directory.

MARTIN, Arthur Wesley, Jr., Assoc. Prof. of Psychol., Univ. of Wash., Seattle, Wash. **PSYCHOLOGY.**

MARTIN, Bertha Edith, Prof. and Hd., Dept. of Biol., Shorter Coll., Rome, Ga. **BIOLOGY.**

MARTIN, Earl Albert, Prof. and Chmn., Dept. of Biol., Brooklyn Coll., Bedford Ave. and Ave. H., Brooklyn, N. Y. **REGENERATION IN ANNELIDS.**

MARTIN, Edward John, Hd., Physics and Instrumentation Section, Rsch. Labs. Div., General Motors Corp., P. O. Box 188, North End Sta., Detroit, Mich. **PHYSICS.**

MARTIN, Frederic Thurman, Asst. Prof. of Chem., Univ. of Maine, Orono, Maine. **PHYSICAL CHEMISTRY.**

MARTIN, George Carlyle, Jr., Prof. of Geo., E. Carolina Coll., Greenville, N. C. **PHYSIOGRAPHY.** b. Philadelphia, Tenn., Nov. 10, 1909. s. G. C. and Maude (Woods) M. Edn.: B.A., Univ. of Tenn., 1931; M.A., *ibid.*, 1932; Ph.D., Ohio St. Univ., 1940. m. Miriam Guthrie of Knoxville, Tenn., 1942. d. Mr. and Mrs. E. O. Guthrie. c.: Karen Lynne; Miriam. Exp.: Instr., Geol., Geo. Univ. of Tenn., 1935-38; John A. Bownocker Scholarship and Fellowship, 1938-40; Prof. of Geo., E. Carolina Coll., 1948—. Mem.: Soc. of the Sigma Xi. Ph.D. Dissertation: Geology of Northern Sequatchie Valley. War Record: Capt. to Colonel of Infantry, 1940-46. Travel: U. S.; Can.; Scotland; England; France; Panama; Philippine Islands; Japan. Listed in: A.M.S. Special Int.: Sequatchie Valley, East Tenn. Ridge and Valley Province.

MARTIN, George Willard, Prof. of Botany, State Univ. of Iowa, Iowa City, Iowa. **MYCOLOGY.**

MARTIN, Harry Mathias, Prof. of Parasitology, Univ. of Pa. Schl. of Veterinary Med., 39th St. and Woodlane Ave., Philadelphia, Pa. **PARASITOLOGY, PATHOLOGY.**

MARTIN, Helen M., Rsch. Geologist, Geol. Survey Div., Mich. Dept. of Conservation, Lansing, Mich. **PLEISTOCENE AND ECONOMIC GEOLOGY.**

MARTIN, Howard H., Prof. and Exec. Officer, Geography, Univ. of Wash., Seattle, Wash. **GEOGRAPHY.**

MARTIN, J. Rogers, Chf. Engr., Hot Mix Asphaltic Concrete Assn. of Okla., Inc., 424 Cravens Bldg., Oklahoma City, Okla. **ASPHALTS AND ASPHALT PAVEMENTS.**



Short Courses in Hwy. Constrn., Collaborated in Dev. of Effective Specific Gravity for Fine Aggregates, Hygroscopic Method for Determining Saturated Surface Dry Point for Fine Aggregate, Evap-

orative Index; Consulting Work in Civil Engrng., Chf. Engr., Hot Mix Asphaltic Concrete Assn. of Okla., Inc., Oklahoma City, Okla., 1951—. Mem.: Sigma Xi; Hwy. Rsch. Bd.; Assn. of Asphalt Paving Tech.; Natl. Soc. of Prof. Engrs.; Okla. Engrs. Club; Chi Epsilon; Rotary. Contrb. to: Roads and Sts., Public Works; Proc. of Asphalt Paving Tech. Special Int.: Asphalt and Asphalt Paving.

MARTIN, James C., Assoc. Chemist, Agri. Expt. Sta., Univ. of Calif., Berkeley, Calif. **SOIL CHEMISTRY.**

MARTIN, James Francis, Chf., Div. of Plant Quarantine Admin., Bureau Entomol. and Plant Quarantine, U. S. D. A., 7504 14th St., N. W., Washington, D. C. **ENTOMOLOGY.**

MARTIN, Jerome, Dir. of Rsch., Commercial Solvents Corp., Terre Haute, Ind. **CHEMISTRY.**

MARTIN, John H., Sr. Agronomist in Chg. Sorghum Investigations, Bureau Plant Indus., Soils and Agri. Engrng., Beltsville, Md. **AGRONOMY.**

MARTIN, John Nathan, Prof. of Botany, Iowa State Coll., Ames, Iowa. **PLANT MORPHOLOGY.**

MARTIN, Joseph Holmes, Hd., Poultry Dept., Purdue Univ., Lafayette, Ind. **POULTRY GENETICS.**

MARTIN, Laura H., 3126 38th St., N. W., Washington, D. C. **GEOLOGY AND GEOGRAPHY.**

MARTIN, Lay, Asst. Prof. of Med., Johns Hopkins Univ., Baltimore, Md. **INTERNAL MEDICINE.**

MARTIN, Mabel Florence, 905 Wilbraham Rd., W., Springfield, Mass. **PSYCHOLOGY.**

MARTIN, Miles J., Editor, Internal Tech. Publications, General Electric Rsch. Lab., Schenectady, N. Y.

MARTIN, Phyllis Cook, Prof. of Biol., Pa. Coll. for Women, Pittsburgh, Pa. **BIOPSYCHOLOGY.** b. Folkington, England, June 27, 1908. d. Henry and Alice (Rhoades) C. Edn.: B.S., Univ. of Pittsburgh, 1934; M.S., *ibid.*, 1936; Ph.D., Univ. of Ill., 1939. m. Albert Martin, Jr., 1939. c.: Ralph; Patricia; Richard. Exp.: Grad. Asst. in Biol., Univ. of Pittsburgh, 1934-35; Instr., Pa. Coll. for Women, 1935-37; Instr. in Biol., Winchester - Thurston Schl., 1937; Fellow in Bot., Univ. of Ill., 1937-39; Asst. in Gen., Univ. of Pa., 1940; Asst. Prof. in Biol., 1940; Assoc.



Prof., 1943; Prof., 1949, Pa. Coll. for Women; Lectr. in Orientation, Univ. of Pittsburgh, 1948—. Mem.: Phi Beta Kappa; Phi Kappa Phi; Phi Sigma; Sigma Xi. Co-Author: Whom God Hath Joined, 1953. Contrb. to: Proc. Pa. Acad. Sci.; Amer. Jour. of Bot.; Shakespeare Bull. Ph.D. Dissertation: A Morphological Comparison of Two Species of *Thyja*. Travel: England; Europe; Canada. Hobby: Gardening. Listed in: A.M.S. Special Int.: Human Development and Behavior, Edn. for Marriage.

MARTIN, Richard Blazo, Asst. Prof., Clark Univ., 150 Pleasant St., Saundersville, Mass. **CHEMISTRY (ORGANIC).** b. Winchendon, Mass., July 1, 1917. s. William Butler and Elizabeth (Ela) M. Edn.: A. B., Clark Univ., 1937; A.M., *ibid.*, 1940; Ph.D., *ibid.*, 1949. m. Dorothy Holway, Sept. 20, 1941. c.: Lawrence Sanborn; Richard Holway; Janet Lois. Exp.: Fellow, Clark Univ., 1940-41; Instr., *ibid.*, 1946-49; Asst. Prof., *ibid.*, 1949—. Hon. Pos.: Treasurer, Central Mass. Section, Amer. Chem. Soc. Mem.: Lambda Chi Alpha. War Record: U. S. Navy, 1941-46. Special Int.: Or-

ganic Synthesis in Fields of Alicyclic Ketones and Complexing Agents; Spectrophotometric Applications to Measurement of Complexing Abilities of Various Chelating Agents with Various Metals.

MARTIN, Robert Earl, Prof. of Physics, Hanover Coll., Hanover, Ind. PHYSICS.

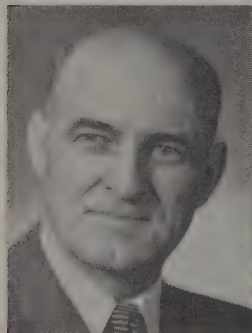
MARTIN, Thomas L., Dean, Coll. of Applied Sci., Brigham Young Univ., Provo, Utah. SOIL BACTERIOLOGY.

MARTIN, Wesley G., 6054 N. Kent Ave., Milwaukee 11, Wis. CERAMICS.

MARTIN, William E., Ext. Specialist in Soils and Assoc. Agriculturalist, Univ. of Calif., Berkeley, Calif. SOILS.

MARTIN, William Hope, Dean and Dir., Coll. of Agri. and Agril. Expt. Sta., Rutgers Univ., New Brunswick, N. J. PLANT PATHOLOGY. b. Carlisle, Pa., June 3, 1890. a. William and Sarah (Morrison) M. Edn.: B.A., Univ. of Maine, 1915; M.A., Rutgers Univ., 1917; Ph.D., *ibid.*, 1918. Hon. Deg.: D.Sc., Univ. of Maine, 1944. m. Eugenia Mary Rodick, Sept. 11, 1918. Exp.: Rsch. Asst. in Plant Pathol., N. J. Agril. Expt. Sta., New Brunswick, N. J., 1915-18; Assoc. Plant Pathol., *ibid.*, 1919-23; Pathologist, *ibid.*, 1923—; Prof. of Plant Pathol., Rutgers Univ., *ibid.*, 1926—; Dir. of Rsch., *ibid.*, 1935—; Dean, Coll. of Agri. and Dir. of N. J. Agril. Expt. Sta., *ibid.*, 1939—; Dir. of Agril. Ext. Service, *ibid.*, 1945—. Mem.: A.A.A.S.; Amer. Phytopathol. Soc.; Potato Assn. of Amer.; Sigma Chi; Alpha Zeta; Sigma Xi. Contrb. to: Many Articles on Plant Disease for Scientific Jours. Special Int.: Plant Pathol.; Culture and Diseases of Potatoes; Expt. Sta. Admin.

MARTIN, William McKinley, Vice-Pres., James Dole Engrng. Co., 211 Sutler St., San Francisco, Calif. FOOD TECHNOLOGY: ENGINEERING EQUIPMENT. b. Sylva, Va., Sept. 14, 1896. s. Madison Dalton and India Melvina (Alderman) M. Edn.: B.S.A., Univ. of Alberta, 1924; M.Sc., *ibid.*, 1926; Ph.D., Univ. of Minn., 1929. m. Iris Brough, Dec. 27, 1929. c.: Jacquelyn. Exp.: Bureau, Natl. Rsch. Council of Can., 1924-25; Studentship, *ibid.*, 1925-26; Fellowship, *ibid.*, 1926-27; Asst. Chemist, Mont. State Agri. Expt. Sta., 1929-30; Asst. Prof., *ibid.*, 1930-31;



Asst. Prof., *ibid.*, 1931-34; Rsch. Chemist, Rsch. Dept., Amer. Can Co., 1934-38; Group Supvr., *ibid.*, 1938-45; Dir. of Rsch. and Development, James Dole Engrng. Co., San Francisco, Calif., 1945-52; Vice-Pres., *ibid.*, 1952—. Mem.: Amer. Chem. Soc.; Inst. of Food Technologists; Sigma Xi; Phi Kappa Phi; Gamma Alpha; Kiwanis. Contrb. to: Jour. Physical Chem.; Indus. and Engrng. Chem.; Food Engrng.; The Canner; Canning Age; Food Packer; Plant Physiol.; Cereal Chem. War Record: Canadian Field Artillery in World War I. Gen. Int.: Invention of the Martin Aseptic Canning System (Food Eng. Award, 1951) Tenderometer and Other Inventions; 33 U. S. and Foreign Patents on Apparatus and Machines, mostly in the Food Processing Field. Special Int.: Food Technol.; Short High Temperature Sterilization of Foods.

MARTIN, William Ted, Prof., Math. Dept., Mass. Inst. of Tech., Cambridge, Mass. MATHEMATICS.

MARTON, Ladislaus L., Chf., Electron Physics Sect., Natl. Bur. of Standards, Washington 25, D. C. PHYSICS. b. Budapest, Hungary, Aug. 15, 1901. s. James L. and Helena (Ring) M. Edn.: Ph.D., Univ. of Zurich, 1924. m. Claire e Perl de Kisker, 1933. Exp.: Rsch. Asst., Univ. of Zurich, Switzerland, 1924-25; Rsch. Physicist, Tungsram Lamp Co., Ujpest, Hungary, 1925-28; Instr. to Asst.

Prof., Univ. of Brussels, Belgium, 1928-38; Lectr., Univ. of Pa., Philadelphia, Pa., 1938-39; Rsch. Physicist, RCA Mgr. Co., 1938-41; Assoc. Prof. and Hd. of Div. of Electron Optics, Stanford Univ., Calif., 1941-46; Staff, Natl. Bur. of Standards, Washington, D. C., 1946—; Editor-in-chief, *Advances in Electronics*, 1948—. Mem.: Amer. Phys. Soc.; A.A.A.S.; Electron Microscope Soc. of Amer.; Phys. Soc. of London; Washington Acad. of Sci.; Phil. Soc. of Wash.; Sigma Xi. Contrb. to: Phys. Rev.; Jour. of Applied Physics; Rev. of Sci. Instruments; Jour. Optical Soc. of Amer.; Jour. of Rsch. of NBS, etc. Gen. Int.: Electron Physics and Electron Optics. Special Int.: Electron Microscope, Electron Interferometer.

MARTS, Ralph Ortman, Technologist, Forest Products, U. S. Forest Products Lab., 420 W. Gorham St., Madison, Wis. WOOD STRUCTURE AND GROWTH RELATIONS.

MARTUS, Rev. Joseph Armand, S.J., Asst. Prof. of Chem., Coll. of the Holy Cross, Worcester 10, Mass. ORGANIC CHEMISTRY. b. Boston, Mass., Mar. 12, 1909. s. Henry and Anne (Mischler) M. Edn.: A.B., Boston Coll., 1933; M.A., *ibid.*, 1934; Lic. Phil., Weston Coll., 1934; M.S., Coll. of the Holy Cross, 1936; Ph.D., Clark Univ., 1952. Exp.: Instr. in Chem., Boston Coll., 1936-37; Ordained to Priesthood, Weston Coll., 1940; Instr. in Chem., Cranwell Prep. Schl., 1942-44; Instr. in Chem., St. George's Coll., Kingston, Jamaica, B. W. I., 1944-47; Instr. in Chem., Coll. of the Holy Cross, Worcester, Mass., 1947-48; Asst. Prof. of Chem., *ibid.*, 1952—. Hon. Pos.: Chmn., Central Section, New England Assn. of Chem. Tchrs., 1952. Mem.: Amer. Assn. of Jesuit Scientists; A.A.A.S.; Amer. Chem. Soc.; Worcester Engrng. Soc. Contrb. to: Hormone; Bull. Amer. Assn. Jesuit Scientists. Special Int.: Catalytic Hydrogenation of Amines and Chelation.



MARVEL, Carl Shipp, Univ. of Ill., Urbana, Ill.

MARVIN, Henry Howard, Prof. of Theoretical Physics and Chmn., Dept. of Physics, Univ. of Nebr., Lincoln, Nebr. SPECTROSCOPY.

MARVIN, Philip Roger, Vice-Pres., Commonwealth Engr. Co., 1771 Springfield St., Dayton 3, Ohio.



SOLID STATE PHYSICS. b. Troy, N. Y., May 1, 1916. s. George Grant and Marjorie (Clorinda) M. Edn.: B.Ind.E., Rensselaer Polytech. Inst., 1937; M.B.A., D.C.S., Ind. Univ., 1951. m. Grace E. Meerbach, Aug. 1942. Exp.: Engr., Gen. Elec. Co., Schenectady, N. Y., 1937-42; Dir. of Chem. and Met. Engrng., Bendix Aviation Corp., Marine Div., 1943-44; Dir. of Rsch. and Development, Milwaukee Gas Spec. Co., Milwaukee, Wis., 1945-52; Vice-Pres., Commonwealth Engr. Co., Dayton, Ohio, 1952—. Mem.: Amer. Chem. Soc.; Amer. Econ. Assn.; Inst. of Aeronautical Sci.; Delta Tau Delta; Engrng. Soc. of Detroit; Sigma Xi; Tau Beta Pi; Beta Gamma Sigma. Contrb. to: Die Casting; Jour. of Soc. for Non-Destructive Testing. Special Int.: Structure of Metals and Semi-Metals; X-Ray and Electron Diffraction; Thermo-Elec. Effects; Electron Conduction.

MARYOTT, Carlton H., 2638 Henry St., Augusta, Ga. MEDICAL SCIENCES.

MASE, Darrell J., SPEECH AND HEARING.

MASIUS, Morton, Prof. of Physics and Dir., Salisbury Physics Lab., Worcester Poly. Inst., Worcester, Mass. PHYSICS.

MASON, Arnold C., Instr., Dept. of Geol., Univ. of Wis., Madison, Wis. GEOLOGY.

MASON, Arthur Charles, Entomologist, Bureau Entomol. and Plant Quarantine, U. S. D. A., Washington, D. C. ENTOMOLOGY.

MASON, C. W., Prof., Schl. of Chem. Engrng., Cornell Univ., Ithaca, N. Y. MICROSCOPY.

MASON, David Malcolm, Sr. Rsch. Engr., Calif. Inst. of Tech., Jet Propulsion Laboratory, 647 N. Lucerne Blvd., Los Angeles 4, Calif. CHEMICAL ENGINEERING.



HEAT TRANSFER AND REACTION KINETICS, PARTICULARLY APPLIED TO COMBUSTION AND CORROSION PROCESSES. b. Los Angeles, Calif., Jan. 7, 1921. s. D. M. and Anna Pride (McKelvy) M. Edn.: B.S., Calif. Inst. of Tech., 1943; M.S. ibid., 1947; Ph.D., ibid., 1949. Exp.: Chem. Engineer, Standard Oil Co. of Calif., San Francisco, Calif., 1943-44; Chem. Engr., Calif. Rsch. Corp., La Habra, Calif., 1946-

47; Instr., Chem. Engrng. Dept., Calif. Inst. of Tech., Pasadena, Calif., 1949-52; Sr. Rsch. Engr., Jet Propulsion Lab., ibid., 1952—. Mem.: Amer. Inst. of Chem. Engrs.; Tau Beta Pi; Sigma Xi. Contrb. to: Jour. Amer. Chem. Soc.; Chem. Engrng. Progress; Indus. and Engrng. Chem.; Analytical Chem. Special Int.: Heat Transfer in Turbulent Fluids; Reaction Kinetics of Indus. Chem. Processes; Corrosion of Metals; Fluid Dynamics and Reaction Kinetics of Combustion.

MASON, Harold Lawrence, Assoc. Prof. of Physiol. Chem., Mayo Foundation, Univ. of Minn., Rochester, Minn. BIOCHEMISTRY.

MASON, John Alden, Curator, Amer. Section, Univ. Museum, Univ. of Pa., 33rd and Spruce Sts., Philadelphia, Pa. ARCHAEOLOGY, LANGUAGES.

MASON, Karl Ernest, Prof. of Anatomy, Univ. of Rochester, Rochester, N. Y. ANATOMY.

MASON, Max, 1035 Harvard Ave., Claremont, Calif.

MASON, Ruric Coin, Westinghouse Rsch. Labs., East Pittsburgh, Pa. PHYSICS, ELECTRICAL ENGINEERING.

MASSEY, Arthur Ballard, Assoc. Prof. of Biol., Va. Poly. Inst., Blacksburg, Va. BOTANY.

MASSEY, Emil L., Dir. of Sci., Detroit Public Schls., Div. Instrn., Detroit Bd. of Edn., 467 W. Hancock Ave., Detroit, Mich. EDUCATION.

MASSEY, Louis Melville, Prof. of Plant Pathol. and Hd. Dept., N. Y. State Coll. of Agri., Cornell Univ., Ithaca, N. Y. PLANT PATHOLOGY.

MASTER, Arthur Matthew, Asst. Prof. of Clinical Med., Coll. of Physicians and Surgeons, Columbia Univ., N. Y., N. Y. CARDIOLOGY.

MASSON, Pierre, Dept. of Pathol., Univ. of Montreal, Que., Can. PATHOLOGY.

MASTICK, Seabury Cone, Bear Ridge Farm, Pleasantville, N. Y. CHEMISTRY.

MATAS, Rudolph, Prof. Emer. Surgery, Tulane Univ., 2255 St. Charles Ave., New Orleans, La. ANTHROPOLOGY, ANATOMY.

MATEER, Florence, Prof. of Clinical Psychol., Claremont Grad. Schl., P. O. Box 429, Claremont, Calif. CLINICAL PSYCHOLOGY; SOMATO-BEHAVIORAL FACTORS AND CORRECTIVE EDUCATION. b. Lancaster, Pa., Dec. 6, 1887. d. John Andrew and Laura Naomi (Diehl) M. Edn.: A.M., Clark Univ., 1914; Ph.D., ibid., 1916. Exp.: Psychologist, Organized Psychol. Clinic at Mass. Schl. for F. M., Waverly, Mass., 1916-19; Clinical Psychol., Ohio Bureau of Juv. Rsch., 1919-22; Private Practice, 1922-45; Prof. of Clinical Psychol., Claremont Grad. Schl., Claremont, Calif., 1945—; Psychologist, Public Schls., Pomona, Calif., 1947—. Mem.: Pi Lambda Theta; A.A.A.S.; Amer. Psychol. Assn.; Ohio Acad. Sci.; N.E.A.; Internat. Council of Women Psychologists. Author: Child Behavior, 1918; Unstable Child, 1924; Just Normal Children, 1929; Glands and Efficient Behavior, 1935. Special Int.: Somato-behavioral Syndromes, Especially Glandular Variations; Calcium and Phosphorus Variance; Cong. Symp. and Myotonia.

MATHER, Bryant, Chf., Special Investigations Branch, Concrete Rsch. Div., Waterways Expt. Station, Corps of Engrs., U. S. Army, P. O. Drawer 2131, Jackson, Miss. GEOLOGY—ENGINEERING MATERIALS RESEARCH, ENTOMOLOGY. b. Baltimore, Md., Dec. 27, 1916. s. Leon Bryant and Julia Belle (Ferguson) M. Edn.: A.B., Johns Hopkins Univ., 1936. m. Katharine Selden Kniskern, 1940. Exp.: Curator of Minerals, Field Museum of Natural Hist., Chicago, Ill., 1939-41; Geologist, Corps of Engrs., U. S. Army, West Point and Mt. Vernon, N. Y., 1941-46; Engr., Waterways Expt. Station, Jackson, Miss., 1946—. Mem.: Amer. Soc. for Testing Materials; Amer. Inst. of Mining and Met. Engrs.; Amer. Concrete Inst.; Meteoritical Soc.; Lepidopterists Soc.; Natural History Soc. of Md.; Highway Rsch. Bd.; Miss. Acad. Sci.; etc. Contrb. to: Proc. Amer. Soc. Testing Materials; Proc. Amer. Concrete Inst.; Proc. Highway Rsch. Bd.; Engrng. News-Record; etc. Special Int.: Application of Phys. Sciences to Rsch. on Concrete and Concrete Aggregates; Development of Methods of Testing for Concrete and Concrete Aggregates; Chem. and Phys. Reactions in Concrete; Butterflies of Miss.; Meteorites of Md.

MATHER, Kirtley Fletcher, Prof. of Geol., Harvard Univ., Cambridge, Mass. PETROLEUM GEOLOGY.

MATHES, Robert Carl, Transmission Rsch. Engr., Bell Telephone Lab., 171 Sagamore Rd., Maplewood, N. J. COMMUNICATION RESEARCH.

MATHESON, Robert, Prof. Emer., Cornell Univ., Ithaca, N. Y. MEDICAL ENTOMOLOGY.

MATHEWS, Joseph Howard, Chmn. and Dir., Dept. of Chem., Univ. of Wis., Madison, Wis. PHYSICAL CHEMISTRY.

MATHEWSON, Champion Herbert, Prof. of Metallurgy, Yale Univ., New Haven, Conn.

MATHEWSON, Louis Clark, Prof. of Math., Dartmouth Coll., Hanover, N. H. MATHEMATICS.

MATHIAS, Mildred Esther, 2851 N. Lake Ave., Altadena, Calif. TAXONOMY.

MATLACK, Marion Brooks, Food Preservation Specialist, Food Distribution Programs, Branch, Production and Marketing Admin., U. S. D. A., Washington, D. C. CHEMISTRY.

MATTHES, Francois Emile, Sr. Geologist, U. S. Geol. Survey, Washington, D. C. GEOMORPHOLOGY.

MATTHEWS, Arnold Whitney, Dir., Analytical and Rsch. Dept., United-Rexall Drug Co., Ltd., 68 Broadview Ave., Toronto, Ont., Can. PHARMACY.

MATTHEWS, Donald Maxwell, Prof. of Forest Mgt., Univ. of Mich., Ann Arbor, Mich. FOREST MANAGEMENT.

MATTHEWS, Donald N., Forester, Blister Rust Control Study, U. S. Forest Service, 2118 Davidson St., Missoula, Mont. FORESTRY.

MATTHEWS, Jack. SPEECH AND HEARING.

MATTHEWS, Mary Lockwood, Dean, Schl. of Home Econ., Purdue Univ., Lafayette, Ind. HOME ECONOMICS.

MATTHEWS, Velma Dare, Prof. of Biol., Coker Coll., Hartsville, S. C. BIOLOGY. b. Burlington, N. C., Aug. 3, 1904.



d. Joseph Marvin and Cora (Moore) M. Edn.: A.B., Woman's Coll. of Univ. of N. C., 1925; M.A., Univ. of N. C., 1927; Ph.D., *ibid.*, 1930. Exp.: Hd. of Biol. Dept., Ark. Agril. and Mech. Coll., Monticello, Ark., 1930-31; Rsch. and Asst. in Botany Library, Univ. of N. C., Chapel Hill, N. C., 1931-34; Assoc. Prof. and Hd. of Biol. Dept., Coker Coll., Hartsville, S. C., 1934-35; Prof. of Biol. and Hd. Dept., *ibid.*, 1935—. Mem.: Fellow, A.A.A.S.; S. C. Acad. of Sci.; Botanical Soc. of Amer.; A.A.U.W.; Mycol. Soc. of Amer.; Torrey Botanical Club; Southeastern Assn. of Biol.; Amer. Fern Soc. Author: Studies on the Genus *Pythium*, 1931, (Univ. N. C. Press.) Contrb. to: N. Amer. Flora; Jour. Eli Mitchell Sci. Soc.; Amer. Fern Jour.; House and Garden; Home Gardening; Camellian, etc.

MATTOX, Norman Thomas, Assoc. Prof. of Zool., Miami Univ., Oxford, Ohio. INVERTEBRATE ZOOLOGY.

MATTSON, Harold, Assoc. Prof. and Chmn., Dept. of Horticulture, Forestry, N. Dak. Agri. Coll., Fargo, N. Dak. HORTICULTURE.

MATZ, Charles H., Polaroid Corp., 730 Main St., Cambridge, Mass. PHYSICS, ENGINEERING.

MATZKE, Edwin B., Assoc. Prof. of Botany, Columbia Univ., N. Y., N. Y. CELLULAR MORPHOLOGY.

MAUDE, Aylmer Henry, Rsch. Supvr., Hooker Electrochem. Co., 9349 Rivershore Dr., Niagara Falls, N. Y. INDUSTRIAL CHEMISTRY. b. Moscow, Russia, Aug. 8, 1890. s. Aylmer and Louise (Shanks) M. Edn.: F.R.I.C., Finsburg Tech. Coll., London, England. m. Winifred E. Hanson, 1931. c.: David L. Exp.: Control Chemist, Canadian Explosives Ltd., 1915-19; Rsch. Chemist, Shawinigan Chem. Co., Ltd., 1920-23; Rsch. Chemist, Westinghouse Electric Mfg. Co., 1923-25; Chem. Engr., Rubber Service Labs., 1925-32; Rsch. Chemist, Hooker Electrochem. Co., 1932-38; Rsch. Supvr., *ibid.*, 1938—. Chmn., Torch Club of Niagara Falls. Mem.: Amer. Inst. Chem. Engrs.; Amer. Chem. Soc.; Royal Inst. of Chem.; Lions. Contrb. to: Jour. Electrochem. Soc.; Trans. Amer. Inst. Chem. Engrs. Special Int.: Organic and Inorganic Chlorine Compounds such as Benzene Hexachloride, Chlorinated Hydrocarbons, Hydrogen Chloride, Aluminum Chloride, Chlorophenols.

MAURER, O. H., Univ. of Ill., Urbana, Ill. PSYCHOLOGY.

MAURER, George, Rsch. Chemist, E. I. du Pont de Nemours and Co., Wilmington, Del. CHEMISTRY OF DYES.

MAVER, Mary Eugenie, Sr. Biochemist, Natl. Cancer Inst., Bethesda, Md. BIOCHEMISTRY.

MAVOR, James Watt, Rsch. Prof. of Biol., Union Coll., Schenectady, N. Y. GENERAL BIOLOGY.

MAX, Louis William, Assoc. Prof. and Acting Chmn., Dept. of Physiol., Coll. of Dentistry and Grad. Schl., N. Y. Univ., 209 E. 23rd St., N. Y., N. Y. ELECTROPHYSIOLOGY.

MAXCY, Kenneth Fuller, Prof. of Epidemiol., Johns Hopkins Univ., 615 N. Wolfe St., Baltimore 5, Md.

EPIDEMIOLOGY. b. Saco, Maine, July 27, 1889. s. Frederick Edward and Estella (Gilpatrick) M. Edn.: A.B., George Wash. Univ., 1911; M.D., Johns Hopkins Univ., 1915; Dr.P.H., *ibid.*, 1921. m. Gertrud H. McClellan, June 22, 1918. c. Kenneth F., Jr.; Frederic; Salina Chadwick. Exp.: Resident, Johns Hopkins Hosp., Baltimore, Md., 1915-16; Asst. in Med., Henry Ford Hosp., 1916-17; Asst. Surgeon, P.A.S. and Surgeon, U. S. Public Health Service, 1921-29; Prof. of Bacteriol. and Prev. Med., Univ. of Va., 1929-36; Prof. of Public Health and Preventive Med., Univ. of Minn., 1936-37; Prof. of Bacteriol., Johns Hopkins Univ., Baltimore, Md., 1937-38; Prof. of Epidemiol., *ibid.*, 1938—. Mem.: Amer. Epidemiol. Soc.; Fellow, A.P.H.A.; Assn. of Amer. Physicians; A.A.A.S.; Natl. Acad. Sci.; Phi Beta Kappa; Sigma Xi; Alpha Omega Alpha; Delta Omega. Author: Collected Papers of Wade Hampton Frost, 1941; Rosenau's Preventive Med. and Hygiene, 1951. War Record: Army Epidemiol. Bd., 1941-49. Special Int.: Epidemiol. of Infectious Diseases.

MAXFIELD, Joseph Peason, Consulting Engr., Rt. 1, Madison, N. J. ACOUSTICS.

MAXFIELD, Kathryn Erroll, Psychologist, Student Personnel Bureau, Cit7 Coll., 603 W. 111th St., N. Y., N. Y. PSYCHOLOGY.

MAXWELL, Bryce, Rsch. Assoc. with rank of Asst. Prof., Plastics Lab., Princeton Univ., Princeton, N. J. RHEOLOGY AND THE MECHANICAL PROPERTIES OF HIGH POLYMERS. b. Glen Cove, N. Y., July 26, 1919. s. Howard W. and Helen (Young) M. Edn.: B.S., Princeton Univ., 1943; M.S., *ibid.*, 1948. Exp.: Rsch. Fellow, Princeton Univ., 1946-48; Rsch. Asst., *ibid.*, 1948—; Asst. Prof., *ibid.*, 1950—. Mem.: Soc. of Rheol.; Amer. Soc. of Mechanical Engrng. Amer. Soc. for Testing Materials; Soc. of Plastics Engrs.; Sigma Xi. Contrb. to: Indus. and Engrng. Chem.; Jour. Soc. of Plastics Engrs.; Trans. A.S.M.E. War Record: U. S. Navy, 1943-46. Special Int.: Methods of Testing of Physical Properties of High Polymers and Interpretation of the Relationship Between Chemical Structure and Properties; Tehng. of Courses on Properties of Materials.

MAXWELL, Frederick Richard, Jr., Prof. of Elec. Engr., Univ. of Ala., Tuscaloosa, Ala. ELECTRICAL ENGINEERING. b. Tuscaloosa, Ala., June 15, 1889. s. Frederick and Lucy (Cochrane) M. Edn.: B.S., Univ. of Ala., 1911; M.E., *ibid.*, 1912; E.E., *ibid.*, 1923. m. Kathleen Searcy of Tuscaloosa, Ala., Jan. 30, 1924. d. George and Cammie Searcy. c.: Camille Searcy; Alfreda Tunstall. Exp.: Jr. Engr., Tuscaloosa Ice and Light Co., 1912-14; Engr., Tuscaloosa Railway and Utilities Co., 1914-17; Asst. Gen. Mgr., *ibid.*, 1918-20; Assoc. Prof., Univ. of Ala., 1920-35; Prof. of Elec. Engrng., *ibid.*, 1935—; Consulting Engr., *ibid.*, 1945—. Mem.: Tau Beta Pi; Amer. Inst. of Elec. Engrs.; Chi Beta Phi; Phi Gamma Delta. War Record: Naval Aviator, 1917-18; 1941-45. Hobbies: Aviation; Boating; Fishing and Hunting. Listed in: Who's Who in Amer.; A.M.S. Special Int.: Power Machinery.

MAXWELL, George B. Cressey, Prof., Syracuse Univ., Syracuse, N. Y. GEOGRAPHY.

MAXWELL, Ross Allan, Big Bend Natl. Park, Natl. Park Service, Marathon, Tex. GEOLOGY.

MAY, Franklin Hinsdell, Technical Editor, Geol. Survey, U. S. Dept. of Interior, Washington, D. C. MICROSCOPIC STRUCTURE OF FEATHERS.

MAY, Mark A., Prof. Ed., Psychol. and Dir., Inst. of Human Relations, Yale Univ., New Haven, Conn. EDUCATIONAL PSYCHOLOGY. b. Aug. 12, 1891, Jonesboro, Tenn. s. S. J. and Mary (Kyker) M. Edn.: A.B., Maryville Coll., 1911; Ph.B., Chicago, 1912; M.A., Columbia, 1915; Ph.D., *ibid.*, 1917; Hon. M.A., Yale, 1927; Hon. LL.D., Syracuse, 1949. m. Rutel Patton of Maryville, Tenn., Sept. 12, 1917. d. Samuel and Martha Patton. c.: Samuel C.; Martha Norwood. Exp.: Instr., Milit. Psychol., 1st Lt., San. Corps, Div. Psychol., U. S. Army, 1917-18; Statistician, Surg. Gen. Office, Wash., D. C., 1918-19; Asst. Prof., Psychol., Syracuse Univ., 1919-20; Assoc. Prof., 1920-21; Prof., 1921-24; Rsch.

Assoc., Tchrs. Coll., Columbia, 1924-27; Prof., Edn. Psychol., Yale Univ., 1927—; Dir., Inst. of Human Relations, *ibid.*, 1935—. Mem.: U. S. Advisory Comm. on Information; Amer. Psychol. Assn.; A.E.R.A.; A.A.A.S.; Sigma Xi. Author: *The Mechanism of Controlled Assn.*, 1918; *How to Study in Coll.*, 1924; *Studies in Deceit*, 1928; *Studies in Service and Self-Control*, 1929; *Studies in the Organization of Character*, 1930; Edn. of Amer. Ministers (3 Vols.), 1933; *Safety on the Road (with others)*; *Competition and Cooperation (with L. Doob)*, 1937; Edn. in *a World of Fear*, 1941; *A Soc. Psychol. of War and Peace*, 1943. Ph.D. Dissertation: *Mechanism of Controlled Assn.* War Record: Sci. Consultant, O.S.R.D., Certificate of Merit—Presidential Award. Travel: Europe. Listed in: Who's Who in Amer.; A.M.S.; Internatl. Who's Who.

MAYALL, Nicholas Ulrich, Univ. of Calif., Lick Observatory, Mount Hamilton, Calif.

MAYER, Joseph E., Prof., Inst. for Nuclear Studies, Univ. of Chicago, Chicago 37, Ill. **CHEMICAL PHYSICS, STATISTICAL MECHANICS AND QUANTUM THEORY.** b. N. Y. C., Feb. 5, 1904. s. Joseph and Catherine (Proescia) M. Edn.: B.S., Calif. Inst. of Tech., 1924; Ph.D., Univ. of Calif., 1927. m. Maria Goepfert, Jan. 18, 1930. c.: Maria Ann; Peter Conrad. Exp.: Asst. in Chem., Univ. of Calif., Berkeley, Calif., 1927-28; Internatl. Edn. Bd. Fellow, Gottingen, Germany, 1929-30; Assoc. in Chem. Johns Hopkins Univ., Baltimore, Md., 1930-35; Assoc. Prof., *ibid.*, 1935-39; Prof., Univ. of Chicago, Chicago, Ill., 1946—. Hon. Pos.: Chmn., Div. of Chem. Physics Amer. Phys. Soc., 1952; Pres., Comm. on Thermodynamics and Statistical Mechanics; Internatl. union of Pure and Applied Physics. Mem.: Amer. Phys. Soc.; Amer. Chem. Soc.; Faraday Soc.; N. Y. Acad. of Sci.; Natl. Acad. of Sci.; Tau Beta Pi; Sigma Xi. Author: *Statistical Mechanics*, with Mara G.Mayer, 1940; *Phase Transformations in Solids*, with Smoluchowski and Weyl, 1951. Contrb. to: Jour. of Chem. Physics, etc. Special Int.: *Statistical Mechanics of Liquids*, *Imperfect Crystals*, *Gases*; *Quantum Mechanics of Chem. Binding*, *Electron Infinity*, etc.

MAYFIELD, George R., Hd., Dept. and Prof. of German, Vanderbilt Univ., Nashville, Tenn. **ORNITHOLOGY.**

MAYNARD, Julian Lewis, Assoc. Prof. of Chem., Univ. of Minn., Minneapolis, Minn. **INORGANIC CHEMISTRY.**

MAYNARD, Leonard Amby, Hd., Dept. of Biochem. and Nutrition and Dir., Schl. of Nutrition, Savage Hall, Cornell Univ., Ithaca, N. Y. **NUTRITION.** b. Hartford, N. Y., Nov. 8, 1887. s. Edward and Fanny (Cotton) M. Edn.: A.B., Wesleyan Univ., 1911; Ph.D., Cornell Univ., 1915. Hon. Deg.: D.Sc., Wesleyan Univ., 1945. m. Helen Jackson, June 3, 1919. c.: Patricia and Nancy. Exp.: Asst. Prof., Animal Nutrition, Cornell Univ., Ithaca, N. Y., 1915—; Dir., U. S. Plant, Soil and Nutrition Lab., Ithaca, N. Y., 1939-45; Dir. of Schl. of Nutrition, Cornell Univ., Ithaca, N. Y., 1941—. Hon. Pos.: Chmn. of Food and Nutrition Bd. of Natl. Rsch. Coun. Mem.: Amer. Inst. of Nutrition; Natl. Acad. of Sci.; Amer. Chem. Soc.; Amer. Soc. of Animal Production; Phi Beta Kappa; Sigma Xi; Phi Kappa Phi; Ithaca County Club. Author: *Animal Nutrition*, 1937. Contrb. to: *Over 100 Scientific Papers*, War Record: U. S. Army, 1917-19. Special Int.: *Biochem. and Nutrition*.

MAYO, Marion J., 3962 Juniata St., St. Louis, Mo. **PSYCHOLOGY EDUCATION.**

MAYOR, John Roberts, Prof. of Math., Prof. of Edn., Chmn., Dept. of Edn., Univ. of Wis., Madison. **WIS. GEOMETRY AND MATHEMATICS EDUCATION.** b. La Harpe, Ill., July 9, 1906. s. James Cary and Edna May (Roberts) M. Edn.: B.S., Knox Coll., 1928; M.A., Univ. of Ill., 1929; Ph.D., Univ. of Wis., 1933. m. Darlene Louise Miller, Jan. 25, 1934. c. Berta Edna; James Otto. Exp.: Instr., Univ. of Wis., 1929-35; Prof. of Math. and Chmn. of Dept., Southern Ill. Univ., 1935-47; Assoc. Prof. Math. and Edn., Univ. of Wis., Madison, Wis., 1947-51; Prof., *ibid.*, 1951—. Mem.:

Natl. Council of Tchrs. of Math.; Math. Assn. Amer.; Central Assn. of Sci. and Math. Tchrs.; Amer. Math. Soc.; A.A.A.S.; N.E.A.; Natl. Assn. of Secondary Schl. Principals; Wis. Edn. Assn.; Wis. Math. Council; Phi Beta Kappa; Sigma Xi; Pi Mu Epsilon; Tau Kappa Epsilon; Gamma Alpha. Contrb. to: Amer. Jour. Math.; Math. Tchrs. Schl., Sci. and Math.; Amer. Math. Monthly. Special Int.: *Geometry and Math.* Edn.

MAYR, Ernst Walter, Amer. Museum of Natural History, N. Y., N. Y. **SYSTEMATIC ORNITHOLOGY.**

MAZZINI, L. Y., Indianapolis, Ind. **SEROLOGY.**

McADAMS, William H., Mass. Inst. of Tech., Cambridge 39, Mass. **HEAT TRANSFER.**

McAFEE, William Keith, Pres., Universal Sanitary Mfg. Co., Box 300, Redlands, Calif. **CERAMIC ENGINEERING.**

McALISTER, Dean Ferdinand, Assoc. Physiologist, Div. Forage Crops, U. S. D. A., U. S. Regional Soybean Lab., 205 Old Agri. Bldg., Urbana, Ill. **PLANT PHYSIOLOGY.**

McALISTER, Edward Dorris, Chf. Engr., Instrumentation Camera Works, Eastman Kodak Co., Rochester, N. Y. **PHYSICS, RADIATION.**

McALISTER, Lawrence Clayton, Jr., Chf. Entomologist, Technical Development Labs., U. S. Indus. Chemicals, Inc., Baltimore, Md. **ENTOMOLOGY.**

McALLISTER, Lawrence Earl, Hd., Div. Sci. and Math. and Physics Dept., Berry Coll., Mt. Berry Ga. **PHYSICS, PHOTOGRAPHY.**

McALLISTER, Sumner Hatch, Assoc. Dir. of Rsch., Shell Development Co., Emeryville, Calif. **PETROLEUM PRODUCTS AND PETROCHEMICALS.** b. Salt Lake City, Utah, May 23, 1907. s. Duncan William and Mary Ann (Hatch) M. Edn.: A.B., Stanford Univ., 1929; M.A., *ibid.*, 1930. m. Marjorie Laws, Oct. 3, 1932. c.: Ann Laws; Duncan Thomas; Vermont Hatch and Alan Pierce. Exp.: Asst. Chem., Shell Development Co., Emeryville, Calif., 1930-34; Chemist, *ibid.*, 1934-37; Dept. Hd., Applications, *ibid.*, 1937-40; Dept. Hd., Process Development Dept., *ibid.*, 1940-42; Assoc. Dir. of Rsch., *ibid.*, 1942-46; Assoc. Dir. of Rsch., *ibid.*, 1946—. Mem.: Amer. Inst. of Chem. Engrs.; Amer. Chem. Soc.; Amer. Petroleum Inst.; Soc. of Automotive Engrs.; Sigma Xi; Phi Lambda Upsilon; Alpha Chi Sigma. Contrb. to: *Proc. Amer. Petroleum Inst.*; *Oil Gas Jour.*; *Natl. Petroleum News*; *Jour. Amer. Chem. Soc.*; *Jour. Organic Chem.*; *Chem. Engrs. Progress*; *Petroleum Processing*. Special Int.: *Aviation Fuels*; *Petrochem. and Petroleum Products*.

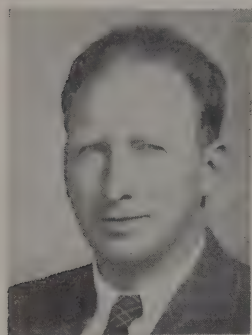
McARDLE, R. E., Chief, U. S. Forest Service, Dept. of Agri., Washington, D. C. **FORESTRY.**

McAVOY, Blanche, Prof. of Biol., Ill. State Normal Univ., Normal, Ill. **PLANT ECOLOGY; TAXONOMY OF FLOWERING PLANTS; METHODS OF TEACHING.** b. Mitchell, Ind., Sept. 11, 1885. d. Geo. and Mary (McIntire) McA. Edn.: B.A., Univ. of Cincinnati, 1909; M.A., Ohio State Univ., 1912; Ph.D., Univ. of Chicago, 1930. Exp.: Tchrs., 5th and 6th Grades, Kennedy Hgts., Ohio, 1909-11; Tchng. Fellowship, Ohio State Univ., 1911-14; Tchrs., Watterman Hall, Sycamore, Ill., 1914-15; Tchrs., H. S., Mount Healthy, Ohio, 1915-18; Tchrs., Wyoming, Ohio, 1918-21; Tchrs., Ball Tchrs. Coll., 1921-25; Ill. State Normal Univ., Normal, Ill., 1926—. Mem.: Fern Soc.; A.A.A.S.; Botanical Soc. of Amer.; Ecological Soc. of Amer.; N.E.A.; Torrey Botanical Soc.; Ill. Edn. Assn.; Acad. of Sci. in Ill., Ind. and Ohio; Sigma Xi; Sigma Delta Epsilon; Delta Kappa Gamma; Gamma Theta Upsilon. Author: *Study Guide*, 1938; *Biology, A Study Guide* by McAvoy and Moore, 1950. Contrb. to: *I.E.A. Jour.*; *Botanical Gazette*.

McBAIN, James William, Prof. of Chem., Stanford Univ., Stanford, Calif. **CHEMISTRY.**

McBRIDE, Orville Clark, Sr. Entomologist, Bureau Entomol. and Plant Quarantine, U. S. D. A., Beltsville, Md. **ENTOMOLOGY.**

McBRYDE, Felix Webster, Consultant Geographer in Latin Amer., Office Coord. Internatl. Statistics, U. S. Bur. Census, Wash., D. C. **GEOGRAPHY.**



b. Apr. 23, 1908. Lynchburg, Va. s. John McLaren and Flora O'Neill (Webster) McB. Edn.: B.A., Tulane Univ., 1930; Grad. Stud., Univ. of Colo., 1930-31; Clark Univ., 1931-32; Univ. of Calif., 1933-35; Ph.D., ibid., 1940. m. Frances Van Winkle, Salt Lake City, Utah, July 23, 1934. d. Chas. Thorne and Elva Young Van W. c.: Richard Webster; Sarah Elva; John McLaren. Exp.: Fourth Tulane Expedition (Across Central Amer.), 1927-28; Student

Asst. in Geol., Tulane Univ., 1929-30; Fellow in Geog., Univ. of Colo., 1930-31; Field Asst. in Archaeol., N. Utah Univ., Smithsonian Inst., summer, 1931; Fellow, Geog., Clark Univ., 1931-32; Clark and Carnegie Inst. in Guatemala, 1932; Tulane Univ., Middle Amer. Rsch. Inst., Asst. in Geog., 1932-33; Univ. of Calif., Berkeley, Tchng. Asst., 1933-35, 1937, Spring; Fellow, Soc. Sci. Rsch. Coun., Guatemala and El Salvador, 1935-36; Instr. in Geog., Ohio State Univ., 1937-45; Instr. in Geog., Univ. of Calif. at Los Angeles, summer, 1940; Fellow, Natl. Sci., Geog., Natl. Rsch. Coun. and Pan-Amer. Airways Fellow in Guatemala and Mex., 1940-41; Expert Consult., Milit. Intelligence Div., War Dept., sum. 1942; Geog., Milit. Intelligence Div. of War Dept., Wash., D. C., 1942-45; Spec. Lectr., Latin Amer. Workshop, Western Reserve Univ., summer, 1944; Dir., Peruvian Office, Inst. of Soc. Anthropol., Smithsonian Inst., 1945-47; Viru, Exped., 1945-46; Spec. Repre. Inst. Andean Rsch., 1946-48; Cult. Geog., U. S. Food Consultant Mission in Peru, UNESCO, Amazon Proj., 1947-48. Consultant Geographer, Pan-Amer. Airways, 1951—. Hon. Pos.: Manpower Com., Geol.-Com. on Lat. Amer. Geog. Div. of Natl. Rsch. Coun. Mem.: Amer. Anthropol. Assn.; Assn. Amer. Geol.; A.A.A.S.; Amer. Geog. Soc.; Amer. Geophys. Union; Lima Geog. Soc., Chmn. Geog. Inst. Curriculum Com., one of Founders, Geog. Inst., and Mem. Escuela de Altos Estudios, Univ. San Marcos; and Amer. Meteorol. Soc.; Assn. of Amer. Geog.; Ohio Acad. Sci.; NCGT; Amer. Polar Soc.; Soc. for Amer. Archaeol.; Inter-Amer. Soc. of Anthropol. and Geog.; ASGP (Founding Pres., 1943-44; Correspond. Sec. for Lat. Amer.) Soc. of Amer. Milit. Engrs.; Mex. Soc. of Geog. and Statistics, 1945-48; Sigma Nu; Phi Beta Kappa. Author: Sololá: A Guatemalan Town and Cakchiquel Market-Center, 1933; Cultural and Historical Geography of Southwest Guatemala; Smithsonian Inst., 1947. Contrb. to: Travel; Sci. Monthly; Bull. Amer. Meteorol. Soc.; Bull. Hist. of Med. Ph.D. Dissertation: Native Econ. of Southwest Guatemala and Its Natl. Background. Travel: Mex.; West Indies; Central Amer.; S. Amer. Hobbies: Photography; Drawing. Listed in: Amer. Young Men; A.M.S.; Who Knows—and What; Biog. Dir. Amer. Scholars; Fellows of the Soc. Sci. Rsch. Council, 1950.

McBURNAY, John White, Technologist and Asst. Section Chf., Natl. Bureau of Standards, Washington, D. C. **STRUCTURAL MATERIALS.**

McCALL, Arthur Gillett, retired, 4707 Calvert Rd., College Park, Md. **SOIL CONSERVATION.**

McCALL, John Oppie, Dir., The New Organization Schl. for Grad. Dentists, 30 W. 74th St., N. Y. 23, N. Y. **PERIODONTIA.** b. Geneva, N. Y., Oct. 4, 1879. s. John Oppie (Father by Adoption—Charles W. McCall) and Caroline McC. Edn.: A.B., Yale Univ., 1901; D.D.S., Univ. of Buffalo, 1904. m. Irene T. McCall of Buffalo, N. Y., Dec. 6, 1911. d. C. J. and Amelia Tingler. c.: Elizabeth R.; Helen I.; John O., Jr.; Nancy. Exp.: Prof. of Chem., Univ. of Buffalo, Dental Dept., 1910-15; Prof. of Periodontology, N. Y. Univ. Coll. of Dent., 1925-31; Dir., Guggenheim Dental Clin., N. Y. City, 1931-47; Supvr., Course in Oral Hygiene, N. Y.

State Agri. and Tech. Inst., 1947-48; Dir., New Organization Schl. for Grad. Dentist, N. Y., N. Y., 1952—. Hon. Pos.: Former Chmn., Comm. on Community Health of N. Y. Tuberculosis and Health Assn. Mem.: Amer. Dental Assn.; Amer. Acad. of Periodontology; Amer. Assn. for Dental Rsch.; Amer. Coll. of Dentists; Delta Upsilon; Xi Psi Phi; Omicron Kappa Upsilon. Author: Co-author, Textbook of Clin. Periodontia, 1922; Clin. Dental Roentgenology, 1940; Movable-Removable Bridgework, 1950; Author, Fundamentals of Dent. in Med. and Pub. Health, 1937. Contrb. to: Jour. of Amer. Dental Assn.; Amer. Jour. of Periodontology. Listed in: Who's Who in Amer.; A.M.S.

McCALL, Max Adams, Asst. Chf., Bureau Plant Indus., Soils and Agri. Engrng., U. S. D. A., Washington, D. C. **AGRONOMY.**

McCALL, Raymond Joseph, Chmn., Dept. of Psychol., De Paul Univ., 64 East Lake St., Chicago 1, Ill. **PSYCHOLOGY.** b. Bronx, N. Y., Oct. 16, 1913. s. John J. and Helen G. (Whalen) McC. Edn.: A.B., Fordham, 1934; M.A., Catholic Univ., 1936; Ph.D., Fordham, 1941; M.A., Columbia, 1949; Ph.D., ibid., 1951. m. Mary Elizabeth McDonald, June 19, 1937. c.: Raymond; Anthony. Exp.: Instr., St. John's Univ., Brooklyn, N. Y., 1936-40; Assoc. Prof. and Acting Chmn., St. John's Univ. Schl. of Commerce, ibid., 1940-45; Prof. and Chmn., ibid., 1945-51; Rsch. Asst. Departs. of Rsch. Psychiatry and Psychol., New York Psychiatric Inst., New York, N. Y., 1949-50; Consulting Psychologist Grace Clinic, Brooklyn, N. Y., 1951—; Prof. and Chmn., Dept. of Psychol., Dir. of Testing, De Paul Univ., Chicago, Ill., 1951—. Mem.: Amer. Psychological Assoc.; Amer. Catholic Psychological Assoc.; Amer. Philosophical Assn.; Amer. Philosophy of Edn.; Ill. Psychological Assn.; Chicago Soc. of Catholic Psychologists; Sigma Xi; A.A.U.P. Author: Basic Logic, 1947, rev. ed., 1952. Contrb. to: New Scholasticism; Proceedings Amer. Catholic Philosophical Assn.; Commonweal. Special Int.: Personality Theory, Abnormal Psychology, Rorschach Testing.

McCALLA, Thomas Mark, Bacteriologist, Soil Conservation Service Rsch., Univ. of Nebr., Lincoln, Nebr. **SOIL MICROBIOLOGY.**

McCALLAN, Samuel Eugene Alan, Hd. Pathologist, Fungicide Project, Boyce Thompson Inst., Yonkers, N. Y. **PLANT PATHOLOGY.**

McCANDLESS, Boyd Rowden, Rsch. Prof. and Dir., Iowa Child Welfare Rsch. Sta., State Univ. of Iowa, Iowa City, Iowa. **CHILD AND CLINICAL PSYCHOLOGY.** b. St. John, Kans., Aug. 18, 1915. s. Homer H. and Ada (Rowden) McC. Edn.: A.B., Ft. Hays Kans. State Coll., 1936; M.A., State Univ. of Iowa, 1938; Ph.D., ibid., 1941. m. Elinore Olson, June 14, 1941. c.: Beth; Mark; Christine. Exp.: Rockefeller Fellow, Office of Radio Rsch., N. Y. C., 1939-40; Mental Hygienist, Wayne Co. Trng. Schl., Northville, Mich., 1941-42; Selection and Classification Officer, U. S. Maritime Service Officers Schls., Alameda, Calif., 1942-46; Asst. and Assoc. Prof., San Francisco State Coll., 1946-48; Assoc. Prof., Ohio State Univ., Iowa City, Iowa, 1948-51; Rsch. Prof. and Dir., Iowa Child Welfare Rsch. Sta., ibid., 1951—. Hon. Pos.: Chmn., Com. for Diagnostic Devices, Div. Clinical Abn. Psychol., Amer. Psychol. Assn.; Program Com., Div. Childhood and Adolescence, Amer. Psychol. Assn. Mem.: Fellow, Amer. Psychol. Assn.; Fellow, Soc. for Rsch. in Child Development; Fellow, Amer. Assn. on Mental Deficiency; Fellow, Sigma Xi; Kiwanis. Contrb. to: Jour. Abnormal and Social Psychol.; Amer. Jour. of Mental Deficiency; Psychol. Monographs; Jour. Applied Psychol.; Jour. Genetic Psychol.; Child Development; Amer. Jour. Orthopsychiatry. Gen. Int.: Diplomate in Clinical Psychol., Amer. Psychol. Assn.; Mem., Bd. of Trustees, Amer. Bd. of Examiners in Professional Psychol. Special Int.: General Child and Clinical Psychol.; Personality Development; Exptl. Child Psychol.

McCARThY, Dorothea, Assoc. Prof., Grad. Schl., Fordham Univ., N. Y., N. Y. **PSYCHOLOGY.**

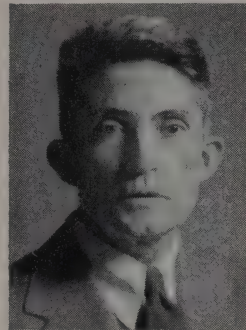
McCARTY, Arthur Louis, retired, Box 386, Rt. 3, **DIOPHANTINE ANALYSIS.**

McCARTY, Harold Hull, Prof. of Geography, Univ. of Iowa, Iowa City, Iowa. **GEOGRAPHY**.

McCARTY, Maclyn, Assoc., Rockefeller Inst. Med. Rsch., 66th and York Ave., N. Y., N. Y. **BACTERIOLOGY**.

McCAUGHEY, William J., Lord Hall, Ohio State Univ., Columbus, Ohio. **MINERALOGY**.

McCAY, Clive Maine, Prof. of Nutrition, Cornell Univ., Ithaca, N. Y. **NUTRITION**; **GERONTOLOGY**.



b. Central, Ind., Mar. 21, 1898. s. L. J. and May (Crim) McC. Edn.: A.B., Univ. of Ill., 1920; M.S., Iowa State Coll., 1923; Ph.D., Univ. of Calif., 1925. m. Jeanette Beyer in 1927. Exp.: Prof. of Nutrition, Cornell Univ., 1927—. Hon. Pos.: Past Pres., Amer. Gerontological Soc.; Past Pres., Amer. Inst. of Nutrition. Mem.: Amer. Chem. Soc.; Amer. Inst. Nutrition; Amer. Soc. Biol. Chemists; Amer. Dietetic Assn.; Sigma Xi. Author: Nutrition of the Dog, 1949. Co-author:

The Vitamins, 1939; Macy Foundation, Problems of Aging, 1948-49; Biological Foundation of Health Edn.: 1952; Food and Life, 1952. Contrb. to: Jour. of Nutrition; Archives Biochem.; Jour. Gerontology. War Record: Cmdr., U. S. Navy, 1943-46. Gen. Int.: Pioneered in Extension of Life Span and Study of Diseases in Old Age Experimentally; Pioneered in Improvement of Bread on a National Scale. Special Int.: Human and Animal Nutrition; Gerontology.

McCLEARY, Charles David, Mgr., Basic Rsch., Naugatuck Chem. Div., U. S. Rubber Co., Naugatuck, Conn. **ORGANIC CHEMISTRY**. b. Huntsville, Ohio, Nov. 19, 1914. s. Charles S. and Jessie (Forsythe) M. Edn.: A.B., Wittenberg Coll., 1936; Ph.D., Ohio State Univ., 1940. m. Mary Gilkeson, Aug. 29, 1942. c.: Katharine Elizabeth; Anne Forsythe; Charles Albert. Exp.: Rsch. in Synthetic Rubber to Mgr. of Basic Rsch., U. S. Rubber Co., Naugatuck Chem. Div., Naugatuck, Conn., 1940—. Mem.: Amer. Chem. Soc.; A.A.A.S.; Delta Sigma Phi; Gamma Alpha; Blue Key; Sigma Xi. Contrb. to: Jour. Amer. Chem. Soc.; Indus. Engrng. Chem. Special Int.: Synthetic Rubber and Plastics.

McCLELLAN, Walter Stuart, Rsch. Dir., Saratoga Spa., Assoc. Prof. of Med., Albany Med. Coll., Saratoga Springs, N. Y. **PHYSICAL MEDICINE**, **BALNEOLOGY**.

McCLELLAND, Ellwood H., Technology Librarian, Carnegie Library Pittsburgh, 4400 Forbes St., Pittsburgh, Pa. **TECHNICAL LITERATURE**.

McCLELLAND, Thomas Brown, P. O. Box 444, Coconut Grove, Miami, Fla. **TROPICAL HORTICULTURE**.

McCLENDON, Jesse Francis, Rsch. Prof. Physiol., Hahnemann Med. Coll., Philadelphia, Pa. **PHYSIOLOGY**.

McCLESKY, C. S. Prof. of Bacteriol., La. State Univ., Baton Rouge, La. **BACTERIOLOGY**.

McCLINTOCK, Barbara, Carnegie Inst., Cold Spring Harbor, L. I., N. Y.

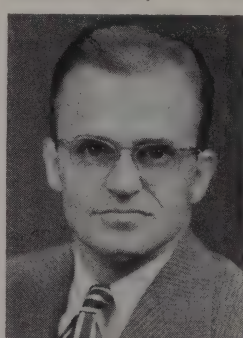
McCLINTOCK, John Thomas, retired, 404 W. Park Rd., Iowa City, Iowa. **PHYSIOLOGY**.

McCLINTOCK, Miller, Pres., Sound Book Press Soc., Inc., Box 222, Scarsdale, N. Y. **ELECTRONIC AND AUDIO RESEARCH WITH SPECIAL REFERENCE TO COMMUNICATIONS AND EDUCATION**. b. Cedar Rapids, Nebr., June 13, 1894. s. George Henry and Elizabeth (Miller) McC. Edn.: B.A., Stanford Univ., 1918; M.A., *ibid.*, 1920; M.A., Harvard Univ., 1922; Ph.D., *ibid.*, 1924. Hon. Deg.:

Sc.D., Tufts Coll., 1937. m. Hazel Barton, Sept. 4, 1917. c.: Thomas Miller; John William. Exp.: Instr., Harvard Univ., 1920-24; Asst. Prof., Univ. of Calif., 1924-26; Dir., Bureau for Street Traffic Rsch., Harvard Univ., 1926-37; Dir., Bureau for Street Traffic Rsch., Yale Univ., 1937-42; Pres., Mutual Broadcasting System, 1942-44; Pres., Sound Book Press Soc., Inc., Scarsdale, N. Y., 1944—. Hon. Pos.: Chmn., Bundles for Amer., 1942-44. Special Int.: Traffic; Transportation; Communications; Audio-Video Practices.

McCLUNG, Leland Swint, Prof. of Bacteriol., Chmn. of Dept., Ind. Univ., Bloomington, Ind. **BACTERIOLOGY**. b. Atlanta, Tex., Aug. 4, 1910. s. Joe B. and Roxie (Swint) M. Edn.: A.B., Univ. of Tex., 1931; A.M., *ibid.*, 1932; Ph.D., Univ. of Wis., 1934. m. Ruth Exner, Dec. 25, 1944. Exp.: Rsch. Bacteriologist, Amer. Can Co., Maywood, Ill., 1934-36; Instr. in Fruit and Jr. Bacteriologist, Coll. of Agri., Univ. of Calif., 1936-37; Instr. in Rsch. Med., Geo. Williams Hooper Foundation for Med. Rsch., *ibid.*, 1937-39; Asst. Prof., Ind. Univ., Bloomington, Ind., 1940-44; Assoc. Prof., *ibid.*, 1944-48; Prof. and Chmn. of Dept., *ibid.*, 1948—. Fellow, A.A.A.S.; Amer. Pub. Health Assn.; Ind. Acad. Sci.; N. Y. Acad. Sci. Mem.: Amer. Assn. Immun.; Amer. Chem. Soc.; Inst. of Food Tech.; Soc. Amer. Bacteriologists; Sigma Xi; Phi Sigma; Gamma Alpha; Alpha Epsilon Delta; Omega Beta Pi. Contrb. to: Jour. of Bacteriol.; Sci. Jour. Infectious Diseases; Centralblatt fur Bacteriologie, etc.; Food Rsch.; Archiv fur Mikrobiologie. Special Int.: Bacteriol., Gen. and Applied.

McCLUNG, Marvin Richard, Poultry Geneticist, Ark. Farmers Assn., 607 Wilson Ave., Fayetteville, Ark.



ANIMAL BREEDING AND GENETICS. b. Bamboo, W. Va., Apr. 3, 1917. s. Marvin K. and Pearl (Nutter) M. Edn.: B.S., W. Va. Univ., 1941; M.S., Univ. of Md., 1942. m. Isabelle Coffman, Oct. 16, 1943. Exp.: Fellowship, Univ. of Md., Coll. Park, Md., 1941-42; W. Va. Univ., Ext. Service, Morgantown, W. Va., 1942-45; Agril. Counselor, Monogahela Power Co., 1945-47; Asst. Prof., Univ. of Ark., Fayetteville, Ark., 1947-50, and 1951-52; General Edn. Bd. Fellow of Iowa State, 1950-51; Poultry Geneticist, Ark. Farmers Assn., Fayetteville, Ark., 1952—. Mem.: Poultry Sci.; Amer. Poultry Assn.; Amer. Soc. Animal Prod.; Genetics Soc. of Amer.; Amer. Genetics Assn.; Alpha Zeta; Phi Bata Kappa; Kiwanis. Contrb. to: Poultry Sci. Special Int.: Poultry Breeding; Swine Breeding; Population Genetics.

McCLURE, Charles F. W., Prof. Emer., Princeton Univ., 1 Battle Rd., Princeton, N. J. **COMPARATIVE ANATOMY**, **EMBRYOLOGY**.

McCLURE, Oscar Earle, Assoc. Prof. of Physics and Electrical Engrng., Ohio Univ., Athens, Ohio. **ELECTRICITY**, **MAGNETISM AND HEAT**.

McCLURE, Roy Donaldson, Surgeon-in-Chg., Henry Ford Hosp., Detroit, Mich. **SURGERY**.

McCOLLUM, Burton, Pres., McCollum Exploration Co., McCollum Labs., Inc. and Cantano Petroleum Co., Experson Bldg., Houston, Tex. **GEOPHYSICS**.

McCOLLUM, Elmer Verner, Gilman Hall, Johns Hopkins Univ., Baltimore 18, Md.

McCOMAS, Earl W., Animal Husbandman, Animal Husbandry Div., Bureau Animal Indus., Agri. Rsch. Admin., U. S. D. A., Beltsville, Md. **ANIMAL HUSBANDRY**.

McCOMAS, Henry Clay, retired, 320 Hawthorn Rd., Baltimore, Md. **PSYCHOLOGY**.

McCOMB, Emily Edgar, Suffield, Conn. **BACTERIOLOGY**.

McCOMB, H. E., Chf., Section Geomagnetism, U. S. Coast and Geodetic Survey, 417 Emerson St., N. W., Washington, D. C. **GEOMAGNETISM.**

McCONNAUGHEY, Bayard H., Asst. Prof. of Biol., Univ. of Ore., Eugene, Ore. **PARASITOLOGY; IN-**



VERTEBRATE ZOOLOGY. b. Pittsburgh, Pa., Apr. 21, 1916. s. Harlow A. and Hattie C. (Cherryman) Mc.C. Edn.: B.A., Pomona Coll., 1938; M.A., Univ. of Hawaii, 1941; Ph.D., Univ. of Calif. at Berkeley, 1948. m. Evelyn I. Shirck, June 27, 1949. c.: William B., Edward A. Exp.: Rsch. Assoc., Scripps Inst. of Oceanography, 1948; Asst. Prof. of Biol., Univ. of Ore., 1948—. Mem.: A.A.A.S.; Amer. Soc. Parasitol.; Amer. Soc. Limnol. and Oceanography; Western Soc. Naturalists; Ore. Acad. Sci.; Soc. Systematic Zool.; Phi Beta Kappa; Sigma Xi. Contrb. to: Jour. Parasitol.; Jour. Marine Rsch.; Pacific Sci. Special Int.; Taxonomy and Life Hist. of the Mesozoa; Biol. of Marine Invertebrates, Pacific Coast.

McCONNELL, Duncan, Chmn. & Prof. of Mineralogy, 140 Lord Hall, Ohio State Univ., Columbus 10, Ohio. **MINERALOGY.** b. Chicago, Ill., Jan. 30, 1909. s. John L. and Anne C. (Duncan) Mc. Edn.: B.S., Wash. & Lee Univ., 1931; M.S., Cornell Univ., 1932; Ph.D., Univ. of Minn., 1937. m. Jane W. Willis, Sept. 5, 1934. c. Joanne; Thomas Duncan; Charlotte. Exp.: Teaching Fellow in Mineral., Stanford Univ., Stanford, Calif., 1934-35; Instr., Univ. of Minn., Minneapolis, Minn., 1936-37; Instr., Univ. of Tex., Austin, Tex., 1937-40; Mineral Economist, U. S. Bur. of Mines, Washington, D. C., 1941; Chemists-Petrographer, U. S. Bur. of Reclamation, Denver, Colo., 1941-47; Hd. of Petrographic Lab., 1944-47, Ibid., Hd. of Sections in Petrography and Inorg. Geochem., Gulf Rsch. & Dev. Co., Pittsburgh, Pa., 1947-50; Prof. of Mineral., Ohio State Univ., Columbus, Ohio, 1950—; Chmn., ibid., 1952—. Mem.: Geol. Soc. Amer.; Mineral Soc. Amer.; Amer. Chem. Soc.; Soc. Econ. Geol.; Soc. Francaise Mineral. et Cristal.; Mineral Soc. Gr. Britain and Ireland; Amer. Crystal. Assn.; Sigma Xi; Gamma Sigma Epsilon; Sigma Gamma Epsilon; Tau Kappa Iota; Sigma Alpha Epsilon. Author: Application of Geology to Engineering Practice, 1950; Metabolic Interrelations, 1952. Contrb. to: Geol. Soc. Amer. Bull.; Amer. Mineral.; Bull. Soc. Francaise Mineral., Christ.; Amer. Jour. Sci.; Jour. Geol.; Jour. Wash. Acad. Sci. Special Int.; Applied Petrography, Structural Crystallography, Crystal Chemistry, Mineralogy of Clays.

McCONNELL, W. Joseph, Pres., North Tex. State Coll., Denton, Tex. **SOCIOLOGY.**

McCONNELL, Wallace Robert, Prof. of Geography and Hd., Dept., Miami Univ., Oxford, Ohio. **GEOGRAPHY.**

McCORMICK, Florence A., 161 Mansfield St., New Haven, Conn.

McCORMICK, Robert N., Assoc. Prof., Div. Physiol. and Health Edn., Ball State Tchrs. Coll., Muncie, Ind. **HYGIENE.**

McCOSH, Gladys Kathryn, Prof. of Zool., Wellesley Coll., Wellesley, Mass. **ECOLOGY.**

McCOTTER, Rollo Eugene, Prof. of Anatomy, Univ. of Mich., Ann Arbor, Mich. **ANATOMY.**

McCOUCH, Margaret Sumwalt, Rose Tree Rd., Media, Pa. **PHYSIOLOGY.**

McCOUGHEY, William J., Prof. of Mineralogy, Ohio State Univ., Columbus, Ohio. **MINERALOGY, GEOLOGY.**

McCOWN, Theodore Doney, Assoc. Prof. Anthropol., Univ. of Calif., Berkeley, Calif. **ANTHROPOLOGY.**

McCOY, Oliver Rufus, Staff Mem., Internatl. Health Div., Rockefeller Foundation, 49 West 49th St., N. Y., N. Y. **PARASITOLOGY.**



McCRACKAN, Robert Franklin, Emeritus, Prof. of Biochem., Med. Coll. of Va., 41 Mill Road, Spartanburg, S. C. **BIOCHEMISTRY.** b. Butler's Post Office, S. C., Apr. 30, 1882. s. William Alexander and Frances Jane (Boone) McC. Edn.: B.S., Milit. Coll. of S. C., 1903; A.M., Columbia Univ., 1910. m. (1) Ottoloe Gunter, (dec.), June 30, 1909, of Seivern, S. C. d. Osborne and Delana Gunter; (2) Alice V. Alexander, Sept. 5, 1925, of Richmond, Va. d. John Robert and Georgiana Alexander. (3) Mrs. Margaret W. Brandon, Oct. 23, 1951. d. Robert E. and Rosa Alice White.

c.: Mary Lee (1st. wife). Exp.: Professor Math., Leesville College, S. C., 1903-05; Prof. Math., Rhodes Military Inst., N. C., 1905-06; Bureau of Edn., P. I., 1906-09; Asst. in Chem., Columbia Univ., 1910-12; Asst. in Chem., Bellevue Med. Coll., 1912; Instr., Med. Coll. of Va., 1912-15; Assoc. Prof. of Biochem., 1915-27; Assoc. Prof. of Chem., 1927-50; Summers, Prof. of Chem., Univ. of Richmond, 1924-27. Hon. Pos.: Sec., Faculty, Schl. of Med., Med. Coll. of Va., 25 years; Chmn. Comm. of Mgmt. of Med. Coll. of Va. Y. M. C. A., 26 yrs.; Chmn., A.C.S. Com. on Radio, 9 yrs. Mem.: Assn. of Citadel Men; A.C.S., Chmn. of Va. Sect., 1928; A.A.U.P.; Va. Acad. of Sci.; Phi Lambda Upsilon. Fellow: A.A.A.S.; Amer. Inst. Chem. Contrb. to: Jour. of A.C.S.; Jour. of Chem. Edn.; Jour. of Lab. and Clin. Med.; Archives of Pathol. and Lab. Med.; Bull. Va. Sect., A.C.S.; Bull. Med. Coll. of Va.; Bull. Va. Acad. Sci. Listed in: A.M.S.

McCREA, Adelia, 16 Fountain Ave., San Francisco, Calif. **BOTANICAL SCIENCES, MEDICAL SCIENCES.**

McCRONE, W. C., Armour Rsch. Foundation, Chicago 16, Ill. **MICROSCOPY.**

McCROSKY, Theodore Tremain, Consulting Engineer, 23 East 26 St., New York 10, N. Y. **COMMUNITY AND REGIONAL PLANNING.**



b. Tecumseh, Nebr., June 12, 1902. s. James Warren and Josephine (Tremain) McC. Edn.: B.S., Yale, 1923; Ing. Constr., Louvain, 1925. m. Agnes James, Sept. 2, 1925. c.: John Warren James. Exp.: Instr., Sheffield Scientific Schl., Yale Univ., 1923-24 and 1925-27; Asst. Engr. Regional Plan of N. Y., N. Y., 1928; City Planning Engr. National Gov., Republic of China; responsible for technical studies, maps, and a complete report on the City Plan of Nanking as the New Capital of China, 1929-30; Planning Dir., City of Yonkers, N. Y., 1931-37; Consultant, Mayor's Committee on City Planning, City of N. Y., 1934-37; Mem. and Acting Executive Officer, Municipal Housing Authority, City of Yonkers, N. Y., 1935-37; Regional Project Adviser, U. S. Housing Authority, 1938; Dir. of Planning, N. Y. C. Planning Commission, N. Y., 1938-40; Executive Dir., Chicago Plan Commission, Chicago, Ill., 1941-42; U. S. Navy, 1943-45; Exec. Dir. of Greater Boston Dev. Committee, Boston, Mass., 1946-48; Partner McHugh and McCrosky, 1948—. Hon. Pos.: Chmn., Comm. of Conference

of Mayors of N. Y. State on Revision of St. Planning Enabling Acts. Chmn.: Amer. Inst. Planners Committee on Civic Edn. Mem.: Amer. Soc. Civil Engrs.; Amer. Inst. Consulting Engrs.; Amer. Inst. Planners, (Vice-Pres., 1943); Inst. Traffic Engrs.: Sigma Xi; Tau Beta Pi; Lambda Alpha; Theta Xi. Co-author: Population, Land Values and Government, 1929; Surging Cities, 1948. Author: San Francisco Bay Vehicular Crossings, Traffic Engineering, 1949; The Effects of a proposed Regional Shopping Center upon the Town of Mount Pleasant, 1951. Contbr. to: Civil Engineering; Proceedings, A.S.C.E.; Jour. of Amer. Inst. Planners; Traffic Engineering. War Record: U. S. Navy Lt. Comdr., 1943-44; Comdr., 1945, Office of Chief of Naval Operations. Special Int.: Patterns of Urban Living and their Effectuation; Traffic Characteristics.

McCRUDDEN, Francis Henry, Asst. Med. Dir., New England Mutual Life Ins. Co., 501 Boylston St., Boston, Mass. MEDICINE.

McCUBBIN, Walter A., Pathologist, Bureau Entomol. and Plant Quarantine, U. S. D. A., Washington, D. C. PLANT PATHOLOGY.

McCULLAGH, D. Roy, Biochemist, Schering Corp., Bloomfield, N. J. BIOCHEMISTRY.

McCULLOCH, Ernest Carr, Prof. of Bacteriol., State Coll. of Wash., Pullman, Wash. BACTERIOLOGY.

McCULLOCH, Irene A., Allan Hancock Foundation, Univ. of Southern Calif., Los Angeles, Calif. ZOOLOGICAL SCIENCES.

McCULLOCH, Warren Sturgis, Prof. of Psychiatry and Hd. Rsch., Dept. of Psychiatry, Ill. Neurophysiatric Inst., 912 S. Wood St., Chicago, Ill. NEUROPHYSIOLOGY.

McCULLOUGH, James Caldwell, Prof. of Chem., Oberlin Coll., Oberlin, Ohio. CHEMISTRY.

McCULLOUGH, Norman B., Natl. Insts. of Health, Bethesda, Md. BACTERIOLOGY.

McCUNE, Robert Franklin, Asst. Prof. of Physics, Bucknell Univ., Lewisburg, Pa. MOLECULAR SPECTROSCOPY. b. Aug. 23, 1915, Muncie, Ind. s. Frank Elton and Ona May (Hogan) McC. Edn.: A.B., Manchester, Ind. Coll., 1937; M.S., Univ. of Ill., 1939; Ph.D., ibid., 1941. Exp.: Analytical Engr., Hamilton Standard Propellers, East Hartford, Conn., 1941-46; Instr. Physics, Trinity Coll., 1946-47; Asst. Prof. Physics, ibid., 1947-52; Asst. Prof., Physics, Bucknell Univ., Lewisburg, Pa., 1952—. Mem.: A.P.S.; A.A.P.T.; A.A.A.S.; Sigma Xi; A.A.U.P.; Phi Kappa Phi; Sigma Pi Sigma. Ph.D. Dissertation: A Photochemical Method for the Separation of the Oxygen Isotopes. Special Int.: Molecular Structure, Theory of Vibrations.

McCUNE, Shannon, Dept. of Geography, Colgate Univ., Hamilton, N. Y. GEOLOGY AND GEOGRAPHY, SOCIAL AND ECONOMIC SCIENCES.

McCUSKEY, Sidney Wilcox, Kerr Prof. of Math. and Astron., Chmn. Dept. of Math., Case Schl. Applied Sci., Cleveland, Ohio. ASTRONOMY.

McCUTCHEON, Frederick Harold, Univ. of N. C., State Coll. Sta., Raleigh, N. C.

McCUTCHEON, Morton, Prof. of Pathol., Univ. of Pa., Philadelphia, Pa. PATHOLOGY.

McCUTCHEON, Thomas Potter, Prof. of Inorganic Chem., Univ. of Pa., Philadelphia, Pa. CHEMISTRY.

McDANIEL, Allen Boyer, Consulting Engr., 1000 Chandler Bldg., Washington, D. C. CIVIL ENGINEERING.

McDANIEL, Eugenia Inez, Assoc. Prof. and Rsch. Assoc., Mich. State Coll., East Lansing, Mich. ENTOMOLOGY.

McDANIEL, Waldon Brooks, Prof. Emer., Latin Language and Literature, Univ. of Pa., Philadelphia,

Pa.; 4082 Malaga Ave., Coconut Grove, Miami, Fla. CLASSICAL PHILOLOGY AND ARTHAEOLOGY.

McDANIEL, William Earl, Assoc. Prof. of Agril. Econ., Univ. of Del., Newark, Del. AGRICULTURAL ECONOMICS (FARM MANAGEMENT AND PRODUCTION ECONOMICS). b. Fresno, Calif., May 30, 1915. s. Jessie Floyd and Emma (Mischer) McD. Edn.: B.S., Univ. of Mo., 1942; M.S., Univ. of Ill., 1943; Ph.D., Univ. of Minn., 1951. m. Frances Mildred Bissett, Dec. 26, 1946. c.: William Earl, II. Exp.: Instr., Schl. of Business Admin., Univ. of Minn., 1947-48; Instr., Dept. of Agril. Econ., ibid., 1948-51; Asst. Prof. of Agril. Econ., Univ. of Del., Newark, Del., 1951-53, Assoc. Prof. of Agril. Econ., ibid., 1953—. Mem.: Amer. Econ. Assn.; Amer. Soc. of Farm Mgrs. and Rural Appraisers; Gamma Sigma Delta; Alpha Zeta. Contbr. to: Minn. Farm and Home Sci.; Broiler Jour.; Broiler Growing. War Record: U. S. Army, 1943-46. Special Int.: Farm Management and Production Econ.

McDERMOTT, Eugene, Pres., Geophysical Service, Inc., Box 1045, 6000 Lemmon Ave., Dallas, Tex. PETROLEUM GEOPHYSICS.

McDIARMID, Richard John, Government Astronomer, Dominion Observatory, Ottawa, Ont., Can. ASTRONOMY, PHYSICS.

McDILL, Robert McKee, Prof. of Math., Hastings Coll., Hastings, Nebr. MATHEMATICS.

McDONALD, Clinton C., Prof. and Hd. Dept. of Botany-Bacteriol., Univ. of Wichita, Wichita 14,



Kans. BOTANY-MICROBIOLOGY. b. West Baden Springs, Ind., Feb. 4, 1893. s. Andrew J. and Minnie (Pierce) McD. Edn.: B.A., Univ. of Ind., 1922; M.A., ibid., 1924; Ph.D., ibid., 1926. m. Laura Felknor, June 1, 1917. c.: Melvin F.; Betty Jean. Exp.: Instr., Univ. of Ind., 1922-26; Prof., Univ. of Wichita, Wichita, Kans., 1926—; Dir., Student Health Service, ibid., 1949—. Mem.: Amer. Public Health Assn.; Fellow, A.A.A.S.; Amer. Coll. Health Assn., (Univ. of Wichita Representative); Soc. Amer. Bacteriologists; Amer. Genetic Assn.; Kans. Acad. Sci.; Phi Beta Kappa; Sigma Xi; Alpha Phi Omega; Amer. Assn. of Univ. Prof.; Past Pres. and Life (Hon.) Mem. of Wichita Garden Club; Section Chief, Health Division, Wichita-Sedgwick Co.; Civilian Defense in Bacterial Warfare. Contbr. to: Kans. Acad. of Sci.; Proc. Amer. Coll. Health Assn.; etc.

McDONALD, Ellice, Dir. Biochemical Rsch. Foundation, Newark, Del. BIOCHEMICAL RESEARCH.

McDONALD, Francis Guy, Asst. Dir. Rsch. Lab., Mead Johnson and Co., 713 Lombard, Evansville, Ind. BIOCHEMISTRY.

McDONALD, Frank Cobb, Prof. of Phys., Southern Methodist Univ., Dallas, Tex. ATOMIC PHYSICS. b. March 19, 1898, Warrensburg, Mo. s. Walter and Mary (Violet) McD. Edn.: B.S., Cent. Mo. S.T.C., 1920; M.S., Univ. of Chicago, 1922; Ph.D., ibid., 1926. m. Margaret Heimbach of Coldwater, Mich., 1930. d. Mr. and Mrs. A. L. Heimbach. c.: Marilyn; Frank and Walter. Exp.: Tchr., Prin., H. S., Lebanon, Mo., 1919-21; Asst. Prof., Oberlin Coll., 1926-29; Prof., South. Meth. Univ., 1929—. Mem.: Amer. Phys. Soc.; Amer. Assn. of Phys. Tchrs.; A.A.U.P.; A.A.A.S.; Phi Sigma Pi; Gamma Alpha; Sigma Xi; Phi Beta Kappa. Ph.D. Dissertation: Some Hydrocarbon Bands. Listed in: A.M.S.; Who's Who in Amer. Methodism.

McDONALD, Hugh J., Prof. and Chmn., Dept. of Biochem., Stritch Schl. of Med., Loyola Univ., 706

S. Wolcott Ave., Chicago 12, Ill. **PHYSICAL CHEMISTRY; BIOCHEMISTRY.** b. Glen Nevis, Ont., Can., July 27, 1913. s. Roderick J. and Annie Sarah (McDonnell) McD. Edn.: B.Sc., McGill Univ., 1935; M.S., Carnegie Inst. of Tech., 1936; D.Sc., *ibid.*, 1939. m. Margaret Bilsland Taylor, Feb. 14, 1942. c.: George Gordon; Jean Margaret; Gail Margaret. Exp.: Mining Advisory Bd. Fellow, Carnegie Inst. of Tech., 1935-36; Tchng. Asst. and Part-time Instr., Carnegie Inst. of Tech., 1936-39; Instr. in Chem., Ill. Inst. of Tech., 1939-41; Asst. Prof. of Chem., *ibid.*, 1941-43; Assoc. Prof., *ibid.*, 1943-46; Prof., *ibid.*, 1946-48; Dir., Corrosion Rsch. Lab., 1944-48; Rsch., Manhattan Project, Columbia Univ., 1943; Prof. and Chmn., Dept. of Biochem., Stritch Schl. of Med., Loyola Univ., Chicago, Ill., 1948—. Mem.: Fellow, A.A.A.S.; Amer. Chem. Soc.; Soc. Exptl. Biol. Med.; Amer. Assn. Clin. Chemists; Chmn., Com. on Edn., 1950-52; Vice-Pres., 1952-53; Sigma Xi; Phi Lambda Upsilon; Alpha Chi Sigma. War Record: Manhattan Project, Columbia Univ., 1943. Special Int.: Phys. Chem.; Electrophoresis; Biochem.

McDONALD, Joseph, Mayo Clinic, Rochester, Minn. **PATHOLOGY.**

McDONALD, Margaret Baxter, retired, Hotel Tryon, Tryon, N. C. **CHEMISTRY.**

McDONNELL, Henry Barnett, retired, 7400 Dartmouth Ave., College Park, Md. **CHEMISTRY AND MEDICINE.**

McDONNELL, John Neumann, Asst. Prof. of Pharm., Philadelphia Coll. of Pharmacy and Sci., Philadelphia, Pa. **PHARMACY.**

McDONNELL, Joseph F., Jr., Exec. Asst. Med. Dir., Schenley Labs., Inc., 350 Fifth Ave., N. Y., N. Y. **PHARMACEUTICAL CHEMISTRY.**

McDONNELL, Madeline Oxford Holland, Mging. Ed., Amer. Professional Pharmacist and Format Ed. Medical Times, 67 Wall St., N. Y., N. Y. **PHARMACY.**

McDONNELL, Milton Earle, retired, 910 Allegheny St., Hollidaysburg, Pa. **CHEMISTRY.**

McDONOUGH, Donald L., Hd., Dept. of Math., South Philadelphia H. S. Boys Inst. Math., Drexel Inst. of Tech., Philadelphia, Pa. **MATHEMATICS.**

McDONOUGH, Eugene Stowell, Prof. Bot., 253 N. Pinecrest, Milwaukee, Wis. **BIOLOGY.** b. Apr. 16, 1905, Abingdon, Ill. s. John and Nora E. (Hankins) McD. Edn.: B.S., Marquette Univ., 1928; M.S., 1930; Ph.D., Ia. State Coll., 1936. m. Marie Wooster of Milwaukee, Wis., Aug. 2, 1930. d. Anson and Margaret Wooster. Exp.: Grad. Asst., Marquette Univ., Bot., 1928-29; Instr. Bot., Mich. State Coll., 1929-30; Instr., Bot., Marquette Univ., 1930-36; Asst. Prof. Bot., 1936-40; Assoc. Prof., 1940-50; Prof., 1950—. Fellow, A.A.A.S. Mem.: Amer. Bot. Soc.; A.A.A.S.; Mycol. Soc.; Genetic Soc. Amer.; Amer. Genetics Assn.; Wis. Acad. of Sci. Arts and Letters; Phi Sigma; Cosmopolitan Club; Human Genetics Soc. of Amer.; Amer. Phytopath. Soc.; Soc. for the Study of Evolution. Contrb. to: Mycologia; Amer. Jour. of Botany; Phytopathology; Jour. of Heredity; Florists' Rev.; Nature. Ph.D. Dissertation: Studies on the Cytology and Host-parasite Relations of *Sclerospora graminicola*. Hobbies: Gardening; Golf; Listed in: A.M.S.; Who's Who in the Middle West; Monthly Supplement to Who's Who in Amer.; Who Knows.

McDONOUGH, Sister M. Rosa, Dean, St. Joseph Coll., West Hartford, Conn. **PSYCHOLOGY.**

McDOUGAL, Taine G., A. C. Spark Plug Div., General Motors Corp., Flint 2, Mich. **CERAMICS.**

McDOUGALL, Dougald, Hd., Dept. of Pharmacy and Pharmaceutical Chem., Univ. of Manitoba, Winnipeg, Man., Can. **CHEMISTRY.**

McDOUGALL, Walter Byron, Naturalist, Natl. Park Service, Natchez Trace Pkwy., P. O. Box 428, Tupelo, Miss. **PLANT ECOLOGY.**

McDOUGLE, Edith Augusta, Instr. in Math. and Physics, Univ. of Del., Newark, Del. **MATHEMATICS, PHYSICS.**

McDOWELL, Clyde Stanley, Pres. and Chmn., Bd. of Dirs., Intercontinental Engrng. Corp., 110 Market St., San Francisco, Calif. **ENGINEERING.**

McDOWELL, Elizabeth D., **SPEECH AND HEARING.**

McDOWELL, J. Spotts, 4716 Bayard St., Pittsburgh 13, Pa. **CERAMICS.**

McDOWELL, Louise Sherwood, Prof. Emer. Physics, Wellesley Coll., 28 Dover Rd., Wellesley, Mass. **PHYSICS.**

McDOWELL, Samuel John, Development Ceramic Engr., Amer. Lava Corp., Newark, N. J. **CERAMIC ENGINEERING.**

McEACHRON, Karl B., Sr., General Electric Co., Pittsfield, Mass. **ELECTRICAL ENGINEERING.**

McELVAIN, Samuel Marion, Univ. of Wis., Madison 6, Wis.

McEWAN, Eula D., Asst. Prof. Emer., Univ. of Nebr., 1973 Sewell Ave., Lincoln, Nebr. **GEOLOGY.**

McEWEN, George Francis, Prof. of Physical Oceanography, Scripps Inst., Univ. of Calif., La Jolla, Calif. **PHYSICS.**

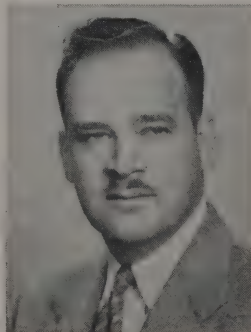
McEWEN, Robert Stanley, Prof. of Zool. and Hd. Dept., Oberlin Coll., Oberlin, Ohio. **EMBRYOLOGY.**

McFADDEN, George Horace, Supvr., Rsch. Coll. of Pharmacy, Ohio St. Univ., Columbus, Ohio. **CHEMISTRY AND PHARMACY.** b. Dec. 3, 1900, New Athens, Ohio. s. Samuel Everett and Jennie (Henderson) McFadden. Edn.: B.S., Muskingum Coll., 1923; B.S. in Pharmacy, Ohio State Univ., 1926; M.S., *ibid.*, 1933; Ph.D., *ibid.*, 1937. m. Polly Finola Hill of Raymond, Ohio, May 5, 1928; d. Abby Wood and Frank Hill. Exp.: Supt., H. S., Short Creek, Ohio, 1926-29; Instr. in Organic Chem., Detroit Inst. of Tech., 1930-33; Instr., Pharm., S. Dak. State Coll., 1936-37; Assoc. Prof. of Chem., Kansas City, Coll. of Pharm., 1937-39; Prof. of Pharmaceutical Chem., Ohio Northern Univ., 1939-42; Prof., Chem. and Hd., Dept. of Chem., 1942-44; Rsch. Assoc., Ohio State Univ., 1944-47; Assoc. Prof., 1947-48; Assoc. Supvr., Rsch., 1949-52; Supvr., Rsch. Coll. of Pharmacy, *ibid.*, 1952—. Mem.: Amer. Chem. Soc.; Sigma Xi; Rho Chi; Phi Mu Delta; Internatl. Torch Club. Contrb. to: Jour. of Amer. Pharmaceutical Assn.; Amer. Jour. of Pharm.; Numerous Patents on Processing of Rubber. Ph.D. Dissertation: A Study of *Rhus Glabra* Linne. Hobbies: Hunting; Fishing; Gardening. Listed in: A.M.S.

McFARLAN, Arthur Crane, Prof. and Hd., Dept. of Geol., Univ. of Ky., Lexington, Ky. **STRATIGRAPHY.**

McFARLAND, Robert Harold, Assoc. Prof. of Physics, Kan. State Coll., Manhattan, Kan. **PHYSICS.**

SPECTROSCOPY NUCLEAR PHYSICS, GASEOUS DISCHARGE. b. Severy, Kans., Jan. 10, 1918. s. Robert Eugene and Georgia Ellen (Simpson) McF. Edn.: B.S., and B.A., Kans., State Tchrs. Coll., 1940; Ph.D., Univ. of Wis., 1947. m. Twilah Mae Seefeld, 1940. c.: Robert Alan, Rodney Jon. Exp.: Instr. Chase Rural High School, Chase, Kans., 1940-41; Instr., Univ. of Wis., Madison, Wis., 1943-44; Senior Engr., Sylvania Elec. Corp., Salem, Mass., 1944-46; Asst. Prof., Kans. State Coll., Manhattan, Kans., Assoc. Prof., *ibid.*, 1947—.



Mem.: Amer. Physical Soc.; Kans. Acad. of Sci.; Sigma Xi; Lambda Delta Lambda; Pi Mu Epsilon; Gamma Sigma Delta; Xi Phi; Kappa Mu Epsilon; Kappa Delta Pi. Contrb. to: Physical Review; Illuminating Engr. Soc.; Amer. Jour. of Physics; Jour. of Amer. Chem. Soc.; Transactions of the Kans. Acad. of Sci. Spec. Int.: Spectroscopy, Gaseous Discharge Phenomena, Tracers using Radioactive Isotopes, Health Physics.

McFARLAND, Frank T., Prof. and Hd., Dept. of Botany, Univ. of Ky., Lexington, Ky.

McFARLAND, Ross Armstrong, Asst. Prof. of Indus. Rsch., Harvard Grad. Schl. Business Admin., Soldiers Field, Boston, Mass. **PHYSIOLOGICAL PSYCHOLOGY**.

McFEE, Raymond Herbert, Sr. Electrical Engr., Submarine Signal Co., Boston, Mass. **EXPERIMENTAL PHYSICS**.

McGAUGHY, J. R., Rt. 3, Mt. Gilead, Ohio.

McGAVRAN, Edward Grafton, Dean and Prof. of Epidemiol. Schl. of Pub. Health, Univ. of N. C., Chapel Hill, N. C. **PARASITOLOGY**. b. May 14, 1902, Pachmari, India. s. John Grafton and Helen (Anderson) McG. Edn.: A.B., Butler Univ., 1924; M.D., Harvard Med. Schl., 1928; Internship, Rochester Gen. Hosp., 1928-29; M.P.H., Harvard Schl. of Pub. Health, 1934-35. m. Mary Graydon Payne of Danville, Ill., Oct. 26, 1927. d. Mr. and Mrs. Lincoln Payne. c.: Edward Grafton, Jr.; Merrill Payne; Mary Katherine. Exp.: Rsch. Fellow, Dept. Comp. Pathol., Harvard Med. Schl., 1924-26; Techn. Fellow, Dept. of Parasitol., ibid., 1926-28; Rockefeller Foundation Med. Rsch., Egypt, 1927; Natl. Bd. Diplomat, 1929; Gen. Practice of Med., Sidel, Ill., 1929-34; W. K. Kellogg Foundation, Dir. of Health and County Health Officer, Hillsdale, Mich., 1934-39; W. K. Kellogg Foundation, Survey and Study of Health Conditions in Sugar Indus. in Hawaii, 1939-40; Dir., W. Va. Pub. Health Trng. Center and Monongalia Co. Health Dept., Morgantown, W. Va., 1940-41; Spec. Lectr. in Pub. Health at Univ. of W. Va., 1940-41; Spec. Consultant to U.S.P.H.S., Lectr., Bethesda, Md., 1941; Health Commr., St. Louis County, Mo., 1941-46; Assoc. Prof., Pub. Health, Wash. Univ., Med. Schl., 1941-43; Prof., Pub. Health, ibid., 1943-46; Act. Hd., Dept. of Pub. Health and Preventive Med., ibid., 1943-46; Prof. of Pub. Health and Preventive Med. and Hd., Dept., Univ. of Kans. Schl. of Med., Kans. City, Kans., 1946-47; Prof. of Epidemiol. and Dean, Schl. of Pub. Health, Univ. of N. C., 1947—. Mem.: Exec. Bd., A.P.H.A.; A.M.A.; N.C.P.H.A.; Elish Mitchell Sci. Soc.; Hon., T.K.A.; Delta Omega. Travel: Egypt; India; Hawaii; Central Amer.; N. Amer. Listed in: Who's Who in Amer.; A.M.S.; Who's Who and What. Special Int.: Parasitol. and Epidemiology.

McGAW, Frederick M., Prof. Emer. Math. and Engrng., Cornell Univ., 615 Sixth Ave., Mt. Vernon, Iowa. **MATHEMATICS**.

McGEORGE, William Thomas, Agri. Chemist and Hd., Dept. Agri. Chem. and Soils, Agri. Expt. Sta., Tucson, Ariz. **AGRICULTURAL CHEMISTRY AND SOILS**.

McGERRIGLE, Harold William, Geologist, Dept. of Mines, Parliament Bldgs., Quebec, Que., Can. **STRATIGRAPHY**.

McGHEE, R. B., **PARASITOLOGIST**.

McGILL, Caroline, Physician, 58 W. Quartz St., Butte, Mont. **INTERNAL MEDICINE**.

McGILL, William Mahone, State Geologist, Va. Geol. Survey, P. O. Box 1428, Univ. Sta., Charlottesville, Va. **GENERAL GROUND-WATER AND PETROLEUM GEOLOGY**.

McGINNIES, William Grovenor, Dir., Rocky Mountain Forest and Range Expt. Sta., Forest Service, Fort Collins, Colo. **ECOLOGY, FORESTRY**.

McGINNIS, Claude Stonecliffe, Chmn., Physics Dept., Temple Univ., Philadelphia, Pa. **PHYSICS**.

McGINNIS, Esther, Dir., Merrill-Palmer Schl., 71 E. Ferry Ave., Detroit, Mich. **CHILD PSYCHOLOGY**.

McGINNIS, Mildred A., **SPEECH AND HEARING**.

McGINTY, Daniel A., Physiologist, Parke, Davis and Co., Detroit, Mich. **PHYSIOLOGY**.

McGRAW, John, Jr., 630 Lafayette St., Easton, Pa. **PHYSICAL CHEMISTRY**.

McGREGOR, James Howard, Prof. Emer. Zool., Columbia Univ., N. Y., N. Y. **ZOOLOGY**.

McGREGOR, John C., Anthropologist and Asst. to Chf., Ill. State Museum, Springfield, Ill. **ANTHROPOLOGY**.

McGREGOR, R. R., Mellon Inst. Indus. Rsch., Pittsburgh, Pa. **CHEMISTRY**.

McGUINNESS, Charles Lee, Prin. Geologist, Chf., Tech. Reports Sect., Ground Water Branch, U. S. Geol. Survey, Washington 25, D. C. **GEOLOGY AND GROUND-WATER HYDROLOGY**. b. Santa Fe, N. Mex., Sept. 16, 1914, s. Michael J. and Delora (Riley) M. Edn.: B.S., Univ. of N. Mex.; 1934; M.S., ibid., 1936. m. Helen Louise Hamlin, July 3, 1937. Exp.: Staff, Ground Water Branch, U. S. Geol. Survey, Washington, D. C., 1938—. Mem.: Geol. Soc. of Amer.; Soc. of Econ. Geol.; Amer. Geophys. Union; Geol. Soc. of Wash.; Cosmos Club; Phi Kappa Phi. Contrb. to: U. S. Geol. Survey; Amer. Geophys. Union Trans.; Econ. Geol.; Amer. Soc. Civil Engr., etc. Special Int.: Gen. Ground-Water Geol. and Hydrol. of U. S.; Ground-Water Law; Ground-Water Geol. and Hydrol. of Caribbean islands.

McGUIRE, Constantine E., Cosmos Club, Washington, D. C. **SOCIAL AND ECONOMIC SCIENCES, HISTORY AND PHILOSOPHY OF SCIENCE**.

McGUIRE, Grace Mary, Chemist and Dir. Vitamin Testing Lab., Lab. Indus. Hygiene, 76 Madison Ave., N. Y., N. Y. **CHEMISTRY**.

McGUIRE, Stuart, 1000 W. Grace St., Richmond, Va. **MEDICAL SCIENCES**.

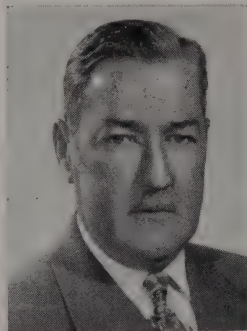
McHALE, Kathryn, Gen. Dir., Amer. Assn. Univ. Women, 1634 I St., N. W., Washington, D. C. **PSYCHOLOGY AND EDUCATION**.

McHARGUE, James Spencer, Hd., Dept. of Chem., Ky. Agri. Expt. Sta., Lexington, Ky. **CHEMICAL RESEARCH**.

McHATTON, Thomas Hubbard, Hd., Dept. of Horticulture, Univ. of Ga., Athens, Ga. **HORTICULTURE**.

McHENRY, Donald Edward, Glen Echo, Md. **ZOOLOGICAL AND BOTANICAL SCIENCES**.

McHENRY, Douglas, Dir. of Dev., c/o Portland Cement Assn., 33 W. Grand Ave., Chicago 10, Ill. **ENGINEERING RESEARCH AND DEVELOPMENT, PARTICULARLY IN CONCRETE STRUCTURES AND PRODUCTS**. b. Crookston, Minn., June 4, 1903. s. Herbert and Mary (Leslie) McH. Edn.: Univ. of Minn., 1921-24. m. Mary Elizabeth Franklin. c.: Christine N. and John E. Exp.: Southern Calif. Edison Co., Los Angeles, Calif., 1925-29; Chf., Survey Party, Phoenix Utility Co., New York, N. Y., 1930-32; Rsch. Engr., Tenn. Valley Authority, Knoxville, Tenn., 1933-40; Rsch. Engr., Bur. of Reclamation, Denver, Colo., 1940-52; Dir. of Development, Portland Cement Assn.; Chicago, Ill., 1952—. Mem.: Amer. Soc. of Civil Engrs.; Amer. Concrete Inst.; Soc. for Exptl. Street Analysis; Amer. Inst. of Physics; Sigma Xi.



Contrib. to: Amer. Soc. of Civil Engrs.; Amer. Concrete Inst.; Amer. Inst. of Physics; Amer. Soc. for Testing Materials; Instn. of Civil Engrs. of London; Civil Engrng.; Engrng. News-Record. Gen. Int.: Sanford E. Thompson Award from Amer. Soc. for Testing Materials, 1943; Telford Award from Instn. of Civil Engrs. of London, 1944.

McILROY, Malcolm S., Franklin Hall, Cornell Univ., Ithaca, N. Y. ELECTRICAL ENGINEERING.

McILVAINE, Harold Ralph Clair, Assoc. Prof. of Bot., Sci. Hall, Univ. of Idaho, Moscow, Idaho. BOTANY. b. Dec. 4, 1912, Altoona, Pa. s. Walter Howard and Claire (Miller) McI. Edn.: B.A., 1933, M.Ed., 1934, Ph.D., 1939, Pa. State Coll. m. Mildred Dunkleberger of Harrisburg, Pa., July 25, 1939. d. I. H. and Josephine Dunkleberger. Exp.: Instr. and Asst. Prof., Psychol. and Other Biol. Sci., Undergrad. Centres, Pa. State Coll., 1939-47; Asst. Prof., Bot., Univ. of Ida., 1947-49; Assoc. Prof., Bot., ibid., 1949—; Dean of Faculty, 1941-43. Mem.: Pa. Acad. of Sci.; Sigma Xi; Psi Chi; Kappa Phi Kappa; Phi Delta Kappa; Mason; Rotary. Contrib. to: Jour. Agri. Rsch. Ph.D. Dissertation: Effect of Radiation on Growth. War Record: Clin. Psychol., 4th Gen. Hosp. and Several Zi Gen. Hosps., 1943-46. Travel: Pacific During War. Hobbies: Photomicrography; Psychometrics. Listed in: A.M.S. Special Int.: Plant Physiology and Anatomy.

McILWRAITH, Charles Goldie, Physicist, Beacon Lab., Texas Co., Beacon, N. Y. PHYSICS.

McINTEER, Berthus Boston, Assoc. Prof., Dept. of Botany, Univ. of Ky., Lexington, Ky. BOTANY.

McINTIRE, Floyd Cottam, Rsch. Biochemist, Abbott Labs., North Chicago, Ill. BIOCHEMISTRY.

McINTIRE, William Cornelius, Supvr., Central Testing Plant, Calco Chemical Div., Amer. Cyanamid Co., Bound Brook, N. J. CHEMICAL ENGINEERING, CHEMISTRY.

McINTOSH, Allen, Zoologist, Taxonomy of Animal Parasites, Div. Zool., Bureau Animal Indus., U. S. D. A., Beltsville, Md. HELMINTHOLOGY.

McINTOSH, Rustin, Dir., Pediatric Service, Babies Hosp. and Carpenter Prof. of Pediatrics, Columbia Univ., N. Y., N. Y. PEDIATRICS.

McINTYRE, A. Ross, Univ. of Neb., Omaha, Nebr. PHARMACOLOGY.

McINTYRE, G. H., Ferro Corp., 4150 E. 56th St., Cleveland 5, Ohio. CERAMICS.

McKAY, John Welborn, Assoc. Cytologist, Plant Indus. Sta., Beltsville, Md. BOTANY, CYTOLOGY.

McKAY, Orval, P. O. Box 303, Saranac, Mich. PHARMACY.

McKEE, Clyde, Dean, Agri. and Dir., Agri. Expt. Sta., Mont. State Coll., Bozeman, Mont. AGRONOMY.

McKEE, Mary Clarissa, Prof. of Chem., Conn. Coll., New London, Conn. CHEMISTRY.

McKEE, Ralph Harper, retired, 635 Riverside Dr., N. Y., N. Y. CHEMICAL ENGINEERING.

McKELVEY, Joseph Vance, Prof. of Math., Iowa State Coll., Ames, Iowa. ALGEBRAIC GEOMETRY.

McKENNA, Philip Mowry, Pres., Kennametal, Inc., P. O. Box 231, Latrobe, Pa. METALLURGY.

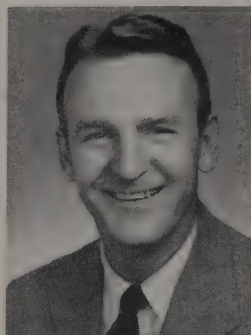
McKENZIE, Frederick Francis, Prof. of Animal Husbandry and Dept. Chmn., Ore. State Coll., Corvallis, Ore. REPRODUCTION PHYSIOLOGY, ARTIFICIAL INSEMINATION.

McKENZIE, Lawson Morell, Physicist, Navy Dept., Washington, D. C. APPLIED PHYSICS.

McKENZIE, Malcolm Arthur, Rsch. Prof. of Botany, Expt. Sta., Mass. State Coll., Amherst, Mass. FOREST PATHOLOGY.

McKERN, Will Carleton, Dir., Milwaukee Public Museum, 818 W. Wisconsin Ave., Milwaukee, Wis. ANTHROPOLOGY.

McKETTA, John J., Jr., Editorial Dir., Petroleum Refiner, Box 2608, Houston 1, Tex. PHASE EQUILIBRIUM AT HIGH PRESSURES; PHASE



RULE. b. Wyano, Pa., Oct. 17, 1915. s. John J. and Mary (Gelet) M. Edn.: B.S., Tri State Coll., 1936; B.S., Univ. of Mich., 1943; M.S., ibid., 1944; Ph.D., ibid., 1946. m. Helen Elisabeth Smith, Oct. 17, 1943. c.: Charles William; John J., III; Robert Andrew. Exp.: Asst. Supt., Caustic Soda Div., Wyandotte Chem. Corp., 1936-41; Dir., Chem. Development, C. B. Schneible Co., 1941-42; Asst. Prof. to Prof. and Chmn. of

Dept. Chem. Engrng., Univ. of Tex., Austin, Tex., 1946-52; Ed. Dir., Petroleum Refiner, Houtson, Tex., 1952—. Mem.: A.I.Ch.E., Amer. Chem. Soc.; A.I.M.M.E.; Chi Epsilon; Alpha Psi Omega; Tau Omega; Phi Lambda Upsilon; Sigma Xi; Phi Kappa Phi; Iota Alpha; Omega Chi Epsilon. Contrib. to: Jour. Petroleum Tech.; Indus. and Engrng. Chem.; Amer. Soc. of Engrng. Edn.; Amer. Inst. of Mining Engrs.; Jour. Indus. Rsch.; Petroleum Engr.; Petroleum Refiner.

McKINNEY, Harold Hall, Sr. Pathologist, U. S. D. A., Bureau Plant Indus., Soils and Agri. Engrng., Beltsville, Md. PLANT VIRUSES, VIRUS DISEASES.

McKINNEY, Leonard Laurence, In Chg., Indus. Protein Sect., Northern Regional Rsch. Lab., Peoria 5, Ill. ORGANIC CHEMISTRY. b. May 28, 1908, Siloam Springs, Ark. s. Claude Pascal and Maude (Leonard) McK. Edn.: B.S., Univ. of Ark., 1931; Geo. Wash. Univ., Evenings, 1934-35; Univ. of Ill., Part-time, 1933-40; M.S., Bradley Univ., 1950. m. Alice Ann Rodkey of Urbana, Ill., 1941. d. Prof. F. S. Rodkey. c.: Carl Stuart and Heather Ellen. Exp.: Chem., Tex. Co., 1931-34; U. S. Food and Drug Admin., Inspector and Analyst, 1935-37; U. S. Soybean Lab., Univ. of Ill., Urbana, Ill., Rsch. of Utilization of Soybean Meal, 1937-42; U. S. Army, 1942-46; Capt. to Lt. Col.; Chem. Advisor to Sixth Army Commander; Flame and Smoke, and Defense Against Chem. Attack; In Chg., Industrial Protein Sect., N. Regional Rsch. Lab., Peoria, Ill., 1946—. Mem.: A.C.S.; A.A.A.S.; Peoria Acad. of Sci.; Alpha Chi Sigma; Sigma Xi; Phi Lambda Upsilon; Alpha Lambda Tau; Armed Forces Chem. Assn. Author: Portable Flame Thrower Operations in World War II, 1950. Contrib. to: Chem. Jours. War Record: (See Above). Hobbies: Milit. Sci. and Tactics. Listed in: A.M.S.; Chem. Who's Who; Who Knows What. Special Int.: Organic and Biochem. of Amino Acids and Proteins, Synthetic Fibers; Plastics.



McKINNIS, Ronald B., Mgr. of Rsch. and Development, Amer. Machinery Corp., Orlando, Fla. FOOD TECHNOLOGY.

McKNIGHT, Charles, Chf. Engr., Aberdeen Proving Ground, R. F. D., Hydes, Md. METALLURGY.

McLACHLAN, Robert William, Assoc. Prof. of Sci., P. O. Box 91, Upper Montclair, N. J. INORGANIC, ANALYTICAL CHEMISTRY.

McLAIN, Joseph, Kent Mfg. Co., Chestertown, Md. PYROTECHNICS AND EXPLOSIVES.

McLAIN, Paul Larimer, Assoc. Prof. of Physiol. and Pharmacol., Med. Schl., Univ. of Pittsburgh, 33 McKelvey Ave., Pittsburgh, Pa. PHYSIOLOGY.

McLANE, Charles M. STERILITY.

McLARTY, Harold Ross, Officer in Chg., Dominion Lab. Plant Pathol., Summerland, B. C., Can. PLANT PATHOLOGY.

McLAUGHLIN, Dean Benjamin, Prof. of Astron., Univ. of Mich., Ann Arbor, Mich. ASTRONOMY.

McLAUGHLIN, Donald Hamilton, Pres., Homestake Mining Co. and Vice-Pres., Cerro de Paso Copper Corp., 40 Wall St., N. Y., N. Y. GEOLOGY, MINING AND ENGINEERING.

McLAUGHLIN, Katherine L., Prof. of Edn., Univ. of Calif., 405 Hilgard Ave., Los Angeles, Calif. EDUCATION.

McLAUGHLIN, Laura, Assoc. Prof. of Foods and Nutrition, Tex. State Coll. for Women, Denton, Tex. NUTRITION.

McLAUGHLIN, Laura Hill, 1214 W. Washington St., Ann Arbor, Mich. ASTRONOMY.

McLEAN, Franklin Chambers, Prof. of Pathological Physiol., Univ. of Chicago, Chicago, Ill. PHYSIOLOGY.

McLEAN, Jay, Assoc., Prof., Dept. Rsch. Surgery Ohio State Univ., Columbus, Ohio. DIAGNOSIS AND TREATMENT TUMORS.

McLELLAN, Roy Davison, Petrographer, Rsch. Lab., Amer. Smelting and Refining Co., Barber, N. J. GEOLOGY.

McLEOD, John Henry, Physicist and Hd., Process Development Dept., Hawk Eye Works, Eastman Kodak Co., Rochester, N. Y. OPTICAL ENGINEERING.

McLESTER, James S., Prof. of Med., Schl. of Med. Univ. of Ala., Birmingham, Ala. MEDICINE.

McLURE, John R., Dean, Coll. of Edn., Univ. of Ala., University, Ala. EDUCATIONAL ADMINISTRATION.

McMAHON, John F., Alfred, N. Y. CERAMICS.

McMASTER, Philip Duryee, Rockefeller Inst. for Med. Rsch., 66th St. and York Ave., N. Y. 21, N. Y.

McMATH, Robert Reynolds, Dir., McMath-Hubert Observatory and Prof. Solar Physics, Univ. of Mich., Box 104, Rt. 4, Lake Angelus, Pontiac, Mich. ASTRONOMY.

McMILLAN, Edwin Mattison, Univ. of Calif., Berkeley 4, Calif.

McMILLAN, Fred Orville, Prof. Elec. Engrng. and Hd. Dept., Ore. State Coll., Corvallis, Ore. ELECTRICAL ENGINEERING.

McMILLEN, Warren Newton, Dir. of Feed Nutrition, A. E. Staley Mfg. Co., Decatur, Ill. ANIMAL NUTRITION. b. Calera, Ala., Oct. 16, 1913. s J. R. and Daisy (Smith) McM. Edn.: B.S., Berry Coll., 1934; B.S., Okla. A. and M. Coll., 1935; M.S., ibid., 1936; Ph.D., Mich. State Coll., 1950. m. Virginia Hodges, Aug. 7, 1937. c.: Warren, Jr.; Jenna Lee. Exp.: Prof. of Animal Husbandry, Panhandle A. and M. Coll., Goodwell, Okla., 1936-44; Assoc. Prof. of Animal Husbandry, Mich. State Coll., East Lansing, Mich., 1944-50; Asst. Dir. of Rsch., Allied Mills, Inc., Chicago, Ill., 1950-52; Dir. of Feed Nutrition, A. E. Staley Mfg. Co., Decatur, Ill., 1952—. Mem.: Fellow, A.A.A.S.; Am. Genetic Assn.; Amer. Soc. Animal Production; Amer. Poultry Sci. Assn.; Alpha Zeta; Phi Kappa Phi; Phi Sigma. Author: Hog Profits for Farmer, 1952. Contrb. to: Jour. Animal Sci.; Jour. Agril. Rsch.; etc. Special Int.: Animal and Poultry Nutrition; Livestock Mgt.; Feed Formulation.

McMILLION, Theodore Meller, Prof. of Biol., Geneva Coll., Beaver Falls, Pa. ANIMAL HUSBANDRY.

McMINN, Howard E., Prof. of Botany, Mills Coll., Oakland, Calif. BOTANY.

McMULLEN, Eleanor C., Assoc. Prof. and Chmn., Dept. of Biol., Wells Coll., Aurora, N. Y. VERTEBRATE MORPHOLOGY.

McMUNN, Richard L., Asst. Prof. of Pomology, Coll. of Agri., Univ. of Ill., Urbana, Ill. AGRICULTURE.

McMURTREY, James Edward, Jr., Prin. Physiologist, U. S. D. A., Bureau Plant Indus., Soils and Agri. Engrng., Beltsville, Md. PLANT PHYSIOLOGY.

McNAIR, James Birtley, 818 S. Ardmore Ave., Los Angeles, Calif. PHYTOCHEMISTRY.

McNALL, Jessie J., Hd., Sci. Dept., Potsdam State Tchrs. Coll., Potsdam, N. Y. GENERAL SCIENCE.

McNALLY, Paul Aloysius, Vice-Pres. and Dir., Georgetown Coll. Observatory, Georgetown Univ., Washington, D. C. ASTRONOMY.

McNAMARA, E. P., 1710 Highland Ave., New Castle, Pa. CERAMICS.

McNARY, Robert Reed, Rsch. Fellow, Fla. Citrus Commn., Citrus Expt. Sta., Lake Alfred, Fla. BIOCHEMISTRY. b. Dayton, Ohio, Oct. 9, 1903.

s. James W. and Carrie Lee (Campbell) McN. Edn.: Ch.E., Univ. of Cincinnati, 1926; A.M., Antioch Coll., 1933; Ph.D., Univ. of Cincinnati, 1936. m. Eula Taylor, 1948. Exp.: Rsch. Chemist, Thomas and Hochwalt Labs., Dayton, Ohio, 1926-28; Frigidaire Corp., 1928-32; Development of Freon Refrigerants, Kettering Lab., Coll. of Med., Univ. of Cincinnati, Ohio, 1936-43; Rsch. Fellow, Fla. Citrus Commn., Citrus Expt. Sta., Lake Alfred, Fla., 1946—. Mem.: Amer. Chem. Soc.; Inst. of Food Tech.; Fla. Engrng. Soc.; Fla. Sewage and Indus. Wastes; Tau Beta Pi; Sigma Xi; Alpha Chi Sigma. Contrb. to: Amer. Chem. Soc. Jours.; Food Tech. Special Int.: By-Product Development of Citrus Fruit; Methods of Treating Citrus Cannery Waste Water; Indus. Hygiene Chem.; Chlorophyll Decomposition; Freon Refrigerants.



McNAUGHT, James Bernard, Prof., Hd. of Pathol., Univ. of Colo. Schl. of Med., 4200 East 9th Ave., Denver 20, Colo. PATHOLOGY. b. July 11, 1894, Girard, Kan. s. Joseph Ezra and Agnes Abbie (Johnson) McN. Edn.: A.B., Univ. of Kan., 1916; A.M., ibid., 1917 M.D., Stanford Univ., 1931. Exp.: Instr. in Bacteriol., Univ. of Kan., 1919-21; Bacteriologist, Grant Hosp., Columbus, Ohio, 1922; Dir. of Lab., Burnett Sanitarium, Fresno, Calif., 1923-27; Clin. Pathol., Chinese Hosp., San Francisco, Calif., 1928-29; Asst. in Path., Stanford Univ., 1930-31; Instr. in Path., ibid., 1931-35; Exchange Instr. in Path., Univ. of Rochester, Schl. of Med., 1934-35; Asst. Prof. in Path., Stanford Univ., 1935-40; Assoc. Prof. of Path., ibid., 1940-45; Pathologist, San Francisco Div., U. S. Dept. of Agri., 1935-37; Dir. of Lab., Palo Alto Hosp. and Pub. Health Dept., 1937-45; Visiting Pathologist to San Francisco Hosp. and Laguna Honda Home, 1931-45. Hon. Pos.: Mem., Bd. of Registry of Med. Technologists of Amer. Soc. of Clin. Path., 1939-45; Mem. of Technicians Advisory Bd. of the Calif. State Bd. of Health, 1941-45; Assoc. Ed. of the Centaur of Alpha Kappa Kappa, 1932-46; News Ed. of the Stanford Med. Bull., 1942-45; Consultant in Path. to The Surgeon General, U. S. Army since 1946; Consultant

in Path. to The Surgeon General, U. S. Air Force, since 1952; Consultant to Atomic Energy Commission, Div. of Biol. and Med., since 1948; Area Consultant in Path., St. Louis Med. Area, Vets. Administration since 1946. Mem.: Amer. Soc. of Exp. Path.; Amer. Assn. of Path. and Bact., Councilor, 1949—; V. Pres. 1952-53, and Pres. 1953-54. Amer. Soc. of Trop. Med.; Amer. Soc. Parasitologists; Fed. of Amer. Soc. for Exp. Biol. and Med.; Fellow of the Amer. Soc. of Clin. Path., Pres., 1949-50; Fellow of the A.M.A.; Calif. Acad. of Sci.; Calif. Acad. of Med.; Sigma Xi; Diplomate of the Amer. Bd. of Path., Trustee, 1944—, and V. Pres., 1951—; Bd of Governors of Coll. of Amer. Path., 1947; Internatl. Assn. of Medical Museums, Councilor, 1949-51, V. Pres., 1951-52 and Pres. 1952-53; Alpha Kappa Kappa; Phi Delta Kappa; Alpha Omega Alpha. War Record: 1st, Inf., U. S. A., 1917-19. Recreations and Hobbies: Exploring Death Valley; Med. Philately and Numismatics; Collecting Old Glass Paperweights Listed in: A.M.S.; Dir. of Med. Specialists; Who's Who Among Physicians and Surgeons; World Biog.; World Who's Who; Who's Who in Amer.

McNEILL, Ellis Meade, Hd., Dept. of Biol., Concord Coll., Athens, W. Va. PHYCOLOGY.

McNELLY Walter C. Prof. of Physiol., Miami Univ., Oxford, Ohio. PHYSIOLOGY OF EXERCISE.

McNEMAR, Quinn, Assoc. Prof. of Psychol., Stanford Univ., Calif. PSYCHOLOGY, STATISTICS.

McNEW, George Lee, Iowa State Coll., Ames, Iowa. PLANT PATHOLOGY.

McNIFF, William T., Assoc. Prof. of Physics, Fordham Univ., N. Y., N. Y. PHYSICS.

McNISH, Alvin G., Natl. Bureau of Standards, Washington 25, D. C. GEOMAGNETISM.

McPEEK, Clayton, Asst. Prof. of Physiol., retired, Ohio State Univ., 19 W. Fifth Ave., Columbus, Ohio. PHYSIOLOGY.

McPHEE, Hugh Curtis, Asst. Chf., Bureau Animal Indus., U. S. D. A., Washington, D. C. GENETICS.

McPHERSON, A. T., Chf., Div. Organic and Fibrous Materials, Natl. Bureau of Standards, Washington, D. C. POLYMER SCIENCE.

McPHERSON, William, Dean Emer., Prof. and Pres., Ohio State Univ., 198 16th Ave., Columbus, Ohio. CHEMISTRY.

McPHERSON, Woodrow Wilson, Prof., Dept. of Agril. Econ., N. C. State Coll., Raleigh, N. C. ECONOMICS AND PUBLIC POLICY. b. Haw River, N. C., Apr. 11, 1917. s. William King and Elizabeth (Slaughter) McP. Edn.: B.S., N. C. State Coll., 1938; M.S., La. State Univ., 1940; Ph.D., Harvard Univ., 1950. m. Jean Richards, May 9, 1943. c.: Robert Bruce; Donald Richards. Exp.: Rsch. Asst. in Agri. Econ., La. Expt. Sta., 1939-40; Agril. Economist, B.A.E., U.S.D.A., 1940-42; U. S. Army, 1942-45; Agril. Economist, B.A.E., U.S.D.A., 1946-48; Prof. in Agril. Econ. and Public Policy, Rsch. and Grad. Tchng., N. C. State Coll., Raleigh, N. C., 1949—. Mem.: Amer. Econ. Assn.; Amer. Farm Econ. Assn.; A.A.U.P.; Alpha Zeta. Contrb. to: Jour. Farm Econ.; etc. Special Int.: Economics and Public Policy, particularly in Agri.; Political Sci.

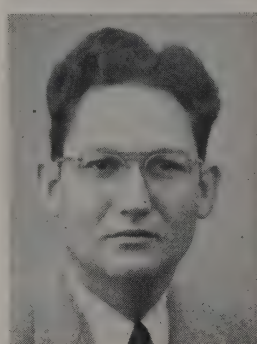
McQUARRIE, Irvine, Prof. and Hd., Dept. of Pediatrics, Univ. of Minn., Minneapolis, Minn. PEDIATRICS.

McQUOWN, Norman A., Asst. Prof. of Anthropol., Univ. of Chicago, Chicago, Ill. LINGUISTICS.

McRAE, Daniel Brent, Physicist, 4437 Brighton Ave., San Diego, Calif. b. June 27, 1902, Salt Lake City, Utah. s. PHYSICS. Daniel and Martha (Burnham) M. Edn.: B.S., Univ. of Utah, 1926; Ph.D., Calif. Inst. Tech., 1930. m. Merle Best of Salt Lake City, June 26, 1933. d. Frederic and Fanny Best. c.: Lorin; Jean; and Daniel. Exp.: Chemist, Amer. Pot. and Chem. Corp., Trona, Calif., 1927; Rsch. Asst., Phy.

Chem., Calif. Inst. Tech., 1928-30; Phy., Eastman Kodak Co., 1930-38; Phy., Eastman Resch. Lab., 1938-39; Phy., Hawk Eye Works, 1939-45; Assoc. Phy., Univ. of Calif., 1945-46; Phy., U. S. Navy Elec. Lab., San Diego, 1946—. Mem.: Optical Soc. of Amer.; Sigma Xi; Acoustical Soc. of Amer.; Amer. Inst. of Phy.; Phi Kappa Phi. Contrb. to: Phy. Rev.; Jour. Optical Soc. of Amer. Ph.D. Dissertation: 1. Experimental Demonstration of the Equivalence of a Mechanically Oscillated Electrostatic Charge in an Alternating Current. 2. The Reflection and Transmission of Light by Photographic Plates. Travel: Hawaiian Islands. Hobbies: Photography; Woodworking; Metal Working; Elec. Gadgets. Listed in: A.M.S. Special Int.: Experimental Physics, Electric Circuit Theory.

McQUOWN, Albert Louis, Pathologist, Our Lady of the Lake Sanatorium, Baton Rouge, La. PATHOLOGY.



b. Stillwater, Okla., Mar. 5, 1918. s. Harry and Lula Elva (Johnson) McQ. Edn.: B.S., Okla. A. and M. Coll., 1937; B.S., Okla. Univ. Schl. of Med., 1939; M.D., ibid., 1941. m. Helen Joy Evans, Janet Jean. Exp.: Internship, State Univ. of Iowa Hosp., Iowa City, Iowa, 1941-42; Resident in Surgery, Polk Co. Hosp., Des Moines, Iowa, 1942-43; Resident in Pathol., Charity Hosp., New Orleans, La., 1946-48; Asst. in Pathology, Tulane Univ. Schl. of Med., New Orleans, La., 1946-47; Asst. Dir., Dept. of Pathol., Charity Hosp. of La., New Orleans, La., 1948-50; Clinical Instr., Dept. of Pathol., La. State Univ. Schl. of Med., New Orleans, La., 1949-52; Asst. Prof., Dept. of Pathol., ibid., 1952—; Co-dir., Dept. of Pathol., Our Lady of the Lake Sanatorium, Baton Rouge, La., 1950—. Mem.: Amer. Soc. Clinical Pathol.; Assn. Pathologists and Bacteriologists; Coll. Amer. Pathologists; La. Soc. Pathologists; A.M.A.; Phi Chi; Phi Sigma; Alpha Pi Mu; Phi Eta Sigma; C. of C. Author: Atlas of Medical Mycology, 1953. Contrb. to: Amer. Jour. Clinical Pathol.; Amer. Jour. Tropical Med.; Amer. Jour. Med. Sci.; La. State Med. Jour. War Record: Lt. (jg) to Lt., M.C., U.S.N.R. Special Int.: Clinical Pathol.; Mycology.

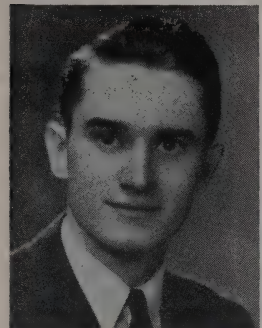
McREYNOLDS, Lindley Ward, Exec. Alumni Secy., Defiance Coll., Defiance, Ohio. ZOOLOGY, BOTANY.

McSHANE, Edward James, Prof. of Math., Univ. of Va., 209 Maury Ave., Charlottesville, Va. ANALYSIS. b. New Orleans, La., May 10, 1904. s. Augustus and Harriet Kenner (Butler) McS. Edn.: B.E., Tulane Univ., 1925; B.S., ibid., 1925; M.S., ibid., 1927; Ph.D., Univ. of Chicago, 1930. Hon. Deg.: Sc.D., Tulane Univ., 1947. m. Virginia Haun, Sept. 10, 1931. c.: Neill; Jennifer; Virginia Patricia. Exp.: Asst. Prof., Univ. of Wichita, 1928-29; Natl. Rsch. Council Fellowship, 1930-32; Hilfsassistent, Universität Göttingen, 1932-33; Instr., Princeton Univ., 1933-34; Asst. Prof., ibid., 1934-35; Prof., Univ. of Va., 1935—; on leave 1942-45, to serve as mathematician at Ballistic Rsch. Lab., Aberdeen Proving Grounds. Hon. Pos.: Vice-Pres., Amer. Math. Soc., 1950-52; Chmn., Section Math., Natl. Acad. Sci., 1952-55; Pres., Math. Assn. Amer., 1943-54. Mem.: Math. Assn. Amer.; A.A.A.S.; Amer. Math. Soc.; Va. Acad. Sci.; Natl. Acad. Sci.; Phi Beta Kappa; Sigma Xi. Author: Integration, 1944; Exterior Ballistics, with J. L. Kelley and F. V. Reno, 1953; Order Preserving Maps and Integration Processes, 1953. Special Int.: Math. Analysis; Calculus of Variations; Exterior Ballistics.

McTEER, Wilson, Assoc. Prof., Dept. of Psychol., Liberal Arts Coll., Wayne Univ., Detroit, Mich. EXPERIMENTAL PSYCHOLOGY.

McVAY, T. N., Schl. of Chem., Metallurgy and Ceramics, Univ. of Ala., University, Ala. CERAMICS.

McVEY, Charles Bernard, Sr. Engr., Eastman Kodak Co., Kodak Park, Bldg. 23, Rochester, N. Y. CHEMICAL ENGINEERING.



b. Ill., Aug. 24, 1922. s. Frank Raymond and Mildred (Lewis) McV. Edn.: B.S., Univ. of Ill., 1944. m. Alice Martha Chafa, Sept. 2, 1950. Exp.: Development Engineer, Tenn. Eastman Co., Oak Ridge, Tenn., 1944-45; General Engr., Eastman Kodak Co., Rochester, N. Y., 1945-51; Sr. Engr., *ibid.*, 1951—. Mem.: Alpha Chi Sigma; Sigma Xi; Tau Beta Pi; Amer. Inst. Chem. Engrs.; Jr. C. of C. Special Int.: Photographic Processing; Air Conditioning and Ventilation.

McVEIGH, Ilde, Technical Asst., N. Y. Botanical Garden, 236 E. 200th St., Bronx, N. Y. GROWTH ANTIBIOTICS.

McWILLIAMS, Herschel Brian, Asst. Dir., Emory W. Thurston Lab., 1207 S. Vermont Ave., Los Angeles, Calif. BIOCHEMISTRY.

MEAD, Leonard Chapin, Chf. Psychologist and Hd., Human Engrng. Section, Special Devices Div., O. R. I., P. O. Box 272, Port Washington, N. Y. PSYCHOLOGY.

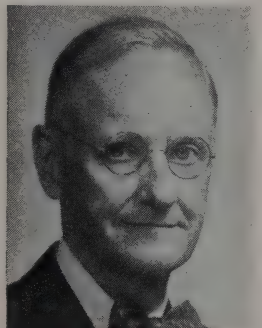
MEAD, Margaret, Assoc. Curator Ethnology, Amer. Museum Natural History, N. Y., N. Y. ANTHROPOLOGY.

MEAD, Morris Wm., Lab. Dir., Natl. Grain Yeast Corp., Belleville, N. J. BIOCHEMISTRY.

MEAD, Sallie P., Mem. Tech. Staff, Bell Telephone Labs., Inc., 463 West St., N. Y., N. Y. ENGINEERING MATHEMATICS.

MEAD, Warren Judson, Mass. Inst. of Tech., Cambridge, Mass.

MEADE, George P., Mgr., Colonial Sugars Co., Gramercy, La. CHEMICAL ENGINEERING, SUGAR REFINING.



b. Cumberland, Md., Dec. 26, 1883. s. Philip Nelson and Sarah (Rannels) M. Edn.: B.S., N. Y., Univ., 1905; Ch.E., *ibid.*, 1921. m. Eleanore Hussey, 1912. Exp.: Asst. Chemist, Natl. Sugar Refinery, Yonkers, N. Y., summers, 1901-05; Full Time, *ibid.*, 1905-07; Asst. Chemist, Fajardo Sugar Co., Puerto Rico, 1908; Chemist and Asst. Supt., Colonial Sugars Co., Gramercy, La., 1909-13; Supt. and Mgr., Cuban Sugar Refining Co., Cardenas,

Cuba and Dir., Central Control Lab., Cuban-Amer. Sugar Co., 1913-23; Gen. Supt., Colonial Sugars Co., Gramercy, La., 1923-28; Mgr., *ibid.*, 1928—; Mem. of Bd. of Dir., *ibid.*, 1950—. Hon. Pos.: Pres., St. James Parish Schl. Bd., 1932—; Pres., Bone Char Rsch. Project, 1950; Delegate, Internatl. Commn. for Uniform Methods of Sugar Analysis, London, 1936; *ibid.*, Brussels, 1949; Chmn., Istrouma Coun., Boy Scouts of Amer., 1941-47; Vice-Pres., Amer. Soc. of Ichs. and Herps., 1951—. Mem.: Amer. Chem. Soc.; Amer. Inst. of Chem. Engrng.; Internatl. Soc. Sugar Cane Tech.; Cuban Sugar Cane Tech.; La. Engrng. Soc.; Phi Beta Kappa; Alpha Chi Sigma; Gramercy-Lutcher Lions Club. Fellow: Inst. of Chemists; A.A.A.S.; N. Y. Acad. of Sci. Author: Cane Sugar Handbook, with the late G. L. Spencer, 1945; Phosphoric Acid and Phosphates, 1952. Contrb. to: About 30 Articles on Sugar Tech., Mfg., Analysis and Refining in Indus. and Engrng. Chem.; Internatl.

Sugar Jour.; Sugar; Sugar Jour.; Jour. Amer. Soc. of Ichs. and Herps.; Herpetologica. War Record: Selective Service Bd., St. James Parish, 1941-45. Special Int.: Sugar Tech.; Herpetol.

MEAKER, Charlotte Laramy, 713 N. New St., Bethlehem, Pa. NUCLEAR PHYSICS.

MEANS, James Howard, Jackson Prof. of Clinical Med., Harvard Med. Schl., 56 Mt. Vernon St., Boston, Mass. INTERNAL MEDICINE.

MEARES, Jefferson Sullivan, Prof. of Physics, N. C. Coll., Raleigh, N. C. PHYSICS.

MEARS, Brainerd, retired, 71 South St., Williamstown, Mass. CHEMISTRY.

MEDER, Albert Eugene, Jr., Dean Admin., Secy. and Prof. of Math., Rutgers Univ., New Brunswick, N. J. MATHEMATICAL LOGIC.

MEDES, Grace, Dir., Dept. of Metabolic Chem., Lankenau Hosp., Rsch. Inst., Corinthian and Girard St., Philadelphia, Pa. BIOCHEMISTRY.

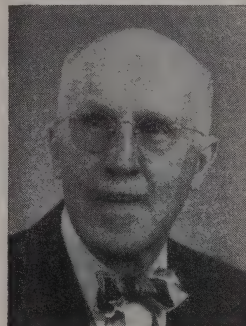
MEDLAR, Edgar M., Assoc. Prof. of Pathol., Coll. of Physicians and Surgeons, Columbia Univ., N. Y., N. Y.

MEDSGER, Oliver Perry, Prof. Emer. Nature Edn., Pa. State Coll., State Coll., Pa.; 509 Greeley St., Orlando, Fla. BOTANY.

MEDUNA, Ladislav, 912 S. Wood St., Chicago, Ill. MEDICINE, PSYCHIATRY.

MEECE, Leonard Ephraim, Prof. Ednl. Admin., Univ. of Ky., Lexington, Ky. EDUCATIONAL ADMINISTRATION.

MEEHAN, S. Mendelson, Dir., Ellis Arboretum and Landscape Architect, W. Chester, Pa. HORTICULTURAL RESEARCH.



b. Germantown, Philadelphia, Pa., Sept. 13, 1874. s. Thomas and Catharine (Colflesh) M. Edn.: Personal Instruction of Father, a Noted Scientist. m. Amelia Kornbau, July 10, 1930. Exp.: Owner and Manager large Production Nursery; Asst. Editor Garden Publication, Meehan's Monthly; Pres. Germantown Horticultural Soc.; Vice-Pres. Bd. Ambler Schl. of Hort. for Women; Editor Nursery Dept. Florists Exchange and Hort. Trade World, N. Y.; Organizer and Director Ellis Arboretum. Hon. Pos.: Pa. Nurserymen's Assn. Mem.: Acad. of Natural Sci.; Amer. Assn. of Botanical Gardens and Arboreta; Amer. Horticultural Council. Contrb. to: Popular Gardening, Horticulture; Florists Exchange. Special Int.: Horticulture.

MEEK, Walter J., Emeritus Prof. of Physiol. and Dean of the Med. Schl., Univ. of Wis., 2015 Chadbourn Ave., Madison 5, Wis. PHYSIOLOGY. b. Dillon, Kans., Aug. 15, 1878. s. William E. A. and Mary Hester (White) M. Edn.: A.B., Univ. of Kans., 1902; Ph.D., Univ. of Chicago, 1909. Hon. Deg.: D.Sc., Univ. of Wis., 1949; Citation, Univ. of Kans., 1950. m. Crescence Eberle, Dec. 26, 1906. c.: Joseph Walter; Mary Crescence; John Sawyers. Exp.: Prof. of Biol., Penn. Coll., 1903-08; Instr., Univ. of Wis., 1908-10; Asst. Prof., *ibid.*, 1910-13; Assoc., Prof., *ibid.*, 1913-18; Prof., *ibid.*, 1918—; Asst. Dean of Med. Schl., *ibid.*, 1918-38; Assoc. Dean, *ibid.*, 1938-49; Emer. Prof. and Dean, *ibid.*, 1949—; Lectr., Univ. of Tex., 1950—. Hon. Pos.: Pres., Amer. Physical Soc., 1930-33; Dir., Madison Gen. Hosp. Mem.: A.A.A.S.; Physiol. Soc.; Natl. Acad. Sci.; Soc. Experimental Biology and Medicine; Amer. Med. Assn. (Honorary); Phi Beta Kappa; Sigma Xi; Gamma Alpha; Phi Sigma; Phi Beta Pi; Phi Kappa Phi; Alpha Tau Omega. Contrb. to: Amer. Jour. Physiol.; Physiol. Rev.; Heart;

Arch. Internal Med.; Proc. Soc. Biol. and Med.; etc. War Record: Chem. War Service, Maj., 1918-19. Special Int.: Circulation; Heart; Anesthesia; Digestive System; Med. History.

MEENES, Max, Prof. of Psychol., Howard Univ., Washington, D. C. **EXPERIMENTAL PSYCHOLOGY.**

MEES, Charles Edward Kenneth, Eastman Kodak Co., Kodak Park Works, Rochester, N. Y.

MEGGERS, William Frederick, Chf. Spectroscopy Section, Natl. Bureau of Standards, 2904 Brandywine St., N. W., Washington, D. C. **SPECTROSCOPY.**

MEGLITSCH, Paul A., Assoc. Prof. of Biol., Drake Univ., Des Moines, Iowa. **PROTOZOOLOGY.** b. Harvel, Ill., Mar. 8, 1934. s. William J. and Christine (Hendricks) M. Edn.: B.S., Univ. of Ill., 1935; M.S., *ibid.*, 1936; Ph.D., *ibid.*, 1938. m. Alison Mitchell, Dec. 31, 1938. c.: Gail; Neil A.; Stephen D. Exp.: Tchr., Chicago City Coll., Chicago, Ill., 1939-49; Air Corps, Army, U. S., 1942-45; Assoc. Prof. of Biol., Drake Univ., Des Moines, Iowa, 1949—. Mem.: A.A.A.S.; Sigma Xi; Amer. Soc. Zool.; Amer. Soc. Protozool.; Soc. System. Zool.; Amer. Micro. Soc.; N. Y. Acad. Sci.; Iowa Acad. Sci. Contrb. to: Jour. of Parasitology; Trans. Amer. Micro. Soc.; Arch. F. Protistenk.; Ill. Bio. Monographs. Spec. Int.: Taxonomy of Protozoal Especially Sporozoa, Myxodporidia. Ciliate Physiology.

MEHL, R. F., Carnegie Inst. of Tech., Pittsburgh, Pa. **METALLURGY.**

MEIER, Norman Charles, Assoc. Prof. of Psychol. and Acting Dir., Bureau Auditory Rsch., Univ. of Iowa, Iowa City, Iowa. **SOCIAL PSYCHOLOGY.**

MEIER, William Herman Dietrich, Author, Biol. Text Books, Ginn and Co., Boston, Mass.; Upper Ferry Rd., Rt. 1, Trenton, N. J. **BIOLOGY.**

MEIGS, Joe V. **STERILITY.**

MEIJER, Robert Randal, Technical Advisor, Bendix Aviation Corp., Eatontown, N. J. **PHYSICS.** b. Staunton, Va., Dec. 1, 1916. s. Jacob H. and Elizabeth T. (Unger) M. Edn.: A.B., Oberlin Coll., 1939; Ph.D., Cornell University, 1948. m. Clarice (Burke) M., 1942. c.: Robert Randal II.; Virginia Lynn; Nancy Anne. Exp.: Consultant, Bur. of Mines, Wash., D. C., 1949; Assoc. Prof. of Physics, George Wash. Univ., Wash., D. C., 1947-53; Operations Analyst, Operations Rsch. Office, Johns Hopkins Univ., Chevy Chase, Md., 1952—. Mem.: A.P.S.; A.A.P.T.; Gamma Alpha. Author: Introduction to Statistical Physics, 1950. Contrb. to: Amer. Jour. of Physics and Physical Review. Special Int.: Atomic, Electron and Nuclear Physics.

MEIKLE, George Stanley, Dir. of Rsch. Relations with Indus., Rsch. Dir., Purdue Rsch. Foundation, Purdue Univ. Lafayette, Ind. **GENERAL RESEARCH ADMINISTRATION.**

MEINECKE, Emilio P. M., retired, 3157 Jackson St., San Francisco, Calif. **PLANT PATHOLOGY.**

MEINZER, Oscar Edward, Chf. Ground Water Div., U. S. Geol. Survey, 2933 S. Dakota Ave., N. E., Washington, D. C. **GROUND WATER GEOLOGY.**

MEISEL, Emmanuel George, Prof. of Dental Pathol., Radiography, and Diagnosis, Schl. of Dentistry, Univ. of Pittsburgh, Pittsburgh, Pa. **DENTISTRY.**

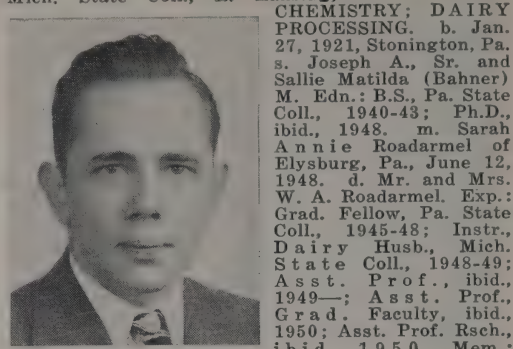
MEISEL, Max, Vice-Pres., Hall-Mark Elec. Sales Co., Inc., 141 Northeast 19th Terrace, Miami, Fla. **BIBLIOGRAPHY.**

MEISSNER, Karl W., 176 Stadium, Lafayette, Ind. **SPECTROSCOPY.**

MEISSNER, William A., 195 Pilgrim Rd., Boston 15, Mass. **PATHOLOGY AND BACTERIOLOGY.**

MEISTER, Morris, Prin., Bronx H. S. Sci., 315 Riverside Dr., N. Y., N. Y. **SCIENCE EDUCATION.**

MEISER, Joseph A., Jr., Asst. Prof. of Dairy Husb., Mich. State Coll., E. Lansing, Mich. **DAIRY**



CHEMISTRY; DAIRY PROCESSING. b. Jan. 27, 1921, Stonington, Pa. s. Joseph A., Sr. and Sallie Matilda (Bahner) M. Edn.: B.S., Pa. State Coll., 1940-43; Ph.D., *ibid.*, 1948. m. Sarah Annie Roadarmel of Elysburg, Pa., June 12, 1948. d. Mr. and Mrs. W. A. Roadarmel. Exp.: Grad. Fellow, Pa. State Coll., 1945-48; Instr., Dairy Husb., Mich. State Coll., 1948-49; Asst. Prof., *ibid.*, 1949—; Asst. Prof., Grad. Faculty, *ibid.*, 1950; Asst. Prof. Rsch., *ibid.*, 1950. Mem.: Gamma Sigma Delta; Amer. Dairy Sci. Assn.; Internatl. Assn. of Milk and Food Sanitarians; Mich. Assn. Sanitarians; Amer. Legion. Author: Chem. and Phys. Control of Dairy Products (with others), 1950. Contrb. to: Jour. Dairy Science. Ph.D. Dissertation: A Study of Factors Affecting Shrinkage in Ice Cream. War Record: U. S. Inf., 84th Div., 334th Inf., 1943-45; Overseas, European Theatre, 1944-45. Travel: Europe; N. Amer. Hobbies: Model Railroad; Photography. Listed in: A.M.S. Special Int.: Ice Cream Processing; Packaging Dairy Products.

MEITER, Edward George, Dir., Industrial Hygiene Div., Employers Mutual



Liability Insurance Co. of Wis., 710 N. Plankinton Ave., Milwaukee, Wis. **INDUSTRIAL HYGIENE AND SAFETY ENGINEERING.** b. Salem, Ohio, June 11, 1908. s. George and Katherine (Krauss) M. Edn.: B.S., Mt. Union Coll., 1920; M.Sc., Ohio State Univ., 1921; Ph.D., *ibid.*, 1923. m. Hazel Frances Meiter, June 18, 1923. c.: George E. Exp.: Grad. Asst. in Chem., Ohio State Univ., 1920-23; Asst. Physical Chemist, U. S. Bureau of Mines, 1923-28; Assoc. Chemist, 1928-32; Employers Mutual Liability Insurance Co. of Wis., 1932—. Hon. Pos.: Chmn., Indus. Hygiene Sub-Com., Natl. Assn. of Mutual Casualty Companies; Chmn., Engrng. Com., Chem. Section, Natl. Safety Council. Mem.: Amer. Chem. Soc.; Fellow, Amer. Inst. Chemists; Fellow, A.A.A.S.; Fellow, Amer. Public Health Assn.; Amer. Indus. Hygiene Assn.; Amer. Soc. Safety Engrs.; Veterans of Safety; N. Y. Acad. Sci.; Phi Kappa Tau; Sigma Xi. Co-author: Industrial Safety in Germany. Contrb. to: Jour. Amer. Chem. Soc.; Jour. Indus. and Engrng. Chem.; Engrng. News Record; etc. War Record: S.A.T.C., Mt. Union Coll., World War I; Scientific Consultant for U. S. Govt. in European Theatre. Consultant to Dept. of Commerce on Indus. Intelligence Program, World War II. Gen. Int.: Mem., Rsch. Com., President's Conf. on Indus. Safety. Special Int.: Rsch. in Indus. Gases, Gas Masks, Dust Respirators, Atmospheric Pollutions, Dust Problem in Indus., Noise in Indus., Health Hazards in Indus., Safety Engrng.

MEKEEL, H. Schudder, Assoc. Prof. of Anthropol. and Sociology, Sterling Hall, Univ. of Wis., Madison, Wis. **ANTHROPOLOGY.**

MELANDER, Axel Leonard, Prof. Emer. Biol., N. Y. City Coll., N. Y., N. Y.; Rsch. Assoc., Univ. of Calif., 4670 Rubidoux Lane, Riverside, Calif. **ENTOMOLOGY.**

MELCHER, Arthur Clarke, retired, 58 Bowen St., Newton Center, Mass. **CHEMISTRY.**

MELCHER, George, Supt. Emer., Kans. City Public Schl., 3331 Campbell St., Kansas City, Mo. **SCHOOL ADMINISTRATION**.

MELCHERS, Leo E., Prof. and Hd., Depts. of Botany and Plant Pathol., Kansas State Coll., Manhattan, Kans. **BOTANY**.

MELDRUM, William Buell, John Farnum Prof. of Chem., Haverford Coll., Haverford, Pa. **ANALYTICAL, PHYSICAL CHEMISTRY**.

MELENEY, Frank Lamont, Assoc. Prof. Clinical Survey, Coll. of Physicians and Surgeons, Columbia Univ., N. Y., N. Y. **SURGERY**.

MELHUS, Irving E., Dir., Iowa State Coll., 407 Pearson Ave., Ames, Iowa. **PLANT PATHOLOGY, BOTANY**.

MELLON, Melvin Guy, Prof. of Analytical Chem., Purdue Univ., Lafayette, Ind. **CHEMISTRY**. b. Oct. 25, 1893, Conneaut Lake, Pa. s. Harry J. and Myrta Ella (Miller) M. Edn.: B.S., Allegheny Coll., 1915; M.S., Ohio State Univ., 1917; Ph.D., *ibid.*, 1919; Hon. Sc.D., Allegheny Coll., 1940. m. Catharine Collart of Cleveland, Ohio, Aug. 30, 1919. d. Melius and Ora Collart, c.: Frances Catharine (Mrs. P. A. Phillips). Exp.: Tch., Pa. Pub. Schls., 1911-12; Grad. Asst., Ohio State Univ., 1915-18; Instr. *ibid.*, 1918-19; Asst. Prof., Purdue Univ., 1919-25; Assoc. Prof., 1925-31; Prof., 1931—; Visiting Prof., Ohio State Univ., Summer, 1931. Mem.: Pres., Ind. Acad. of Sci., 1942; A.C.S.; A.A.A.S., Fellow; Amer. Soc. for Testing Materials; Optical Soc. of Amer.; Soc. Applied Spectroscopy; Inter-Soc. Color Coun.; Alpha Chi Rho; Alpha Chi Sigma; Phi Lambda Upsilon; Phi Sigma; Mason; Torch; Phi Beta Kappa; Sigma Xi. Author: Chem. Publications, 1928; Methods of Quantitative Chemical Analysis, 1937; Quantitative Analysis Record Book, 1944; Colorimetry for Chemists, 1945; Analytical Absorption Spectroscopy, 1950. Contrb. to: Chem. Jours. Ph.D. Dissertation: Further Studies on a Lead Standard Cell. Hobbies: Forestry; Music. Listed in: A.M.S.; Who's Who in Amer.; Biog. Literarisches Handwörterbuch.; Who Knows— and What; World Biog.; Who's Who in Chem.; Int. Blue Book. Special Int.: Colorimetry; Spectrophotometry; Chemical Literature.

MELLON, Ralph Robertson, Dir., Inst. of Pathol., Western Pa. Hosp., 4800 Friendship Ave., Pittsburgh, Pa. **BACTERIOLOGY**.

MELLOW, Ernest Wesley, Chemical Engr., Rsch. and Development Dept., Phillips Petroleum Co., Bartlesville, Okla. **CHEMICAL ENGINEERING**. b. St. Louis, Mo., Feb. 20, 1918. s. Samuel and Bertha (Robinson) M. Edn.: B.S., Univ. of Mo., 1940; M.S., Univ. of Mo., 1946; Ph.D., Univ. of Ill., 1950. m. Florence Hohlt, Feb. 1, 1948. c.: Wesley Scott; Carolyn Sue. Exp.: Grad. Asst., Univ. of Mo., Columbia, Mo., 1940-41; Chemical Engr., Du Pont Co., Cleveland, Ohio, 1941-42; U. S. Air Force, 1942-46. Graduate Asst., Univ. of Ill., Urbana, Ill., 1946-49; Asst. Prof. of Chem. Engr., Univ. of Mo., Columbia, Mo., 1949-52; Project Supvr., Callery Chem. Co., Callery, Pa., 1952-53; Chemical Engr., Rsch. and Development Dept., Phillips Petroleum Co., Bartlesville, Okla. Mem.: Amer. Inst. of Chem., Engrs.; Amer. Chem. Soc.; Amer. Soc. for Engr. Edn.; Tau Beta Pi; Sigma Xi. Contrb. to: Jour. of Chemical Phys. Special Int.: Diffusional Processes, Thermodynamics.

MELNICK, Joseph L., Dept. of Preventive Med., Yale Med. Schl., New Haven, Conn., **VIROLOGY**.

MELNICK, Perry J., Assoc. Prof. of Pathol., Univ. of Southern Calif. Med. Schl., 531 W. College St., Los Angeles 12, Calif. **PATHOLOGY**. b. Poland, May 6, 1901. s. Herman M. and Tillie Helen M. Edn.: B.S., Univ. of Ill., 1927; M.S., *ibid.*, 1929; M.D., Univ. of Ill. Coll. of Med., 1930; Ph.D., Univ. of Ill., 1936. m. Esther Altabe, Aug. 15, 1926. c.: Philip Albert; David John; Daniel Charles. Exp.: Interne, Cook Co. Hosp., 1929-31; Resident Surgical Pathologist, *ibid.*, 1931-33; Chf. Resident Pathologist, *ibid.*, 1933-35; Natl. Cancer Inst. Fellowship, 1938-39; Pathologist, Cancer Control Div., Ill. State

Health Dept., 1940-42; Assoc. Prof. of Pathol., Univ. of Southern Calif. Med. Schl., 1946—; Attending Pathologist, Los Angeles Co. Gen. Hosp., 1948—; Consulting Pathologist, Birmingham VA Hosp., 1947-50; Pathologist, French Hosp., 1950—. Mem.: Fellow, Amer. Coll. of Physicians; Amer. Soc. Clinical Pathologists; A.M.A.; Amer. Assn. Pathologists and Bacteriologists; Coll. Amer. Pathologists; Phi Delta Spsslon; Calif. Acad. Sci.; A. F. and A. M. Contrb. to: Archives of Pathol.; Amer. Jour. Cancer; Amer. Jour. Obstetrics and Gynecol.; etc. War Record: Major, Lt. Col., M. C., U. S. Army, 1942-46. Gen. Int.: Third Award at Internatl. Congress of Radiology in 1937 for Researches in Radiation Pathology of Tumors; Class I Certificate of Merit from Ill. State Med. Soc. in 1937 and in 1939 for similar Researches; Arquin Prize, Cook Co. Hosp., 1931. Special Int.: Pathol. and Radiation Pathol. of Tumors.

MELOCHE, Villiers Willson, Prof. of Analytical Chem., Univ. of Wis., Madison, Wis. **INORGANIC ANALYTICAL CHEMISTRY**.

MELTON, Frank Armon, Prof. of Geol., Univ. of Okla., Norman, Okla. **GEOLOGY, GEOMORPHOLOGY**.

MELVILLE, Carey Eyster, Prof. of Math., Clark Univ., 950 Main St., Worcester, Mass. **MATHEMATICS**.

MENDE, William C., Dir. Pharmaceutical Dev., Ortho Rsch. Foundation, Raritan, N. J. **PHARMACY**.

MENDENHALL, Harrison Shepler, Prof. of Math. and Astron., Okla. A. and M. Coll., Stillwater, Okla. **ASTRONOMY**.

MENDENHALL, Walter Curran, 9 E. Lenox St., Chevy Chase 15, Md.

MENDENHALL, Walter L., Prof. of Pharmacol. and Physiol., Boston Univ., Boylston St., Boston, Mass. **PHYSIOLOGY**.

MENDLOWITZ, Milton, Assoc. Attending Physician, Mt. Sinai Hosp., 136 E. 64th St., N. Y. 21, N. Y. **INTERNAL MEDICINE**. b. N. Y., Dec. 30, 1906. s. Benjamin and Emma (Schramm) M. Edn.: A.B., C. C. N. Y., 1927; M.D., Univ. of Mich., 1932. m. Muriel Chertoff, June 15, 1940. c.: Judith Ann; Susan Amelia; Benjamin Noah. Exp.: Interne and Resident, Mt. Sinai Hosp., N. Y. C., 1932-36; Fellow, *ibid.*, 1936; Fellow, Michael Reese Hosp., Chicago, Ill., 1937; Fellow, Univ. Coll. Hosp., London, 1938; Internal Med., 1939-52; Adj. Physician, Mount Sinai

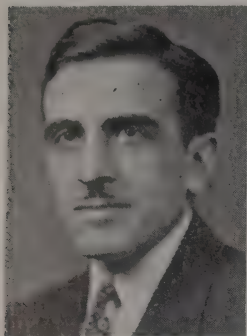


Hosp., N. Y. C., 1946-52; Assoc. Att. Physician, *ibid.*, 1953—. Mem.: Amer. Med. Assn.; Amer. Physiol. Soc.; Soc. of Clin. Investigation; N. Y. Acad. of Med.; N. Y. Acad. of Sci.; A.A.A.S.; Amer. Coll. of Physicians; Amer. Fed. for Clin. Rsch.; Amer. Heart Assn.; Phi Kappa Phi; Alpha Omega Alpha. Contrb. to: Proc. of Soc. for Exptl. Biol. and Med.; Amer. Heart Jour.; Amer. Jour. of Physiol.; Jour. of Thoracic Surgery; Clin. Sci.; Arch. of Internal Med., etc. Special Int.: Physiol. of Circulation; Exptl. Coronary Occlusion; Expt. Pulmonary Embolism; Exptl. Heart Failure; Renal Transplantation; The Digital Circulation; Hypertension.

MENNINGER, Karl A., 3617 W. 6th St., Topeka, Kans., **MEDICINE—PSYCHIATRY**.

MENNINGER, William C., 3617 W. 6th St., Topeka, Kans., **MEDICINE—PSYCHIATRY**.

MENOTTI, Amel R., Vice-Pres., Dir. of Rsch., Bristol Labs. Inc., Syracuse 1, N. Y. **CHEMISTRY.**



b. Italy, Oct. 7, 1913. s. David and Mary (Menotti) M. Edn.: B.S., Antioch Coll., 1937; Ph.D., Ohio State Univ., 1940. m. Mary Pia, Sept. 4, 1939. c.: David; Marilyn; Robert; Nancy. Exp.: Eli Lilly and Co., Indianapolis, Ind., 1933-34; Staff, C. F. Kettering Fdn., Antioch Coll., Yellow Springs, Ohio, 1934-37; Staff, Amer. Med. Assn., Chicago, Ill., 1940-43; Dir. of Rsch., Bristol Labs. Inc., Syracuse 10, N. Y., 1943-46; Vice-Pres., ibid., 1946—. Mem.: Amer. Chem. Soc.; Amer.

Pharm. Assn.; N. Y. Acad. of Sci.; A.A.A.S.; Tech. Club of Syracuse; Mem. Bd. of Trustees, Antioch Coll., Yellow Springs, Ohio; Sigma Psi. Contrb. to: Jour. Amer. Chem. Soc.; Indus. and Engrng. Chem.; Abstracts in Med. Field. Special Int.: Direct Responsibility for Overall Rsch. Policies for Bristol Labs. Inc.

MENZEL, Donald Howard, Harvard Coll. Observatory, Cambridge 38, Mass.

MENZEL, R. Winston, Instr. Biol., Tex. A. and M. College, College Station, Tex. **INVERTEBRATE ZOOLOGY.** b. James City County, Va., January 29, 1920. s. G. E. and Susan (Gary) M. Edn.: B.S., Coll. of Wm. and Mary, 1940; M.A., ibid., 1943; Ph.D., A. and M. Coll. of Tex., 1954. m. Margaret Young, Apr., 1949. c.: R. W., Jr. Exp.: Rsch. Asst., Va. Fisheries Lab., 1940-42; Asst. Biologist, Va. Fisheries Lab., 1942-46; Biologist, Tex. A. and M. Rsch. Foundation, 1949-53; Instr. Biol., ibid., 1953. Mem.: A.A.A.S.; Amer. Soc. Limnology and Oceanography; Amer. Soc. Ichthyology and Herpetology; Amer. Fisheries Soc.; Tex. Acad. Science. Contrb. to: Trans. Amer. Fisheries Soc.; Sci.; Copeia. Special Int.: Fishery Biol.; Oyster Rsch. with Special Attention to Growth, Life History, Mortality Causes; Fin Fish Studies, Commercial Fishes, Chesapeake Bay and Species Toad Fishes in Atlantic and Gulf Coasts; Fouloung Organisms, Gulf of Mexico.

MENZIES, James David, Pathologist, Div. Soils, Fertilization, and Irrigation, U. S. D. A., Box 82, Prosser, Wash. **PLANT PATHOLOGY.**

MERA, Harry Percival, retired, P. O. Box 1426, Santa Fe, N. Mex. **ANTHROPOLOGY.**

MERCER, Frank Louis, Assoc. Prof. of Biol. and Pharmacognosy, St. Louis Coll. of Pharmacy and Allied Sciences, 3709



Viking, Lemay 23, Mo. **BOTANY-PHYSIOLOGY AND PHARMACOGNOSY.** b. Springfield, Ill., Dec. 20, 1910. s. Lon C. and Dell (Lambert) M. Edn.: Ph.G., St. Louis Coll. of Pharmacy and Allied Sciences, 1934; B.S., ibid., 1935; M.S., Univ. of Mich., 1936; Ph.D., Wash. Univ., 1950. m. Virginia Tanner, July 19, 1937. c.: Donald Louis; Frank Daniel. Exp.: Pharmaceutical Chemist, Campho-Phe-nique Co., 1936-44; Consultant, Theo. Bender

Co., 1944-46; Assoc. Prof., St. Louis Coll. of Pharmacy and Allied Sciences, 1944—. Mem.: Fellow, A.A.A.S.; Amer. Pharmaceutical Assn.; Amer. Soc. of Plant Physiologists; Sigma Xi; Phi Lambda Upsilon; Kappa Psi. Contrb. to: Arch. Biochem. and Biophys.; Nature; Sci. Counselor. Special Int.: Tobacco Mosaic Virus Biosynthesis Studies.

MEREDITH, Florence L., Prof. of Hygiene and Public Health, Tufts Coll., Medford, Mass **MEDICINE.**

MEREDITH, Howard V (oas), Prof. and Consultant, Iowa Child Welfare Rsch. Sta. and Coll. of Dentistry, Univ. of Ia., Iowa City, Iowa. **PHYSICAL GROWTH OF CHILD.**



b. Nov. 5, 1903. b. Birmingham, Eng. s. Howard and Ada (Barker) M. Edn.: A.A., Graceland Coll., 1929; B.A., Univ. of Ia., 1931; M.A., ibid., 1932; Ph.D., ibid., 1935. m. Matilda Johnson, of Des Moines, Ia., 1926. d. Charles and Emma Johnson. c.: Leslie Hugh; Mavis Rogene. Exp.: Rsch. Asst., Ia. Child Welfare Rsch. Sta., 1931-35; Rsch. Assoc., ibid., 1935-39; Asst. Prof., ibid., 1939-42; Assoc. Prof.,

ibid., 1942-48; Prof., ibid., 1948-49; Prof. and Chmn., Admin. Comm., ibid., 1949; Prof., Schl. of Health and Phys. Edn., Univ. of Ore., 1949-52; Prof. and Consultant, Iowa Child Welfare Rsch. Sta. and Coll., Univ. of Ia., Iowa City, Iowa, 1952—. Exchange Appointment, Harvard, Summer, 1935; Visiting Lectr., Univ. of Sou. Calif., Summer, 1948; Visiting Prof., Univ. of Sou. Calif., 1951. Fellow: Soc. for Rsch. in Child Development. Mem.: Amer. Assn. of Physical Anthropologists; Rsch. Coun. of Amer. Assn. for Health, Phys. Edn., and Rec.; Rsch. Sect. of Northwest Dist. Assn. for Health, Phys. Edn., and Rec.; A.A.U.P.; Sigma Xi; Phi Epsilon Kappa; Lambda Delta Sigma; Rsch. Club. Author: A Brief Hist. of Character Edn., 1932; The Rhythm of Physical Growth, 1935; The Physical Growth of White Children, A Rev. of Amer. Rsch. Prior to 1900, 1936; The Physical Growth of the Young Child, 1939; Physical Growth from Birth to Two Yrs., A Rev. and Synthesis of No. Amer. Rsch. on Stature, 1943. Contrb. to: Child Development; Human Biol.; Amer. Jour. of Phys. Anthropology; Growth; Jour. Pediatrics; Amer. Jour. of Diseases of Children; Rev. of Ednl. Rsch.; Jour. of Dental Rsch.; Amer. Jour. of Orthodontics; Amer. Jour. of Pub. Health; Jour. of Dental Edn.; Psychol. Bull.; Physical Educator; Hygeia; Schl. and Soc.; Parents Mag.; Yearbook of Phys. Anthropology; Collier's Encyc. Ph.D. Dissertation: The Rhythm of Physical Growth: A Study of Eighteen Anthropometric Measurements of Ia. City White Males Ranging in Age between Birth and Eighteen Yrs. Travel: Europe. Listed in: A.M.S.; Who Knows— and What; Who's Who on Pacific Coast; Who's Who in Amer.

MEREDITH, William Ogilvia, Chemist, Grain Rsch. Lab., Bd. Grain Commn., Grain Exchange, Winnipeg, Man., Can. **CEREAL CHEMISTRY.**

MERIAM, James Lathrop, Assoc. Prof. of Engineering Mechanics, Univ. of Calif., Berkeley 4, Calif. **APPLIED MECHANICS.** b. Columbia, Mo., Mar. 25, 1917. s. Junius Lathrop and Mary (Bone) M. Edn.: B.E., Yale Univ., 1939; M.Eng., ibid., 1941; Ph.D., ibid., 1942. m. Julia Ellen Powers, Dec. 25, 1940. c.: Mary Ellen; Melissa Lee. Exp.: Test Engr., Pratt and Whitney Aircraft, E. Hartford, Conn., 1940; Asst. in Instruction, Yale Univ., New Haven, Conn., 1940-42; Engr. Gen. Elec. Comp., W. Lynn, Mass., 1942; Instr. of Mech. Engrng., Univ. of Calif., Berkeley, Calif., 1942-44; Asst. Prof. of Mech. Engrng., Univ. of Calif., 1945-49; Assoc. Prof. of Engrng., Design, ibid., 1949—; Asst. Dean, Coll. of Engrng., ibid., 1952—. Mem.: Soc. for Experimental Stress Analysis; Amer. Soc. for Engineering Edn.; Sigma Xi; Tau Beta Pi; Pi Tau Sigma. Author: Mechanics, Part I Statics, 1952; Mechanics, Part II, Dynamics, 1952. Contrb. to: Jour. of Applied Mechanics; Welding Jour.; Proceedings of the Soc. for Exp. Stress Analysis; Jour. of The Franklin Institute; Mathematical Tables and Other Aids to Computation. War Record: W. W. II. Gen. Int.: Recipient of Award for the Ad-

vancement of Basic and Applied Sci., from the Yale Engrng. Assn. Spec. Int.: Engineering Mechanics, Theory of Elasticity, Experimental Stress Analysis.

MERICA, Paul Dyer, Pres. and Dir., Internat. Nickel Co., 67 Wall St., N. Y. 5, N. Y. **METALLURGY**. b. Warsaw, Ind., Mar. 17, 1889. s. Charles Oliver and Alice (White) M. Edn.: A.B., Univ. of Wis., 1908; Ph.D., Univ. of Berlin, 1914. Hon. Deg.: D.Sc., DePauw Univ., 1934; D.Sc., Lehigh Univ., 1938; D.Sc., Stevens Inst. of Tech., 1942. m. Florence Young, Sept. 22, 1917. Exp.: Rsch. Physicist, U. S. Bureau of Standards, 1914-19; Dir. of Rsch., Internat. Nickel Co., 1919-29; Tech. Asst. to Pres., 1929-31; Dir., ibid., 1934; Vice-Pres., ibid., 1936; Exec. Vice-Pres., ibid., 1949; Pres., ibid., 1952—. Mem.: Natl. Acad. Sci.; Amer. Iron and Steel Inst.; Amer. Soc. for Testing Materials; Amer. Phys. Soc.; Amer. Inst. Mining and Metall. Engrs.; Inst. of Metals, Great Britain; Iron and Steel Inst., Great Britain; Can. Inst. of Mining and Met.; Amer. Soc. for Metals; Mining and Met. Soc. of Amer. Special Int.: Originator of "precipitation theory" of Hardening of Alloys, developed in connection with rsch. on Aluminum Alloys.

MERIGOLD, Benjamin Shores, Prof. of Chem., Clark Univ., Worcester, Mass. **CHEMISTRY**.

MERILH, Edmond L(ouis), Prof. of Bacteriol., Loyola Univ., 2219 Pine St., New Orleans 18, La.



BACTERIOLOGY AND HISTOLOGY. b. Mar. 6, 1898, New Orleans, La. s. Jean Edmond and Adele (Desmaries) M. Edn.: B.S., Spring Hill Coll., 1917; Tulane Univ., Med. Schl., 1917-19; M.S., Loyola Univ., New Orleans, La., 1923. m. Lillian Marie Stanton of New Orleans, La., Dec. 17, 1931. d. Mr. and Mrs. Gideon Townsend Stanton. c.: Edmond L., Jr.; Lillian Marie; Jeanne-Adele; Marietta Paula. Exp.: Instr. in Biol., Loyola Univ., 1919-22; Assoc. Prof. of

Biol., Bacteriol. and Histol., 1922-43; Prof. of Biol., Bacteriol. and Histol., 1943—; Certificate of Bacteriol. and Pathol., Loyola Univ., 1922; Lifetime Tchrs. Certificate, La., 1938; Citation of Merit, Loyola Univ., 1944. Hon. Pos.: Bd. of Eye, Ear, Nose, and Throat Hosp.; Exec. Coun. of New Orleans Acad. of Sci., Sec.; Vice-Pres., New Orleans Botanical Soc. Mem.: A.A.A.S.; Cath. Round Table; A.Ph.A.; La. Acad. of Sci.; B.E.U.; Natl. Med. Tech. Soc.; Moderator of Agramonte Pre. Med. Soc.; N.C.E.A.; Amer. Micros. Soc.; Soc. of Amer. Bacteriologists; South Central Branch; Natl. Geog. Soc.; Theta Beta; B.B.B.; Phi Rho Sigma; Blue Key Natl. Gamard Pre-Dental Soc.; Hon. Frat.; 4th Degree K. of C.; Order of Alhambra; S.Y.C.; A.A.A.; L'Union Francaise. Author: Bacteriol. Guide for Dental Students, 1941; Revised: 1943, 1945, 1949. Contrb. to: Turtux News; Jour. of Parasitol. War Record: W. W. I. S.A.T.C., Camp Martin, New Orleans, La.; Red Cross Instr., W. W. II. Travel: Europe; N. Amer.; Cuba. Gen. Int.: Devised a Modified Acid-Fast Staining Method; Method for Cultivating and Mounting Molds. Hobby: Photography, Stills and Movies. Listed in: A.M.S.; Who's Who in Amer.; Who Knows—And What: Who's Who in the South and Southwest; Internat. Blue Book of Who's Who in the World; A.A.A.S. Directory.

MERKER, Harvey M., Dir. of Scientific Relations Parke, Davis and Co., Detroit 32, Mich. **CHEMICAL ENGINEERING**. b. Detroit, Mich., Feb. 24, 1888. s. Herman and Rosa C. (Walz) M. Edn.: B.S., Univ. of Mich., 1909; Master of Engrng., Univ. of Mich., 1940; Dr. of Sci., Wayne Univ., 1943. m. Buda O. Martin, June 27, 1911. c.: Marjorie; Henry. Exp.: Staff, Parke, Davis and Co., 1909—. Hon. Pos.: Trustee, Kresge Eye Inst.; Trustee, Edwin S. George Foundation; Trustee, Cranbrook Inst. of Sci.; Trustee and Past Pres., Detroit Inst.

of Cancer Rsch; Engrng. Soc. of Detroit; Amer. Chem. Soc.; Amer. Inst. of Chem. Engrs.; Tau Beta Pi; Torch Club of Detroit; Orpheus Club of Detroit; Detroit Central H. S. Alumni Assn.; etc.

MERLUB-SOBEL, Menahem, Assoc. Prof. of Ch.E., Asst. Pres., Hebrew Inst. of Tech., Haifa, Israel.



(on leave of absence Hotel Tudor Arms, Cleveland, Ohio). **CHEMICAL ENGINEERING**. b. Brooklyn, N. Y., Aug. 12, 1900. s. Samuel and Libby (Merlup) S. Edn.: A.B., Columbia Coll., 1922; A.M., ibid., 1924; Ch.E., ibid., 1924; Ph.D., Western Reserve Univ. Grad. Schl., 1930. Exp.: Warner Chem. Co., Carteret, N. J., Chem., 1922; Dept. Foreman, 1924; Beryllium Corp. of Amer., Chem. Engr., 1925-26, 1931-32; Kemet Lab. Co., 1926-31, Chem. Engr.; Addressograph-

Multigraph Corp., Cleveland, Ohio, Hd. of Chem. and Metal. Dept., 1932-40; External Lectr., Fenn Coll., Cleveland, 1936; Lectr., Cleveland Coll., 1937; Rsch. Dir., Virginia-Carolina Chem. Co., Richmond, Va., 1940-45; Tech. Mgr., Palestine Potash Ltd., Jerusalem, Israel, 1945-47; Assoc. Prof. of Ch.E. and Metall., Hebrew Inst. of Tech., Haifa, Israel, 1947—. Mem.: A.A.A.S.; A.I.M.M.E.; A.I.Ch.E.; A.C.S.; Electrochem. Soc.; N. Y. Acad. of Sci.; Sigma Xi; Israeli Chem. Assn.; Israel Soc. of Architects and Engrs. Author: Metals and Alloys Dictionary, 1944. Ph.D. Dissertation: Electrodeposition in Anhydrous Ammonia. Travel: Europe. Gen. Int.: Acting Co-Pres., Hebrew Inst. of Tech., 1950-51. Listed in: Who's Who in Engrng.; Biograph. Directory, A.M.S.; Who's Who in Jewry; Palestine Personalial; Who's Who in Israel.

MERRELL, Margaret, Assoc. Prof. of Biostatistics, Schl. of Hygiene and Public Health, Johns Hopkins Univ., 615 N. Wolfe St., Baltimore, Md. **BIOSTATISTICS**.

MERRIAM, Charles Edward, Prof. Emer. Political Sci., 1126 E. 59th St., Chicago, Ill. **POLITICAL SCIENCE**.

MERRILL, Archibald Shepard, Prof. and Chmn., Dept. of Math., Mont. State Univ., Missoula, Mont. **MATHEMATICS**.

MERRILL, Elmer Drew, Arnold Prof. of Botany, Harvard Univ., Arnold Arboretum, Jamaica Plain, Mass. **SYSTEMATIC BOTANY**.

MERRILL, Ferrand Seymour, Div. Engr., Amer. Bridge Co., 1415 Frick Bldg., Pittsburgh, Pa. **ENGINEERING**.

MERRILL, Helen Abbott, Prof. Emer. Math., Wellesley Coll., 6 Roanoke Rd., Wellesley, Mass. **MATHEMATICS**.

MERRILL, Henry B., B. D. Eisendrath Memorial Lab., Racine, Wis. **LEATHER CHEMISTRY**.

MERRILL, John Ellsworth, Prof. of Astron., Ohio Wesleyan Univ., Delaware, Ohio. **ASTRONOMY**. b. May 10, 1902, Parsonsfield, Me. s. John and Mabel (Buckpitt) M. Edn.: A.B., Boston Univ., 1923; M.S., Case Schl., 1927; M.A., Princeton Univ., 1929; Ph.D., ibid., 1931. m. Esther Mary Ives of Salem, Mass., Sept. 3, 1925. d. Mr. and Mrs. Wm. L. Ives. c.: Laura-May Esther; John Raymond. Exp.: Instr. in Math., Case Schl., 1924-28; Instr. in Math., Princeton, 1929-30; Asst. Prof. of Astron., Univ. of Ill., 1931-32; Curator of Astron., Buffalo Museum of Sci., 1932-36; Rsch. Asst. in Astron., Princeton, 1936-37; Instr. in Astron., Hunter Coll., 1937-38; Asst. Prof., Hunter Coll., 1938-47; Visiting Asst. Prof., Princeton, 1942-45; Assoc. Prof., Hunter Coll., 1947-50; Assoc. Prof. of Astron., Ohio Wesleyan, 1950-51; Prof., ibid., 1951—; Rsch. Assoc., Princeton

Univ. Obs., 1945—. Hon. Pos.: Prof. Augustus Howe Buck Scholar, Boston Univ., 1920-23, Fellow, 1923-24; Thaw Fellow in Astron., Princeton, 1930-31. Mem.: A.A.A.S.; Amer. Astron. Soc.; I.A.U.; N. Y. Acad. of Sci.; Phi Beta Kappa; Sigma Xi; Kappa Phi Alpha. Author: Tables for Solution of Light Curves of Eclipsing Bivaries. Co-author: Determination of the Elements of Eclipsing Bivaries. Ph.D. Dissertation: The Eclipsing Variable R T Lacertae. Listed in: A.M.S.

MERRILL, Joseph Francis, 47 E. South Temple St., Salt Lake City, Utah. PHYSICS.

MERRILL, Lynn L., Chmn., Dept. of Math. and Dean of Engineering, Clarkson Coll., Potsdam, N. Y. MATHEMATICS AND ENGINEERING. b. Erin, N. Y., Oct. 19, 1902. s. Nelson and Nettie (Westbrook) M. Edn.: B.S., C. C. T., 1924; M.S., ibid., 1927; E.E., ibid., 1932; Ph.D., Rensselaer Polytechnic Inst., 1936. m. Elizabeth Shannon of Amsterdam, N. Y., Sept. 1, 1924. d. William and Winifred Shannon. c.: Genevieve Marie; Betty Aileen. Exp.: Math. Dept., Clarkson Coll., Advancing to Asst. Prof., 1924-29; Eng. Gen. and High Voltage Bushing Depts., Gen. Elect. Co., Designer, 1929-32; Grad. Student, Renss. Poly. Inst., 1932-33; Math. Dept., ibid., Advancing to Assoc. Prof., 1933-44; Mathematician Rsch. Dept., Stromberg Carlson Co., 1944-48; Chmn., Dept. of Math., Clarkson Coll., 1948; Dean of Engineering, 1952—. Consulting Mathematician, Stromberg Carlson Co. and Aluminum Co. of America. Mem.: Sigma Xi; Tau Beta Pi; Eta Kappa Nu; Amer. Math. Assn.; A.S.E.E.; I.R.E.; Rotary Internat. Contrb. to: Natl. Math. Mag.; Welding Jour.; Jour. of Acoustical Soc. of Amer.; Proceedings of Inst. of Radio Engrs. Ph.D. Dissertation: The Direct Determination of a Function Knowing the Sum of Its Successive Integrals. Listed in: A.M.S. Special Int.: Heat Flow; Vibration; Acoustics.

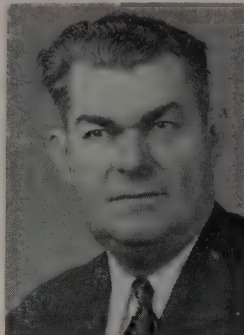
MERRILL, Malcolm Hendricks, Deputy Dir. and Chf., Div. of Labs., Calif. State Dept. of Public Health, 2180 Milvia St., Berkeley 4, Calif. PUBLIC HEALTH ADMINISTRATION AND PUBLIC HEALTH LABORATORY. b. Richmond, Utah, June 28, 1903. s. L. Edgar and Clara (Hendricks) M. Edn.: B.S., Utah State Agril. Coll., 1925; M.S., St. Louis Univ., 1927; M.D., ibid., 1932; M.P.H., Univ. of Calif., 1947. m. Thelma Holdaway, Aug. 11, 1926. c.: M. Donald; L. Bruce; T. Jean. Exp.: Asst. in Bacteriol., 1925-32; Asst., Rockefeller Inst. for Med. Rsch., 1932-35; Intern and Resident, Univ. Calif. Hosp., 1935-37; Chf., Bureau of Venereal Diseases, Calif. State Dept. Public Health, 1937-41; Chf., Div. of Labs., ibid., 1941—. Deputy Dir., ibid., 1945—. Mem.: A.M.A.; Amer. Public Health Assn.; A.A.A.S.; Delta Omega; Sigma Xi; Alpha Omega Alpha. Special Int.: Bacteriol.; Virus Diseases; Immunology; Public Health Admin.

MERRILL, Paul Willard, Retired, 813 Santa Barbara St., Pasadena 4, Calif. ASTROPHYSICS. b. Minneapolis, Minn., Aug. 15, 1887. s. Charles Wilbur and Kate Amelia (Kreiss) M. Edn.: A.B., Stanford, 1908; Ph.D., Univ. of Calif., 1913. m. Ruth L. Currier, Sept. 12, 1913. c.: Donald H. Exp.: Asst., Fellow, Lick Obs., Univ. of Calif., 1908-13; Instr. in Astronomy, Univ. of Mich., Ann Arbor, Mich., 1913-16; Asst. and Assoc. Physicist, U. S. Bureau of Standards, Washington, D. C., 1916-19; Astronomer, Mt. Wilson and Palomar Obs., 1919-52; Retired, 1952—. Mem.: Foreign Assoc. Royal Astronomical Soc.; Natl. Acad. of Sci.; Amer. Phil. Soc.; Amer. Astron. Soc.; Astron. Soc. Pacific; Amer. Phys. Soc.; Phi Beta Kappa; Sigma Xi. Author: The Nature of Variable Stars, 1938; Spectra of Long-Period Variable Stars, 1940. Contrb. to: Astrophys. Jour.; Pub. Astronomical Soc. of the Pacific. Special Int.: Photography; Wave Lengths of Spectrum Lines; Stellar Spectra.

MERRIMAN, Daniel, Assoc. Prof. of Biol., Dir., Bingham Oceanographic Lab., Master, Davenport Coll., Yale Univ., New Haven, Conn. ICHTHYOLOGY.

MERRITT, Arthur Hastings, 5000 Fieldston Rd., N. Y., N. Y. PERIODONTOLOGY.

MERRILL, Pierce Kelton, Chmn., Div. of Soc. Studies, Ark. Poly. Coll., Russellville, Ark. SOCIOLOGY. b. Harrison, Ark., Sept. 11, 1901. s. Rev. Pierce and Ida Belle (Kelton) M. Edn.: B.A., Univ. of Okla., 1932; M.A., ibid., 1940; Ph.D., Vanderbilt Univ., 1951. m. Emma Lea Berry, Dec. 25, 1943. c.: William Kelton. Exp.: Prin., High Schl., Comanche, Okla., 1932-34; Prin. and Coach, High Schl., Olustee, Okla., 1934-36; Supt., Porter High Schl., Altus, Okla., 1936-38; Prof. of Sociology, Southwestern State Coll., Durant, Okla., 1938-42; Chmn., Div. of Social Studies, Ark. Poly. Coll., Russellville, Ark., 1942—. Mem.: Amer. Sociol. Soc.; Southwestern Social Science Soc.; Amer. Acad. Political Social Sci.; Mason; Rotary. Special Int.: Race Relations in Plantation Areas; Acculturation of Choctaw Indians.



Ark. Poly. Coll., Russellville, Ark., 1942—. Mem.: Amer. Sociol. Soc.; Southwestern Social Science Soc.; Amer. Acad. Political Social Sci.; Mason; Rotary. Special Int.: Race Relations in Plantation Areas; Acculturation of Choctaw Indians.

MERRITT, Ernest, Prof. Emer. Physics, Cornell Univ., 1 Grove Pl., Ithaca, N. Y. LUMINESCENCE.

MERRITT, George E., Hd., Optics Branch, Naval Proving Ground, Box 124, Dahlgren, Va. INTERFEROMETRY. b. Indianapolis, Ind., June 23, 1890. s. Worth and Jessie (Fisher) M. Edn.: B.A., Pomona Coll., 1913. m. (1) Muriel Fleming, 1916. c.: Marjorie; Donald; Madeline. m. (2) Laura Thompson, Sept. 7, 1940. c.: Elizabeth. Exp.: Staff, Natl. Bur. of Standards. Mem.: Wash. Phil. Soc.; Geophys. Union; A.A.A.S. Contrb. to: Jour. of Rsch.; Jour. Amer. Ceramic Soc.; Proc. Geophys. Special Int.: Interferometry, Metrology in Gen., Optics, Design of Cameras for Special Purposes, Instrumentation.

MERRITT, Melvin L., Retired, U. S. Forest Service, 3017 N. E. 28th Ave., Portland 12, Ore. FORESTRY. b. West Union, Iowa, Oct. 19, 1879. s. Morris and Jennie S. (Allnatt) M. Edn.: B.S.A., Iowa State Coll., 1904; M.S.A., ibid., 1910. m. Nellie I. Brown, 1913. c.: Alice M.; Melvin L., Jr.; Morris. Exp.: Instr., Iowa State Coll., 1904-05; Forester, Philippine Bureau of Forestry, 1905-09; Staff, U. S. Forest Service, 1909-41; Asst. Regional Forester, Alaska, 1921-34; Asst. Regional Forester, Portland, Ore., 1934-41; Retired, 1942; Fellow, A.A.A.S. Mem.: Soc. Amer. Foresters; Phi Kappa Phi.

MERRY, Frieda Kiefer, Prof. of Psychol. and Edn., Morris Harvey Coll., Charleston, W. Va. PSYCHOLOGY, EDUCATION.

MERRY, Ralph Vickers, Prof. of Psychol. and Edn., Morris Harvey Coll., Charleston, W. Va. PSYCHOLOGY, EDUCATION.

MERRYMON, William Walter, 1017 Austin Ave., Denton, Tex. PHYSICS.

MERSHON, John Valentine, Practicing Orthodontist, 1520 Spruce St., Philadelphia, Pa. ORTHODONTICS.

MERSHON, Ralph D., P. O. Box 346, Coconut Grove, Miami, Fla. ENGINEERING.

MERTENS, Gerard M., Prof. Blackburn Coll., Carlinville, Ill. CHEMISTRY. b. Vienna, Austria, Oct. 12, 1913. s. Dr. Richard and Frances (von Bronneck) M. Edn.: Sc.D., Univ. of Lausanne, Switzerland, 1938; M.A., Univ. of Mich., 1949; Ph.D., ibid., 1951. Exp.: Prof. de Idiomas, Univ. of Sucre, Sucre, Bolivia, 1945-46; Instr. of German, Univ. of Mich., 1947-49; Instr. of German, Univ. of N. Dak., 1949-50; Instr. of French and Spanish, Darrow Schl., 1950-51; Assoc. Prof. of Chem., Talladega Coll., 1951—. Mem.: Amer. Chem. Soc.; Mod. Lang. Assn.; Amer. Assn. of Tchrs. of German; A.A.U.P. Author: Melgarejo, 1946. Contrb. to: Monatshefte. Ph.D. Dissertation: Beitrage zur Kenntniss der Bildung von

Olefinen, (Chem.); Stefan Zweig's Biographical Writings as Studies of Human Types, (German). Hobbies: Travel; Sports; Reading.

MERTIE, John Beaver, Jr., Sr. Geologist, U. S. Geol. Survey, Washington, D. C. GEOLOGY.

MERTON, Robert, Dept. of Sociol., Columbia Univ., N. Y., N. Y. SOCIOLOGY AND ANTHROPOLOGY.

MERZ, Albert Ronald, Prin. Commodity Specialist, U. S. Tariff Commn., 5116 Chevy Chase Pkwy., N. W., Washington, D. C. FERTILIZER CHEMISTRY.

MERZ, August, Exec. Chemist, Calco Chemical Div., Amer. Cyanamid Co., Bound Brook, N. J. COAL TAR CHEMISTRY.

MESERVEY, Arthur Bond, Prof. of Physics, Dartmouth Coll., Hanover, N. H. STEREOSCOPIC X-RAY.

MESSENGER, Helen Althea, Prof. of Physics, Hunter Coll., 695 Park Ave., N. Y., N. Y. PHYSICS.

MESSER, Harold Madison, Assoc. Prof. of Biol., Gettysburg Coll., Gettysburg, Pa. VERTEBRATE ANATOMY.

MESSER, William Earl, Chf. Synthetic Rubber Rsch., Synthetic Rubber Div., U. S. Rubber Co., Box 110, Natugatuck, Conn. ORGANIC CHEMISTRY.

MESSMAN, Henry Cashal, Gen. Purchasing Agent, Westvac Chlorine Prods. Corp., Chrysler Bldg., N. Y., N. Y. INDUSTRIAL CHEMICAL ECONOMICS.

METCALF, Clell Lee, Hd., Dept. of Entomol. and Prof., Univ. of Ill., Urbana, Ill. ENTOMOLOGY.

METCALF, John Trumbull, Prof. of Psychol., Univ. of Vt., Burlington, Vt. PSYCHOLOGY.

METCALF, Robert L., Citrus Expt. Sta., Univ. of Calif., Riverside, Calif. ENTOMOLOGY.

METCALF, Zeno Payne, Hd., Dept. of Zool. and Entomol., N. C. State Coll., Raleigh, N. C. SYSTEMATIC ZOOLOGY.

METFESSEL, Milton Franklin, Prof. of Psychol. and Chmn., Div. Social Studies, Univ. of Southern Calif., Los Angeles, Calif. PSYCHOLOGY.

METTEN, John F., Chmn., Bd. of Dirs., N. Y. Shipbuilding Corp. Camden, N. J. MARINE ENGINEERING.

METZ, Charles William, Univ. of Pa., Zool. Lab., 38th St. and Woodland Ave., Philadelphia 4, Pa.

METZGER, Herbert John, Assoc. Prof. of Agri. Biochem., Rutgers Univ., New Brunswick, N. J. BACTERIOLOGY.

MEYER, Arthur Ernest, Dir. of Rsch., Fellow Pharmaceutical Co., 32-03 162nd St., Flushing, N. Y. BIOCHEMISTRY, PHYSIOLOGY.

MEYER, Arthur William, Prof. of Anatomy and Exec. Hd., Emeritus, 121 Waverley St., Palo Alto, Calif. ANATOMY AND HISTORY THEREOF. b. Cedarburg, Wis., Aug. 18, 1873. s. Henry and Louise (Wiepking) M. Edn.: B.S., Univ. of Wis., 1898; M.D., Johns Hopkins Med. Schl., 1905. m. Esther H. Robinson, Dec. 28, 1907. c.: Ruth E.; Robert W. Exp.: Instr. of Physics, St. Johns Milit. Acad., Delafield, Wis., 1898-1901; Asst. Anatomy, Johns Hopkins Univ., Baltimore, Md., 1905-06; Instr., ibid., 1906-07; Asst. Prof., Univ. of Minn., Minneapolis, Minn., 1907-08; Prof., Northwestern Univ. M. S., Chicago, Ill., 1908-09; Human Anatomy, Stanford Univ., Stanford, Calif., 1909—; Emeritus, Palo Alto, Calif. Hon. Pos.: Assn. Anatomists Exec. Comm., Vice-Pres. Mem.: A.A.A.S.; Soc. Zool.; Soc. of Exptl. Biol. and Med.; Amer. Assn. of Anatomists; West. Soc. Naturalists; Amer. Genetics Assn.; Hist. of Med. Soc. and Hist. of Sci. Soc.; A.A.P.S.; Phi Beta Kappa; Sigma

Xi. Author: Rise of Embryol., 1939; An Analysis of the Exercitationes de Generatione Animalium of William Harvey, 1936. Contbr. to: Anat. Record; Amer. Jour. of Anat.; Jour. of Anat. of England; Anat. Anz.; Archiv. f. Entwklgsmech., Germany; Sci.; Jour. Amer. Med. Assn.; Jour. Obstetrics; Bull., Hist. of Med.; Calif. Med. Jour.; J.H.H.B.; J.H.H. Alumni Mag.; Wis. Alumni Mag.; Stanford Med. Alumni Bull. Special Int.: Anatomy-gross and Microscopic; Embryology and Hist. Thereof; Growth; Anomalies; Mechanical Effects of Movements in Man.

MEYER, Bernard Sandler, Prof. of Botany, Ohio State Univ., Columbus, Ohio. PLANT PHYSIOLOGY.

MEYER, Charles Ferdinand, Assoc. Prof. of Physics, Univ. of Mich., Ann Arbor, Mich. PHYSICAL OPTICS.

MEYER, E. Gerald, Hd., Chem. Dept., N. Mex. Highlands Univ., Las Vegas, N. Mex. PHYSICAL CHEMISTRY. b. Albuquerque, N. Mex., Nov. 2, 1919. s. Leopold and Beatrice (Ifeld) M. Edn.: B.S., Carnegie Inst. of Tech., 1940; M.S., ibid., 1942; Ph.D., Univ. of N. Mex., 1950. m. Betty Knobloch, July 4, 1941 c.: Lee Gordon; Terry Gene. Exp.: Jr. Chemist, Harbison Walker Refractories Co., Pittsburgh, Pa., 1940-41; Instr., Carnegie Tech., Pittsburgh, Pa., 1941-42; Asst. Phys. Chem., U. S. Bureau of Mines, College Park, Md., 1942-44; Chemist, Naval Rsch. Lab., Washington, D. C., 1944-46; Chemist, Rsch. Div., N. Mex. Inst. of Mining and Tech., 1946-48; Rsch. Fellow, Univ. of N. Mex., 1948-50; Hd., Sci., Coll. of St. Joseph, Albuquerque, N. Mex., 1950-52; Hd. Chem. Dept., N. Mex. Highlands Univ., Las Vegas, N. Mex., 1952—. Mem.: Amer. Chem. Soc.; Phi Kappa Phi. Contbr. to: A.S.T.M. Bull.; Indus. and Engrng. Chem.; Jour. Amer. Chem. Soc.; Jour. Chem. Phys. Special Int.: Kinetics; Radiochem.; Thermodynamics.

MEYER, Garson, Chf. Chemist, Eastman Kodak Co., 55 Chadbourn Rd., Rochester, N. Y. CHEMISTRY.

MEYER, Herbert Albert, Assoc. Prof. of Math., Univ. of Fla., Gainesville, Fla. MATHEMATICS (APPLIED).

MEYER, Jane Dick, Asst. Prof. of Chem., 413 W. Third St., Greensburg, Pa. ORGANIC CHEMISTRY. d. Paul Abner and Jean M. (Dick) M. Edn.: A.B., Wilson Coll., 1928; Ph.D., Johns Hopkins Univ. Exp.: Asst. Prof. of Chem., Wilson Coll., 1935-36; Libr. Rsch. for Dr. E. Emmet Reid, in preparation of material for a book, as yet unpublished on Organic Sulfur Compounds; Asst. Prof. of Chem., Seton Hill Coll., Feb. 1944-1950; 1950—, with E. Emmet Reid on work in Sketch. Mem.: A.C.S.; A.A.A.S.; A.A.U.P.; Coll. Club (Gbg.); Bus. and Professional Women's Club; Fellow: Amer. Inst. of Chemists; Contbr. to: Jour. of A.C.S.; Organic Syntheses. Ph.D. Dissertation: The Higher Normal Alcohols. Hobbies: Flowers; Stamps. Listed in: A.M.S.; Amer. Women. Special Int.: Rsch. Alcohols—Fattyacids Book Knowledge—Organic Sulfur Compound; Literature Rsch.

MEYER, Karl, Assoc. Prof. of Biochem., Coll. of Physicians and Surgeons, Columbia Univ., N. Y., N. Y. BIOCHEMISTRY.

MEYER, Karl Friederich, Dir., Geo. Williams Hooper Foundation, Univ. of Calif. Med. Center, San Francisco, Calif. EPIDEMIOLOGY; IMMUNOLOGY. b. Basel, Switzerland, May 19, 1884. s. Theodor and Sophie (Lichtenhahn) M. Edn.: A.B., Univ. of Zurich, 1905; D.V.M., ibid., 1909; Ph.D., ibid., 1924. Hon. Deg.: M.D., Coll. of Med. Evangelists, 1936; Dr. Med. h.c., Univ. of Zurich, 1937; LL.D., Univ. of Southern Calif., 1946; D.V.M., h.c., Univ. of Zurich, 1949; M.D., h.c., Univ. of Basel, 1952. m. Mary Elizabeth Lindsay, July 16, 1913. c.: Charlotte. Exp.: Pathologist, Transvaal Dept. of Agri., Onderstepoort, Union of S. Africa, 1908-10; Asst. Prof. of Pathol. and Bacteriol., Schl. of Vet. Med., Univ. of Pa., 1910-11; Prof. of Pathol. and Bacteriol., ibid., 1911-13; Dir., Lab. and Exptl. Farm, Pa. Livestock Bd., Philadelphia, 1911-13; Assoc. Prof. of Tropical Med., Geo. Williams Hooper Foundation, Univ. of Calif., 1915;

Prof. of Bacteriol. and Protozool., *ibid.*, 1914-15; Prof. of Rech. Med., *ibid.*, 1921-24; Acting Dir., G.W.H.F., *ibid.*, 1921-24; Dir., *ibid.*, 1924—; Prof. of Bacteriol., Univ. of Calif. Schl. of Med., 1924-48; Prof. of Exptl. Pathol., *ibid.*, 1948—. Mem.: Amer. Acad. of Arts and Sci.; Natl. Acad. Sci.; N. Y. Acad. Sci.; Soc. Amer. Bacteriologists; Amer. Assn. Immunologists; Amer. Acad. Tropical Med.; Amer. Assn. Pathologists and Bacteriologists; Soc. for Exptl. Biol. and Med.; Calif. Acad. of Sci.; A.A.A.S.; Swiss Acad. Med.; Sigma Xi; Delta Omega; Phi Sigma; Alpha Omega Alpha. Contrb. to: Jour. Infectious Diseases; Jour. Immunology; Proc. Soc. for Exptl. Biol. and Med.; Calif. Med.; Amer. Jour. Public Health; etc. War Record: Consultant on Epidemic Diseases, Secy. of War, 1942-45, 1948; Consultant on Tropical Med., *ibid.*, 1942. Gen. Int.: Contribution of Control of Botulism, Epidemiology of Plague, Epidemiology of Psittacosis and Ornithosis and Western Equine Encephalomyelitis. Special Int.: Botulism; Brucellosis; Plague; Ornithosis; Viral Encephalitis; Leptospirosis.

MEYER Max Frederick, retired, 3939 Loquat Ave., Miami, Fla.

MEYER, Roland Kenneth, Prof. of Zool., Univ. of Wis., Madison, Wis. **ENDOCRINOLOGY, PHYSIOLOGY.**

MEYER, Walter Huber, Harriman Prof. of Forest Management, Yale Schl. of Forestry, New Haven, Conn. **FOREST MANAGEMENT AND VALUATION.** b. New Haven, Conn., Oct. 13, 1896. s. Frederick and Selina (Willer) M. Edn.: B.A., Yale, 1919; M.F., *ibid.*, 1922; Ph.D., *ibid.*, 1929; Royal Schl. of Forestry, Stockholm, Sweden, 1922-23. m. Constance Button of Portland, Ore., Sept. 6, 1930. d. Arthur and Emily Button. c.: Walter Huber, Jr. Exp.: U. S. Forest Serv., Northeastern For. Exp. Sta., 1923-26; Jr. Forester and Asst. Silviculturist; U. S. Forest Serv., Pac. Northwest For. Exp. Sta., 1926-35; Asst. Silv., Assoc. Silv., Silv. Schl. of Forestry, Univ. of Wash., 1936-39, Prof. of Forest Mgt.; Schl. of Forestry, Yale Univ., 1939-45, Assoc. Prof.; 1945—, Prof. of Forest Mgt. Mem.: Phi Beta Kappa; Sigma Xi; Xi Sigma Pi; Soc. Amer. Foresters; Amer. Statist. Soc.; Biometrical Soc.; Yale Faculty Club; High Lane Club. Author: Forest Valuation, 1947; Forest Mensuration, 1949. Contrb. to: U.S.D.A. Tech. Bull.; Jour. of Forestry; Jour. Agric. Rsch. Ph.D. Dissertation: Diameter Distribution Series in Evengaged Forest Stands. War Record: Student Army Trng. Corps, 1918. Travel: Scandinavia and Northwestern Europe. Hobbies: Varied Sports. Listed in: Who's Who in Amer.; Who's Who in New Eng.; A.M.S.; Who's Who in Commerce and Indus.; Who Knows—and What; World Biography.

MEYERDING, Henry W., Ret. Prof., Orthopedic Surg., Mayo Found., Grad. Schl. of Med., Univ. of Minn. and Mayo Clinic, 102-110 Second Ave., S. W., Rochester, Minn.



EDWARD HENRY, Ann Louise (deceased). Exp.: Hosp. Staff, Telg. and Other Prof. App.; Assoc. Orthop. Surg., Mayo Clinic, 1910; Assoc., *ibid.*, St. Mary's Hosp., Rochester, Minn., 1910; Assoc., *ibid.*, Colonial Hosp., Rochester, Minn., 1915; Prof. of Orthopedic Surg., Grad. Schl. of Med., Univ. of Minn. and Mayo Foundation, 1937; Lectr. in Orthopedic Surg., St. Mary's Trng. Schl. for Nurses, 1924; Lectr. in Orthopedic Surg., Kahler Schl. of Nursing, Rochester, Minn., 1912. Mem.: A.M.A.; Amer. Orthopedic Assn.; Amer. Acad. of Orthopedic

Surg.; A.A.A.S.; Amer. Coll. of Surg.; Amer. Editors and Authors' Assn.; Internatl. Orthopedic Soc., One of Founders and Charter Mem.; Societe Francaise d'Orthopedie; Assn. of Milit. Surg.; Elected Life Mem., Milit. Surg., U. S. A., 1950; Amer. Bd. of Ortho. Surg., Diplomate of, and One of Organizers; Minn. State Med. Assn.; Alpha Kappa Kappa; Sigma Xi; A. F. and A. M.; Acacia; Mem., Editing and Publishing Comm., Minn. Med.; Editor of Internatl. Coll. Surg. Jour.; Supvng. Ed., U. S., for Excerpta Medica of Amsterdam, Holland, 1946—; Mem., Sub-Ed. Comm. for Progress of Orthopedic Surg., Sect. on Tumors of Bone, Amer. Acad. of Orthopaedic Surg.; Pres. of the Fourth Cong. of the Internatl. Soc. of Orthopedic Surgery and Traumatology, which was held in Amsterdam, Holland, Sept. 13 to 18, 1948; Elected Hon. Mem. of Societe Francaise d'Orthopedie, Oct. 11, 1946; Hon. Mem. Station Orthopedic Soc.; Brazilian Orthopedic Soc.; Netherlands Orthopedic Soc.; Internatl. Soc. for Welfare Cripples; Elected Hon. Mem. of Academie de Chirurgie, and awarded Bronze Medal by the Pres. on the 100th Anniversary of this Soc. in Paris, Oct. 8, 1946; Elected Hon. Exchange Mem., Societe Belge de Chirurgie, Dec. 21, 1946; Elected to Hon. Fellowship, Internatl. Coll. of Surgeons, Oct. 3, 1947; Pres. of the Amer. Chapter of the Internatl. Coll. Surg. and Trustee; Elected to Assoc. Fellowship in the Internatl. Soc. of Surgery, Sept., 1947; Fellow Acad. Internatl. of Med. Contrb. to: Various Professional Jours. Certificate of Merit for Sci., Exhibit on Spondylolisthesis as an Etiologic Factor in Backache, Amer. Med. Assn. Conv., 1938; Gold Medal for Scientific Exhibit on Backache; Its Causes and Treatment by Physical Therapy, Amer. Cong. of Physical Therapy, 1939; Hon. award for Scientific Exhibit on Benign and Malignant Tumors of Bone, Amer. Acad. of Orth. Surgeons, 1943; Certificate of Appreciation for Scientific Exhibit on Benign and Malignant Tumors of Bone, State Med. Soc. of Wis., 1944; Hon. award for Scientific Exhibit on Original Orth. Appliances, Amer. Acad. of Orthopaedic Surgeons, 1947; First Prize (award) for Scientific Exhibit on Benign and Malignant Tumors of Bone, Chicago Med. Soc., 1947.

MEYERHOFF, Howard Augustus, Prof. of Geol. and Geography, Smith Coll., Northampton, Mass. **GEOLOGY.**

MEYERS, Russell, Prof. of Surgery, Chmn., Div. of Neurosurgery, State Univ. of Iowa Hosps., Iowa City, Iowa. **NEUROLOGY AND NEUROSURGERY.** b. Brooklyn, N. Y., Feb. 25, 1905. s. Harry R. and Catherine (Ward) M. Edn.: A.B., Brown Univ., 1927; Sc.M., *ibid.*, 1929; M.D., Cornell Univ., Med. Coll., 1932. m. Mary E. C. Meyers, Sept. 4, 1947. c.: Harvey; Audrey; Mary; David; Russell; Jeffrey; Steven. Exp.: Instr. in Embryol. and Hist. and Exptl. Psychol., Brown Univ., Providence, R. I., 1926-28; Instr. in Psychol., N. Y. Univ., N. Y. C., 1928-32; Asst. in



Physiol., Cornell Univ. Med. Coll., N. Y. C., 1931-32; Instr., Columbia Univ., N. Y. C., 1937-38; Instr. in Neurol. and Neuropsychol., L. I. Coll. of Med., 1939-46; Asst. Prof. of Surgery, State Univ. of Iowa, Coll. of Med., Iowa City, Iowa, 1946-47; Assoc. Prof., *ibid.*, 1948-49; Prof., *ibid.*, 1949—. Mem.: Phi Beta Kappa; Alpha Omega Alpha; Sigma Xi; Amer. Coll. Surgeons; Amer. Neurol. Assn.; Assn. for Research in Nerv. and Mental Dis.; Harvey Cushing Soc.; Internatl. League vs. Epilepsy. Contrb. to: Jour. Immunol.; Amer. Jour. of Surgery; Arch. of Surgery; Annals of Surgery; Arch. Neurol. and Psychiat.; Trans., Amer. Neurol. Assn.; Surgery; Jour. of Neuropathol. and Exptl. Neurol.; Ill. Med. Jour., etc. Special Int.: Neurol., Physiol. Psychol., Neurol. Surgery; Neuropsychol., Gen. Semantics and Logic.

MICHAELIS, Leonor, Mem. Emer., Rockefeller Inst. for Med. Rsch., 325 E. 79th St., N. Y., N. Y. **PHYSICAL, BIOLOGICAL CHEMISTRY.**

MICHELBACHER, Abraham Ezra, Asst. Prof. of Entomol., Univ. of Calif., Berkeley, Calif. ENTOMOLOGY.

MICHELS, Nicholas Aloysius, Prof. of Anatomy, Jefferson Med. Coll., Daniel Baugh Inst. of Anatomy, Hatfield, Pa. HEMATOLOGY AND CONSTITUTIONAL ARTERIAL VARIATIONS. b. St. Paul, Minn., Oct. 1, 1891. s. Jean Pierre and Katherine (Kraemer) M. Edn.: B.A., St. Thomas Coll., 1914; S.T.B., Catholic Univ., 1918; M.A., Univ. of Minn., 1920; Dr. Sc., Univ. of Louvain, 1922. m. Martha A. Tweeddale, 1929. 2nd. Hilda B. Datty, 1942. c.: Adelle; Harvey. Exp.: Marine Biol. Studies at Friday Harbor, 1921; Postgraduate Studies in Biol. at Sorbonne Univ., Paris, France, 1923; In Hematol. with Dr. Ferrata at Sienna Univ., Italy in 1923 and with Dr. Alexander Maximow at Chicago Univ. in 1925; Rsch. on Perivascular Infiltrations of the Central Nervous System with Dr. J. Globus at N. Y. Univ. and Bellevue Hosp. and Mt. Sinai Hosp., 1926-28; Asst. Prof. of Biol. and Histol., St. Louis Univ. Med. Schl., St. Louis, Mo., 1926-27; Assoc. Prof. of Anatomy, Creighton Univ. Med. Schl., Omaha, Nebr., 1927-29; Assoc. Prof. of Anatomy, Jefferson Med. Coll., Hatfield, Pa., 1929-48; Prof. of Anatomy, *ibid.*, 1948—. Hon. Pos.: Chmn., Allied Sci. Section, Internat. Coll. of Surgeons. Mem.: Amer. Assn. of Anat.; Soc. Exptl. Biol. and Med.; Phila. Physiol. Soc.; Soc. d'Antropologie de Bruxelles; International Coll. of Surgeons; Sigma Xi; Phi Beta Pi. Contrb. to: *Compt. Rendus de Seances de la Soc. Biol.*; *Annales de la Soc. Scientifique de Bruxelles*, *La Cellule*, *Folia Haematologica*; *Haematologica Anatomical Record*; *Amer. Jour. of Anatomy*; *Archives of Pathol.*; *Annals of Surgery*; *A.M.A. Archives of Surgery*; *Cancer Jour. of the International Coll. of Surgeons*. Gen. Int.: Exhibits on the Blood Supply of the Liver and Gallbladder at Several Meetings of the Amer. Assoc. of Anatomists, Before the Phila. Session of the Amer. Coll. of Physicians in 1945, at the Centennial Convention of the A.M.A. in Atlantic City, 1947 and at the VI Congress of the Internat. Coll. of Surgeons, Rome, 1948. Special Int.: Small Round Cell Infiltrations in Encephalitis and Poliomyelitis, Mast Cells, Plasma Cells, Erythrocyte, Erythropoiesis, Lymph Nodes, Russell Body Cells, Peritoneal Absorption, Effects of X-Rays on Connective Tissue Cells, Capillary Innervation, Structure of Capillaries and Rouget Cells; Variational Anatomy of the Blood Supply of the Upper Abdominal Organs, Especially of the Liver and Gall bladder and Pertinent Collateral Pathways of Circulation.



MICHELSON, Louis, Technical Director, U. S. Naval Underwater Ordnance Station, Newport, R. I. PHYSICS (ELECTRONICS). b. Lynn, Mass., March 24, 1919. s. Charles and Minnie (Winer) M. Edn.: B.S., Mass. Inst. of Tech., 1940. m. Florence M., Nov. 9, 1941. c.: Barbara Karen. Exp.: Physicist, Corning Glass Works, Corning, N. Y., 1940-41; Chief Physicist, Submarine Mine Depot, Ft. Monroe, Va., 1941-45; Electronic Engr., Sanborn Inst. Co., Cambridge, Mass., 1945-46; Chief Engr., Allied Cement and Chem. Co., Lynn, Mass., 1946-47; Dir., U. S. Ordnance Submarine Mine Lab., White Oak, Md., 1947-50; Chief of Mine Div., Naval Ordnance Lab., *ibid.*, 1950-51; Tech. Dir., U. S. Underwater Ordnance



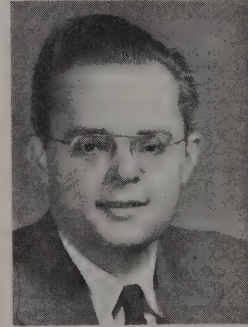
Sta., Newport, R. I., 1951—. Mem.: A.I.E.E.; I.R.E. Gen. Int.: Invented underwater listening system, mine control system, underwater mines. Spec. Int.: Detection of magnetic and acoustic signals of ships and submarines, electronic telometering equipment, invented high speed electronic scanner.

MICHELSON, Israel David, Assoc. Prof. of Pathol. and Bacteriol., Univ. of Tenn., Memphis, Tenn. BACTERIOLOGY.

MICHENER, Charles D., Dept. of Entomol., Univ. of Kans., Lawrence, Kans. ENTOMOLOGY.

MICHIE, Jonnie McCreary, Prof. and Hd., Dept. of Foods and Nutrition, Tex. Tech. Coll., Lubbock, Tex. NUTRITION.

MICKLEY, Harold Somers, Assoc. Prof. of Chem. Engrng., Mass. Inst. of Tech., Cambridge 39, Mass. CHEMICAL ENGINEERING. b. Seneca Falls, N. Y., Oct. 14, 1918. s. Harold Franklin and Marguerite Gladys (Somers) M. Edn.: B.S., Calif. Inst. of Tech., 1940; M.S., *ibid.*, 1941; Sc.D., Mass. Inst. of Tech., 1946. m. Margaret Phillips, Dec. 20, 1941. c.: Steven Phillips; Richard Somers. Exp.: Development Engr., Union Oil Co. of Calif., 1941-42; Proj. Engr., Div. of Indus. Cooperation, Mass. Inst. of Tech., Cambridge, Mass., 1942-45; Asst. Prof. of Chem. Engrng., *ibid.*, 1946-48; Assoc. Prof., *ibid.*, 1948—. Mem.: A.A.A.S.; Amer. Acad. of Arts and Sci.; Amer. Chem. Soc.; Amer. Inst. of Chem. Engrs.; Sigma Xi; Tau Beta Pi. Contrb. to: *Chem. Engrng. Progress*; *Indus. and Engrng. Chem.*; *Jour. of Chem. Physics*; *Trans. of Amer. Soc. of Mech. Engrs.* Special Int.: Thermodynamics; Fluid Mechanics; Catalysis; Indus. Chem.



MIDDLETON, Arthur Everts, Supvr. of Semiconductors and Dielectrics Div., Battelle Mem. Inst., Columbus, Ohio. SOLID STATE PHYSICS AND CHEMISTRY. b. Erie, Pa., June 10, 1919. s. Ralph W. and Gertrude (Everts) M. Edn.: B.S., Westminster Coll., 1940; M.S., Purdue Univ., 1942; Ph.D., *ibid.*, 1944. m. Jane McKelvy, Sept. 2, 1941. c.: Stephen Arthur and David Frank. Exp.: Grad. Asst. in Physics, Purdue Univ., Lafayette, Ind., 1940-43; Instr. in Physics and Rsch. Fellow, *ibid.*, 1943-45; Rsch. Engr., Fed. Tel. and Radio Co., Newark, N. J., 1945; Rsch. Engr., Battelle



Mem. Inst., Columbus, Ohio, 1945-47; Asst. Supvr., *ibid.*, 1947-51; Supvr., *ibid.*, 1951—. Mem.: Sigma Xi; Sigma Pi Sigma; Amer. Phys. Soc.; Sigma Phi Epsilon. Contrb. to: *Battelle Tech. Rev.*; *Digest of Lit. on Dielectrics*; *Phys. Rev.* Special Int.: Solid State Electronic Devices; Semiconductor Devices; Semiconductors; Dielectrics; Solid State Physics; Computer Component Rsch.; Thermoelectricity; Fundamental Elec. Properties of Solids; World Status of Solid State Physics.

MIDDLETON, Austin Ralph, Prof. of Biol., Biol. Labs., Univ. of Louisville, Louisville, Ky. GENETICS

MIDDLETON, David, Asst. Prof. of Applied Phys., Craft Laboratory, Harvard Univ., Cambridge, Mass. ELECTRONICS AND ELECTRONIC PHYSICS. b. Apr. 19, 1920, N. Y. C. s. Chas. Davies Scudder

and Lucile (Davidson) M. Edn.: A.B., Summa Cum Laude, Harvard Coll., 1942; A.M., 1945, Ph.D., 1947, Harvard Univ. m. Nadea Butler of Ojai, Calif., May 26, 1945. d. Dr. and Mrs. Charles T. Butler. c.: Susan Terry; Leslie Butler. Exp.: Teaching Fellow in Electronics, Harvard University, 1942; Spec. Research Associate, 1943-45; Radio Research Laboratory; Research Fellow in Electronics, 1947-49; Asst. Prof., Applied Physics, 1949—. Mem.: Natl. Rsch. Coun. Predoctoral Fellow in Phys., 1946-47; Group Leader, Electronics Rsch. Lab., Harvard, 1949—; Phi Beta Kappa; Fellow, Amer. Phys. Soc.; A. Math. S.; Phi Beta Kappa; Amer. Assn. of Univ. Profs.; Inst. of Radio Engrs.; Sigma Xi; Harvard Club of N. Y. Contrb. to: Math. and Phys. Jour. Ph.D. Dissertation: Theory of Noise Through Non Linear Devices. War Record: Div. 15, O.S.R.D., 1942-45. Travel: N. Amer.; England. Hobbies: Music; Chess; Tennis. Listed in: Who's Who in N. Eng.; A.M.S. Special Int.: Information Theory, Random Processes, and Electronic Physics.

MIDDLETON, Howard E., Asst. Chf. of Rsch., Soil Conservation Service, Washington, D. C. **SOIL CONSERVATION.**

MIDDLETON, Warren Candler, Prof. of Psychol., DePauw Univ., Greencastle, Ind. **ABNORMAL PSYCHOLOGY.**

MIDDLETON, William Shainline, Prof. of Med. and Dean, Med. Schl., Univ. of Wis., Madison, Wis. **INTERNAL MEDICINE.**

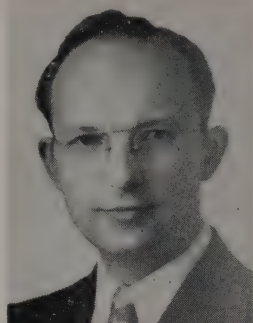
MIDER, George Burroughs, Assoc. Dir. in Charge of Rsch., Nat. Cancer Inst., Bethesda 14, Md. **CANCER RESEARCH.** b. Windsor, N. Y., Aug. 9, 1907. s. Carrol A. and Elizabeth B. (Pawson) M. Edn.: A.B., Cornell Univ., 1930; M.D., ibid., 1933. m. Ruth Lyman, Jan. 7, 1939. c.: Ruth Elizabeth. Exp.: Intern, Albany Hosp., Asst. Resident Surgeon and Resident Surgeon, Albany Hosp., Albany, N. Y., 1934-36; Asst. in Surgery, ibid., 1935-36; Asst. Resident in Surgery, Strong Memorial Hosp. Rochester, N. Y., 1936-37; Asst. in Surgery, Univ. of Rochester, Rochester, N. Y., 1936-37; Fellow in Surgery and Instr. ibid., 1937-39; Rsch. Fellow, Natl. Cancer Inst., Bethesda, Md., 1938-41; Instr. in Pathol., Cornell Med. Coll., Mt. Vernon, 1941-42; Asst. Prof. of Path., ibid., 1942-44; Asst. Pathologist, N. Y. Hosp., N. Y., N. Y., 1941-44; Assoc. Prof. Path., Univ. of Va. Schl. of Med., Charlottesville, Va., 1944-45; Res. Assoc. in Surgery, Univ. of Rochester Schl. Med. & Dentistry, Rochester, N. Y., 1945-48; Prof. of Cancer Rsch., ibid., 1948-52; Assoc. Dir. in Chge. Rsch., Natl. Cancer Inst., Bethesda, Md. Mem.: Amer. Assn. for Cancer Rsch.; Amer. Assn. Path. & Bacteriologists; Amer. Soc. Exper. Path.; A.A.-A.S.; Harvey Soc.; N. Y. Acad. of Sci.; James Ewing Soc.; Sigma Xi; Alpha Omega Alpha. Contrb. to: Cancer; Cancer Rsch. Special Int.: Certified by Amer. Bd. of Pathology in Pathologic Anatomy.

MIDGELY, Albert Leonard, Private Practice, 48 Oriole Ave., Providence, R. I. **DENTAL AND ORAL SURGERY.**

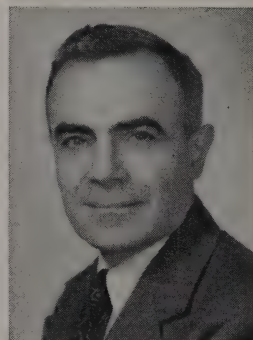
MIEHER, Walter William, Engrng. Dept. Hd. for Armament Radar, Sperry Gyroscopy Co., 192 Jackson Ave., Mineola, N. Y. **COMMUNICATIONS ENGINEERING AND MICROWAVE TECHNIQUES.** b. St. Louis, Mo., Oct. 30, 1916. s. William C. and Emilie C. (Brant) M. Edn.: B.S., Washington Univ., 1938. Exp.: Rsch. Asst., Mass. Inst. of Tech., Cambridge, Mass., 1938-40; Sperry Gyroscope Co., Mineola, N. Y., 1940—. Mem.: Inst. of Radio Engrs.; Sigma Xi; Tau Beta Pi. Contrb. to: Proc. of Inst. of Radio Engrs. Special Int.: Microwave Techniques.



MIELKE, Walter Emil, Instr. in Jr. Coll. Biol. Sci., 202 Hawkins Ave., Coleraine, Minn. **BIOLOGY.** b. Swanville, Minn., Feb. 9, 1914. s. Emil and Hilma (Hoffman) M. Edn.: B.E., St. Cloud State Tchrs. Coll., 1939; M.A., Univ. of Minn., 1948. m. Elizabeth Schauland of Parkers Prairie, Minn., Nov. 20, 1941. d. Mr. and Mrs. Carl Schauland. c.: Betty Louise; James Arlan. Exp.: Rural Schl. of Ottertail Co., Minn., 1935-36; 1936-37; 1937-38; 1939-40; Jr. and Sr. H. S. Sci. at Littlefork H. S., Minn., 1940-42; Rush City H. S., Sr. H. S. Sci., 1942-46; Itasca Jr. Coll., Coleraine, Minn., 1946—. Mem.: Phi Delta Kappa; N.E.A.; M.E.A.; Minn. Educator's Council—C.I.O. (and) G.C.E.O.C.—C.I.O. No. 756 (and) Rouge Teachers Joint Council. Hobbies: Building; Gardening; Photography; Collecting Biological Specimens; Music.



MIGRDIKHIAN, Vartkes, Chemist, Amer. Cyanamid Co., Central Rsch. Labs., Dev. Div., Agril. Chem. Sect., 51 Connecticut Ave., Greenwich, Conn. **CHEMISTRY.** b. Rodosto, Turkey, Oct. 8, 1903. s. Megrdoch and Araksi (Tertzagian) M. Edn.: A.B., Cornell Univ., 1919; Ph.D., ibid., 1923. Exp.: Chemist, Amer. Cyanamid Co., Central Rsch. Labs., Dev. Div., Agril. Chem. Sect., Stamford, Conn., 1919—. Mem.: Central C. o. m. m. of Armenian Gen. Benevolent Union of Amer., Inc.; Amer. Chem. Soc. Author: Chem. of Organic Cyanogen Compounds, 1947; Treatise of Organic Synthesis, 1954, 1955. Contrb. to: Jour. of Phys. Chem.; Encyclopaedia Britannica. Gen. Int.: Dev. of Uses of Hydrocyanic Acid and Cyanides as Fumigants; Discovery of Fumigant Power of Acrylonitrile; Dev. of Plant Hormone Compositions and Insecticides. Special Int.: Hydrocyanic Acid and Cyanides; Fumigants; Fungicides; Moth-Proofing Agents; Hormone Type Compounds and Hormone Preparations Used in Agri.; Contact Insecticides; Acrylonitrile; Acrylonitrile Fumigants.



MILBRATH, David Gallus, Chf., Bureau of Plant Pathol., Calif. State Dept. of Agri., Sacramento, Calif. **PLANT PATHOLOGY.**

MILES, Walter Richard, Prof. of Psychol., Yale Univ., 333 Cedar St., New Haven 11, Conn. **PSYCHOLOGICAL PSYCHOLOGY.** b. Silverleaf, N. Dak., Mar. 29, 1885. s. Thomas Elwood and Sarah Caroline (White) M. Edn.: B.S., Pacific Coll., 1906; A.B., Earlham Coll., 1908; M.A., Iowa State Univ., 1910; Ph.D., ibid., 1913. Hon. Deg.: M.A., Yale Univ., 1931; Sc.D., Earlham Coll., 1952. m. 1. Elizabeth M. Kirk, Sept. 1, 1908 (dec.). m. 2. Dr. Catharine M. Cox, Sept. 9, 1927. c.: Thomas Kirk; Caretta Elizabeth; Marjorie Helen; Anna Mary. Exp.: Instr. in Psychol.



and Edn., Penn Coll., Oskaloosa, Iowa, 1908-10; Asst. and Fellow in Psychol., State Univ. of Iowa, Iowa City, Iowa, 1911-13; Assoc. Prof. of Psychol.,

Wesleyan Univ., Conn., 1913-14; Psychol. at Nutrition Lab., Boston, of Carnegie Instn. of Washington, D. C., 1914-22; Prof. of Expt. Psychol., Stanford Univ., Stanford, Calif., 1922-32; Prof. of Psychol., Yale Univ., New Haven, Conn., 1931—; Fellow, Jonathan Edwards Coll., *ibid.*, 1935—; Attending Psychol., New Haven Hosp. and Dispensary, *ibid.*, 1932—. Hon. Pos.: U. S. Del. to Second Internatl. Congress Mental Hygiene, Paris, 1937; Chmn. Bd. of Dirs., Psychol. Corp. of N. Y., 1944—; Chmn., Bd. of Dirs., Amer. Inst. for Resch., Pittsburgh, Pa., 1947—; Chmn., Conn. Bd. Exam. of Psychologists, 1945—. Mem.: Fellow, Optical Soc. of Amer.; A.A.A.S.; Amer. Psychol. Assn.; Amer. Phil. Soc.; Natl. Acad. of Sci.; Natl. Rsch. Council; Amer. Physiol. Soc.; Soc. of Exptl. Psychol.; A.A.U.P.; Sigma Xi; Phi Delta Kappa; Tau Kappa Alpha; Clubs: Cosmos; Yale of N. Y. C. Author: Effect of Alcohol on Psychol-Physiol. Functions, 1918; Human Vitality and Efficiency under Prolonged Restricted Diet (with F. G. Benedict, et al), 1919; Alcohol and Human Efficiency, 1924; Age in Human Soc. (Murchison's Handbook of Soc. Psychol.), 1935; Mental Changes with Normal Aging (Stieglitz, Geriatric Med.), 1949; Ed. Psychol. Studies of Human Variability, 1936; Selected Psychomotor Measurement Methods (Methods in Med. Resch., Vol. 3, R. W. Gerard, Ed-in-Chf.), 1950. Contrb. to: Numerous Papers in Psychol. and Physiol. Jours. Special Awards: Recipient Pres. Certificate of Merit, 1948; Howard Crosby Warren Med., Exptl. Psychol., 1949. Special Int.: Inventor of Psychol. Apparatus; Psychol. of Vision; Later Maturity and Old Age; Aviation Physiol. and Psychol.; Olfaction.

MILES, Catherine C., Clinical Prof. of Psychol., Yale Univ., 333 Cedar St., New Haven, Conn. **PSYCHOLOGY.**

MILES, Egbert J., Assoc. Prof., Yale Univ., New Haven, Conn. **MATHEMATICS.**

MILES, Ivan E., Dir., Soil Testing Div., N. C. Dept. of Agri., Raleigh, N. C. **AGRICULTURE.**

MILES, Jean Weidensall, General Private Practice, The Barnacle, Monhegan Island, Maine. **PSYCHOLOGY.**

MILEY, George Petrie, 535 Park Ave., N. Y., N. Y. **INTERNAL MEDICINE.**

MILHAM, Willis I., Field Memorial Prof. Emer. Astron., Williams Coll., 24 Hoxsey St., Williamstown, Mass. **ASTRONOMY.**

MILHON, Rev. Damian William, Hd., Premedical Schl., St. Bede Coll., and Hd. Instr., St. Marys Nurse Trng. Schl., LaSalle, Ill. **BOTANY, ZOOLOGY.**

MILISEN, Robert, **SPEECH AND HEARING.**

MILKS, Howard, Prof. Materia Medica and Dir., Small Animal Clinic, N. Y. State Veterinary Coll., Ithaca, N. Y. **MEDICAL SCIENCES.**

MILLAR, Preston S., Pres., Electrical Testing Labs., Inc., 79th St. and East End Ave., N. Y., N. Y. **ILLUMINATING ENGINEERING.**

MILLER, A. Katharine, Rsch. Assoc., Rsch. Div., Sharp and Dohme, Inc., W. Point, Pa. **BACTERIOLOGY.** b. E. Orange, N. J., June 8, 1913. d. William B. and Anna S. (Hartman) M. Edn.: B.A., Moravian Coll. for Women, 1934; M.S., Tehrs. Coll., Columbia Univ., 1936; Ph.D., Cornell Univ., 1942. Exp.: Asst. Prof. of Biol., Moravian Coll. for Women, 1936-41; Temp. Instr. of Biol., Wells Coll., 1942-43; Rsch. Assoc., Sharp and Dohme, Inc., W. Point, Pa., 1943—. Mem.: Soc. Amer. Bacteriol.; East. Pa. Soc. Bacteriol.; Soc. Gen. Microbiol.; N. Y. Acad. of Sci.; Acad.

of Natural Hist.; A.A.A.S.; Soc. of Indus. Microbiol.; Phi Kappa Phi; Sigma Xi; Sigma Delta Epsilon. Contrb. to: Proc. Soc. of Exptl. Biol. and Med.; Jour. Amer. Pharm. Assn.; Amer. Jour. Clin. Pathol.; North Amer. Vet.; Amer. Jour. of Physiol.; Jour. Lab. and Clin. Med.; Jour. Amer. Vet. Med. Special Int.: Bacterimetric Evaluations; Expt. Chemotherapy.

MILLER, Alden Holmes, Prof. of Zool. and Dir., Museum Vertebrate Zool., Univ. of Calif., Berkeley, Calif. **VERTEBRATE ZOOLOGY.**

MILLER, Alten Sidney, Consulting Engr., 80 Westcott Rd., Princeton, N. J. **PUBLIC UTILITY ENGINEERING.**

MILLER, Alton Lombard, Treas. and General Mgr., Charles N. Miller Co., 100 Massachusetts Ave., Boston, Mass. **MATHEMATICS.**

MILLER, Arthur K., Prof. of Geol. and Hd. Dept. of Geol., State Univ. of Iowa, Iowa City, Iowa. **INVERTEBRATE PALEONTOLOGY.** b. Kahoka, Mo., Sept. 27, 1902. s. John Henry and Margaret (Korschgen) M. Edn.: B.A., Univ. of Mo., 1924; M.A., *ibid.*, 1925; Ph.D., Yale Univ., 1930. m. Bertha Kehr, Dec 21, 1927. c.: Leta Louise and Margaret Bertha. Exp.: Instr. in Geol., Univ. of Mo., Columbia, Mo., 1927-29; Instr. in Geol., Yale Univ., New Haven, Conn., 1929-31; Asst. Prof. of Geol., State Univ. of Iowa, Iowa City, Iowa, 1931-35; Assoc. Prof. of Geol., *ibid.*, 1935-40; Prof., *ibid.*, 1940—; Hd., Dept. of Geol., *ibid.*, 1952—. Mem.: Geol. Soc. of Amer.; Amer. Assn. of Petroleum Geol.; A.A.A.S.; Paleontol. Soc.; Soc. Econ. Paleontol. and Mineralogists; Paleontol. Rsch. Inst.; Arctic Inst.; Soc. Geol. Mexicana; Paleontol. Soc. of Japan; Soc. Geol. Suisse; Soc. Soc. Belge de Geol., Paléont. et Hydrol.; Coord. Mem., Inst. Estudios Superiores, Montevideo, 1943—; Gamma Alpha; Sigma Gamma Epsilon. Author: The Nautiloid Cephalopods of the Pa. System in the Mid-Continent Region, with C. O. Dunbar and G. E. Condra, 1933; Devonian Ammonoids of Amer., 1938; Permian Ammonoids of the Guadalupe Mt. Region and Adjacent Areas, with W. M. Furnish, 1940; Ozarkian and Can. Cephalopods, with E. O. Ulrich, A. F. Foerste, et al., 1942-44; Tertiary Nautiloids of the Americas, 1947; Amer. Permian Nautiloids, with Walter Youngquist, 1949; Tertiary Nautiloids of West-Coastal Africa, 1951. Contrb. to: Amer. Jour. of Sci.; Jour. of Geol.; Jour. of Paleontol. Special Int.: Fossil Cephalopods.

MILLER, Arthur W., retired, 6833 Piney Branch Rd., N. W., Washington, D. C. **VETERINARY SCIENCE.**

MILLER, Aura James, Prof. and Hd., Dept. of Pathol., Schl. of Med., Univ. of Louisville, 101 W. Chestnut St., Louisville, Ky. **PATHOLOGY.**

MILLER, Carl Danforth, 327 Salem St., North Andover, Mass. **RHEOLOGY.**

MILLER, Carl Wallace, Prof. of Physics, Brown Univ., Providence, R. I. **PHYSICS.**

MILLER, Charles Phillip, Prof. of Med., Univ. of Chicago, Chicago, Ill. **MEDICINE.**

MILLER, Clemmy Olin, Pres., Kremers-Urban Co., Milwaukee, Wis. **CHEMISTRY, DRUGS.**

MILLER, D. R., Univ. of Mich., Ann Arbor, Mich. **PSYCHOLOGICAL RESEARCH.**

MILLER, David Franklin, Prof. of Zool., Ohio State Univ., Columbus, Ohio. **ZOOLOGY, PHYSIOLOGY.**

MILLER, Dorothea Starbuck, Instr. in Biol. Sciences, Univ. of Chicago, Chicago, Ill. **ENDOCRINOLOGY, ZOOLOGY.**

MILLER, Edgar Calvin LeRoy, Librarian, Med. Coll. of Va., Richmond, Va. **BACTERIOLOGY.**

MILLER, Edgar Grim, Jr., Prof. of Biochem., Coll. of Physicians and Surgeons, Columbia Univ., 630 West 168th St., N. Y., N. Y. **BIOCHEMISTRY.**



MILLER, Ellis, Dir., Chem. Production, Sharp and Dohme, Inc., Glenolden, Pa. ORGANIC CHEMISTRY.

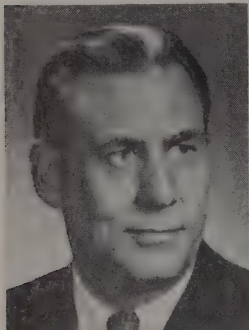
MILLER, Elroy John, Hd., Dept. of Agri. Chem., Mich. State Coll., East Lansing, Mich. COLLOID CHEMISTRY.

MILLER, Emil C., Prof. of Phys., Luther Coll., Decorah, Ia. PHYSICS. b. Nov. 21, 1907, Litchfield, Nebr. s. Henry and Wilhelmina (Kahl) M. Edn.: A.B., cum laude, St. Olaf Coll., 1931; M.S., Univ. Ia., 1935; Ph.D., ibid., 1951. m. Elinor Langum of Preston, Minn., Aug. 16, 1940. d. Mr. and Mrs. A. H. Langum. c.: Diane Winifred. Exp.: H. S. Tchr., Sci. and Math., Minn., 1931-39; Math., U. S. Army Engrs., 1936-37; Asst. Prof. of Phys., Luther Coll., 1939-42; Assoc. Prof. of Phys., ibid., 1947-49; Prof. of Phys., ibid., 1949—. Mem.: A.A.P.T.; A.A.A.S.; N.E.A.; Sigma Xi; Phi Delta Kappa; Iowa Com. for Atomic Energy Edn. Ph.D. Dissertation: A Study of Atomic Energy Edn. for Adults. War Record: Lt., U.S.N.R., 1943-46. Travel: Europe. Hobbies: Golf; Music. Listed in: Who's Who in Midwest; A.M.S. Special Int.: Atomic Energy.

MILLER, Ernest Allen, 113 N. Tioga St., Ithaca, N. Y. MATHEMATICS.

MILLER, Erston Vinton, Physiologist, U. S. D. A., 415 N. Parramore St., Orlando, Fla. PLANT PHYSIOLOGY.

MILLER, Floyd Laverne, Mgr. of Legal, Contract and Patent Dept., Dir. of Rsch. Div., Standard Oil N. Y. 19, N. Y. CHEMISTRY. b. Arbela, Mich., Apr. 12, 1905. s. Fred and Laura (Baldwin) M. Edn.: B.A., Mich. State Normal Coll., 1926; M.S., Univ. of Mich., 1927; Ph.D., ibid., 1929. m. Ruth Pound of Clio, Mich., June 19, 1926. d. Mary and George Pound. c.: Marilyn Ruth (dec.); Lois Marjean; Leighton Pound. Exp.: Instr. in Chem., Mich. State Normal Coll., 1926-27; A.P.I. Fellowship, Univ. of Mich., 1927-29; Chemical Foundation Research Grant ibid., 1929-30; Standard Oil



Development Co., Research Chemist, 1930-31; Chem. Research Group, 1931-33; Head of Lubricants Section, 1933-37; Asst. Director, 1937-45; Assoc. Dir., 1945-47; Dir., 1947-53; Vice-Chmn., Rsch. and Dev. Bd., Dept. of Defense, 1952. Hon. Pos.: Vice-Chmn. of the Fuels and Lubricants Comm. of the Metro. Sect., 1937-38; Chmn. of the Comm. on Chem. of the Conf. on Elec. Insulation, Natl. Rsch. Coun., 1938-40. Mem.: Armed Forces Chem. Assn.; Amer. Ordnance Assn.; A.P.I.; Amer. Chem. Soc.; Soc. of Automotive Engrs.; Sigma Xi; Phi Lambda Upsilon; Kappa Delta Pi; Gamma Alpha; F. and A. M., Echo Lake Country Club. Contbr. to: Over 10 Articles to Scientific Mags. and Publications. Ph.D. Dissertation: The Relations Between Interfacial Tension, Adhesion Tension, and Adsorption from Binary Liquid Mixtures. Travel: Canada; England; France; Belgium; Denmark. Hobbies: Golf; Woodworking; Landscaping. Listed in: Who's Who in the East; Chem. Who's Who; A.M.S.; Who's Who in Engrng.

MILLER, Franklin Rush, Assoc. Prof. of Med., Jefferson Med. Coll. and Hosp., Philadelphia, Pa. INTERNAL MEDICINE.

MILLER, George Abram, 1203 W. Illinois St., Urbana, Ill. MATHEMATICS.

MILLER, Gerrit S., Jr., Assoc. Biol., U. S. Natl. Museum, 2810 Adams Mill Rd., N. W., Washington, D. C. MAMMALOGY.

MILLER, Harry Milton, Jr., Assoc. Dir., Natural Sci., Rockefeller Foundation, 49 W. 49th St., N. Y., N. Y. ZOOLOGY.

MILLER, John Allen, Assoc. Prof. of Zool. and Entomol., Ohio State Univ., Columbus, Ohio. ANIMAL BEHAVIOR, NEUROLOGY.

MILLER, Julian C., Horticulturist and Hd. Horticulture Rsch. Dept., La. State Univ., Baton Rouge, La. HORTICULTURE.

MILLER, Julian C., Horticulturist and Hd. Horti-Plant Pathol., Univ. of Ga., Athens, Ga. MYCOLOGY.

MILLER, L. Wallace, Assoc. Prof. of Biol., Ill. State Normal Univ., Normal, Ill. MYCOLOGY.

MILLER, Lawrence Peter, Biochemist, Boyce Thompson Inst. Plant Rsch., 1086 N. Broadway, Yonkers, N. Y. PLANT CHEMISTRY.

MILLER, Lewis Benjamin, Assoc. Prof. of Chem. Engrng., Univ. of Cincinnati, Cincinnati, Ohio. CHEMICAL ENGINEERING.

MILLER, M. Raines, Chemist, Agri. Expt. Sta., Box 9234, Univ. of Nev., Reno, Nev. AGRICULTURAL CHEMISTRY.

MILLER, Malcolm, Anatomy Dept., Cornell Univ., Ithaca, N. Y. VETERINARY ANATOMY.

MILLER, Merritt Finley, Dean Emer., Coll. of Agri., Univ. of Mo., 514 High St., Columbia, Mo. SOIL SCIENCE.

MILLER, Murray Lincoln, Dir. of Audio-Visual Edn.: Normal State Univ., Normal, Ill. PHYSICS, PSYCHOLOGY, AERONAUTICAL SCIENCE; EDUCATIONAL RESEARCH. b. Ridgeville, Ill., Nov. 9, 1907. s. James Parks and Sarah Elizabeth Agnes (McMurray) M. Edn.: B.S., Bradley Univ., 1930; M.A., Pittsburgh, 1933; Ph.D., ibid., 1946. m. Margaret Troeger, 1934. c.: James Parks; Nancy Ann. Exp.: Supervising Tchr., State Tchrs. coll., Indiana, Pa., 1938-43; Prof. Fine and Indus. Arts, Tchrs. Coll., Columbia Univ., New York, N. Y., 1939-40; Sr. Specialist, Reading and Audio-Visual, Air Univ., Montgomery, Ala., 1946-50; Dir. of Audio-Visual Edn., Ill. State Normal Univ., Normal, Ill., 1950—; Part-time: Educational Consultant, W. A. E., U. S. Air Force, 1951—; Chmn. Reading Rsch. Associates, 1950—. Mem.: Amer. Psychological Assn.; Amer. Edn. Rsch. Assn.; Inst. of Aeronautical Sci.; A.A.A.S. Author: Audio-Visual Operator's Manual, 1953. Contbr. to: Amer. Schl. Bd. Jour.; Schl. Executive; Edn. Screen; Ind. Arts and Vocational Edn. Special Int.: Audio-Visual Rsch.; Accelerated Reading Methods; Communication Theory; Readability; Vision, Optometrics.

MILLER, Neal E., Yale Univ., New Haven, Conn. PSYCHOLOGY.

MILLER, Newton, Physician and Surgeon, 231 N. Main St., Porterville, Calif.

MILLER, Norman, Prof. of Math., Queens Univ., Kingston, Ont., Can. MATHEMATICS.

MILLER, Osborn Maitland, Dept. Survey and Maps, Amer. Geographical Soc., Broadway at 156th St., N. Y., N. Y. CARTOGRAPHY.

MILLER, Pierre A., Assoc. Prof. of Plant Pathol. and Assoc. Plant Pathologist, Expt. Sta., Univ. of Calif., 405 Hilgard Ave., Los Angeles, Calif. PLANT PATHOLOGY.

MILLER, Ralph LeRoy, Geologist, Geol. Survey, U. S. Dept. of Interior, 1308 35th St., N. W., Washington, D. C. GEOLOGY.

MILLER, Ralph Lester, Pres., Insecticide Rsch., Inc., 701 S. Hyer St., Orlando, Fla. ENTOMOLOGY.

MILLER, Raymond Foster, Prof. of Physics, Baker Univ., Baldwin City, Kans. LIGHT AND RADIO PHYSICS.

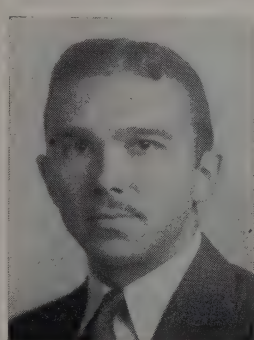
MILLER, Richard Birnie, Prof. of Zoology, Dept. of Zoology, Univ. of Alberta, Edmonton, Alberta, Canada. AQUATIC BIOLOGY. b. March 29,

1915, Weyburn, Saskatchewan. s. Moore A. and C. Muriel (Birnie) M. Edn.: B.A., Univ. of Toronto, 1936; M.A., *ibid.*, 1937; Ph.D., *ibid.*, 1939. m. L. Frances Harkness, Sept. 4, 1937. d. Dr. and Mrs. J. G. Harkness of St. Catharines, Ontario. c.: Richard Graham; Frances Anne Ellen. Exp.: Res. Asst., Dept. of Biol., Univ. of Toronto, 1938-39; Mem. of Staff of Ontario Fisheries Res. Lab., 1936-39; Lectr. in Zool., Univ. of Alberta, 1939-43; Asst. Prof. of Zool., *ibid.*, 1944; Assoc. Biol., Fisheries Res. Bd. of Canada, Summers, 1944-45; Assoc. Prof., Univ. of Alberta, 1947-49; Prof., 1950—. Mem.: Amer. Fisheries Soc.; Amer. Soc. of Limnology and Oceanography; Founding Mem., Canadian Cons. Assn.; Amer. Wildlife Soc. Contrb. to: Copeia; Canadian Jour. of Res.; Canadian Entom.; Jour. of Wildlife Management; Canadian Fish Culturist; Jour. of the Fisheries, Rsch. Bd. of Canada; Bull. of the Fisheries, Rsch. Bd. of Canada. Ph.D. Dissertation: A Contribution to the Ecology of the Chironomidae of Costello Lake, Algonquin Park, Ontario. War Record: Two Yrs. with Univ. of Alberta Contingent of Canadian Officers Trng. Corps (Res.). Travel: Canada; U. S. A.; Europe. Hobbies: Fishing; Camping. Listed in: Who's Who in the Western Hemisphere. Special Int.: Parasitology, Fisheries Management.

MILLER, Robert A., Pittsburgh, Plate Glass Co., 2000 Grant Bldg., Pittsburgh 19, Pa. CERAMICS.

MILLER, Robert Cunningham, Dir., Calif. Acad. Sci., San Francisco, Calif. ZOOLOGY.

MILLER, Shelby Alexander, Prof. of Chem. Engrng., Univ. of Kans., Lawrence, Kans. CHEMICAL ENGINEERING. b.



July 9, 1914, Louisville, Ky. s. George W. and Stella K. (Cralle) M. Edn.: B.S. in Ch.E., Speed Sci. Schl., Univ. of Louisville, Ky., 1935; Ph.D., Univ. of Minn., 1944. c.: Shelby C. Exp.: Asst. Chem., Corhart Refractories Co., 1935; Tchng. Asst., Chem. Engrng., Univ. of Minn., 1935-39; Chem. Engr., Engrng. Rsch. Lab., E. I. du Pont de Nemours and Co., 1940-46; Assoc. Prof., Chem. Engrng., Univ. of Kans., 1946-50; Prof., Chem. Engrng., *ibid.*, 1950—.

Mem.: A.I.Ch.E.; A.C.S.; Sigma Xi; Sigma Tau; A.S.E.E.; A.A.A.S.; Alpha Chi Sigma; Triangle. Contrb. to: Chem. Jours. Ph.D. Dissertation: Agitation of Two-Phase Systems of Immiscible Liquids. Gen. Int.: Author, Annual Rev. on Filtration for Industrial and Engrng. Chem. Contrb. to: 3rd Ed. Perry's Chem. Engrng. Handbook. Hobbies: Music; Conversation; Lang. and Word Use. Special Int.: Agitation, Filtration, Gas Dispersion.

MILLER, Wilbur Hobart, Dir., Custom Sales, Lederle Lab. Div., Amer. Cyanamid Co., 30 Rockefeller Plaza, N. Y. C. ORGANIC AND BIO-CHEMISTRY. b. Boston, Mass., Feb. 15, 1915. s. Silar R. and Muriel (Green) M. Edn.: B.S., Univ. of N. H., 1936; M.S., *ibid.*, 1938; Ph.D., Columbia Univ., 1942. m. Harriett Harmon, June 20, 1941. c.: Nancy Iher and Warren Harmon. Exp.: Grad. Asst. and Instr. in Chem., Univ. of N. H., 1936-38; Asst. in Chem. and Statutory Asst. in Chem., Columbia Univ., N. Y. C., 1938-40; Univ. Fellow, *ibid.*, 1940-41; Rsch.



Chemist, Stamford Rsch. Lab. of Amer. Cyanamid Co., Stamford, Conn., 1941-49; Washington Tech.

Repr., Amer. Cyanamid Co., Washington, D. C., 1949-53. Mem.: Sigma Xi; Phi Kappa Phi; Phi Lambda Upsilon; Amer. Chem. Soc.; A.A.A.S.; N. Y. Acad. of Sci.; Amer. Acad. of Polit. and Soc. Sci. Contrb. to: Jour. of Amer. Chem. Soc.; Sci.; Chem. and Engrng. News. Special Int.: Enzymes; Synthesis and Mechanism of Action of Drugs; Molecular Rearrangements.

MILLER, Shirley Putnam, Prof. Emer. Anatomy, Univ. of Minn., Minneapolis, Minn. ANATOMY.

MILLER, Spencer, retired, 661 Glenneyre St., Laguna Beach, Calif. ENGINEERING.

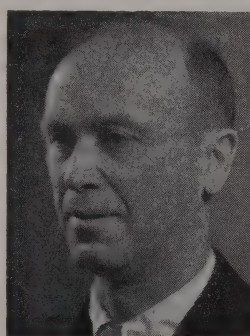
MILLER, Thomas Grier, Prof. of Clinical Med., Univ. of Pa., Philadelphia, Pa. INTERNAL MEDICINE.

MILLER, Ward L., Prof. of Botany, S. Dak. State Coll., Brookings, S. Dak. PLANT MORPHOLOGY.

MILLER, Wilford Stanton, Prof. of Ednl. Psychol., 112 Psychol. Bldg., Univ. of Minn., Minneapolis, Minn. EDUCATIONAL PSYCHOLOGY.

MILLER, William Dykstra, Assoc. Prof. of Forestry, N. C. State Coll., Agri. and Engrng., Raleigh, N. C. FORESTRY.

MILLIGAN, Charles H., Rsch. Dir., Amer. Agril. Chem. Co., Carteret, N. J. CHEMISTRY. b.



Sevierville, Tenn., Oct. 5, 1886. Edn.: A.B., Carson and Newman Coll., 1912; B.S., Univ. of Chicago, 1915; Ph.D., *ibid.*, 1919. m. Ruth Tuttle, Sept. 26, 1926. c.: Marion; Barton. Exp.: Instr. in Biol., Ewing Coll., Ewing, Ill., 1912-13; Asst. Prin., Monroe City H. S., Monroe, La., 1913-14; Assoc. Prof. Chem., N. Y. State Schl. of Claymaking and Ceramics, Alfred, N. Y., 1915-17; Swift Fellow, Rsch. in Organic Chem., Univ. of Chicago, 1917-18; U. S. Army, 1918-19; Grafflin Fellow, Johns Hopkins Univ., 1919-21; Rsch. Chemist, Procter & Gamble, Ivorydale, Ohio, 1921-26; Rsch. Chemist, Champion Coated Paper Co., Hamilton, Ohio, 1926-29; Rsch. Dept., The Amer. Agril. Chem. Co., Newark, N. J., 1929-35; Rsch. Dir., *ibid.*, Carteret, N. J., 1936—. Mem.: Sigma Xi; Gamma Alpha; Amer. Chem. Soc.; A.A.A.S.; N. Y. Acad. of Sci. Contrb. to: Jour. Amer. Chem. Soc.; Indus. and Engrng. Chem.; Jour. Physiol. Chem.

MILLIGAN, Lowell Haines, Asst. Dir. of Rsch., Norton Co., 1 Howatson Way, Worcester, Mass. ABRASIVE PRODUCTS.

MILLIKAN, Clark Blanchard, Prof. of Aeronautics, Calif. Inst. of Tech., Pasadena, Calif. AERONAUTICS.

MILLIKAN, Robert Andrews, Prof. Emeritus Physics, Vice-Pres., Bd. of Trustees, Calif. Inst. of Tech., Pasadena, Calif. PHYSICS. b. Mar. 22, 1868, Morrison, Ill. s. Silas Franklin and Mary Jane (Andrews) M. Edn.: A.B., Oberlin Coll., 1891; A.M., *ibid.*, 1893; Ph.D., Columbia Univ., 1895. Hon. Deg.: Sc.D., Oberlin, 1911; Northwestern, 1913; Univ. of Pa., 1915; Columbia Univ., 1917; Amherst, 1917; Univ. of Dublin, 1924; Yale, 1925; Leeds Univ., 1927; Princeton, 1928; N. Y. Univ., 1929; Harvard, 1932; Univ. of Rochester, 1934; Univ. of Melbourne, 1939; LL.D., Univ. of Calif., 1924; Univ. of Colo., 1927; Univ. of Mich., 1929; Univ. of Southern Calif., 1931; Mills Coll., 1935; Loyola Univ., 1938; Univ. of Chicago, 1941; William Jewell Coll., 1944; Ph.D., King John Casimer Univ., Poland, 1926; Univ. of Ghent, 1927; Docteur Honoris Causa, Univ. of Liege, 1930; Univ. of Paris, 1939; LL.D., Bradley Univ., 1952. m. Greta Irvin Blanchard of Oak Park, Ill., Apr. 10, 1902. d. Clinton R. Blanchard. c.: Clark Blanchard; Glenn Allen (dec.); Max Franklin. Exp.: Asst. in Physics,

Univ. of Chicago, 1896-97; Assoc., *ibid.*, 1897-99; Instr., *ibid.*, 1899-1902; Asst. Prof., *ibid.*, 1902-07; Assoc. Prof., *ibid.*, 1907-10; Prof., *ibid.*, 1910-21; Dir. of Norman Bridge Lab. of Physics and Chmn. of Exec. Coun. of Calif. Inst. of Tech., 1921-45; Vice-Pres., Bd. of Trustees, 1945—. Hon. Pos.: Trustee Huntington Library; Awarded Comstock Prize, Natl. Acad. of Sci., 1913; Edison Medalist, Amer. Inst. of Elec. Engrg., 1922; Hughes Medalist, Royal Soc. of Great Britain, 1923; Nobel Prize in Physics, 1923; Faraday Medalist, London Chem. Soc., 1924; Matteucci Medalist, Societa Italiana della Sci., 1925; Gold Medalist, Amer. Soc. of Mech. Engrs., 1926; Messel Medalist, Soc. of Chem. Indus., British, 1928; Gold Medal Holland Soc., 1928; Soc. Arts and Sci., 1929; Radiol. Soc. of N. Amer., 1930; Gold Medal from Roosevelt Memorial Assn., 1932; Gold Medal of Franklin Inst., 1937; Joy Kissen Mookerjee Gold Medal of the Indian Assn. for Cultivation Sci., 1930; Oersted Medal of Amer. Assn. of Physics Tchrs., 1940; Decorated Chevalier de l'Ordre Natl. de la Legion d'Honneur, 1931; Comdr., *ibid.*, 1936; Order of the Jade, China, 1940; Official of Order Al Merito, Chile, 1944; Medal for Merit, U. S., 1947; Fellow of Amer. Acad. of Arts and Sci.; Pres., A.A.A.S., 1929. Mem.: Natl. Acad. of Sci.; Amer. Philosophical Soc.; Sigma Xi; Phi Beta Kappa; Hon. Mem. 21 Foreign Scientific Soc. Contrb. to: Phys. Rev.; Proceedings of Natl. Acad. of Sci. War Record: Lt. Col., U. S. A.; Chief of Sci. and Rsch., Div. of Signal Corps, 1917-19. Travel: Europe; Canada; Chile; India; etc. Hobby: Golf. Listed in: Who's Who; Who's Who in Amer.

MILLIS, John, retired, Col., U. S. Army, Fern Hall Hotel, 3250 Euclid Ave., Cleveland, Ohio. **ENGINEERING.**

MILLS, Alfred Preston, Asst. Prof. in Phys. Chem., Univ. of Miami, Coral Gables, Fla. (Military Leave).



PHYSICAL CHEMISTRY. b. Jan. 8, 1922, Fallon, Nev. s. Percy E. and Ruth E. (Candee) M. Edn.: B.S., Univ. of Nev., 1943; Ph.D., Tulane Univ., 1949. m. Josephine Elizabeth Sullivan of New London, Conn., Aug. 6, 1946. d. Margaret G. Sullivan. Exp.: Civil Service Physicist P-1, 1943; U. S. N., LTJG, 1943-46; Ellis-Foster Rsch. Fellow, Tulane, Univ., 1946-48; Grad. Tehng. Fellow, *ibid.*, 1948-49; Instr. in Phys. Chem., Univ. of Miami, Coral Gables, Fla., 1949-51; Asst. Prof. in Physical Chemistry, *ibid.*, 1951—. Mem.: A.C.S.; Amer. Phys. Soc.; A.A.A.S.; Fla. Acad. of Sci.; Sigma Xi; Phi Kappa Phi; A.A.U.P.; Theta Chi; Alpha Chi Sigma; Alpha Epsilon Delta; Omicron Delta Kappa. Contrb. to: Jour. of A.C.S. Ph.D. Dissertation: Some Derivatives of Trichlorosilane. War Record: (See above). Hobbies: Tennis; Bridge; Chess. Listed in: A.M.S.; Who's Who Among Students in Amer. Coll. and Univ. Special Int.: Physical Properties of Organosilicon Compounds.

MILLS, Clarence Alonzo, James T. Heady Prof. of Exptl. Med., Univ. of Cincinnati, Cincinnati General Hosp., Cincinnati 29, Ohio. **MEDICAL RESEARCH.** b. Miami, Ind., Dec. 9, 1891. s. Alonzo F. and Margaret Elizabeth (Wininger) M. Edn.: B.A., Univ. of S. Dak., 1917; Ph.D., Univ. of Cincinnati, 1920; M.D., *ibid.*, 1922. m. Edith Clarissa Parrett, June 22, 1915. c.: Russell C.; Marjorie Ruth; Don H. Exp.: Asst. in Physiol., Univ. of S. Dak., 1917; Instr. in Physiol., Univ. of Kans., 1917-18; Instr. in Physiol., Marquette Med. Schl., 1918; Instr. in Biochem., Univ. of Cincinnati, 1919-22; Fellow, Natl. Rsch. Council, 1922-23; Asst. Prof. of Internal Med., Univ. of Cincinnati, 1923-26; Assoc. Prof. of Med., Peking Union Med. Coll., Peking, China, 1926-28; Assoc. Prof. of Internal Med., Univ. of Cincinnati, 1928-30; James T. Heady Prof. of Exptl. Med., *ibid.*, 1930—; Dir., Labs. for Exptl. Med., *ibid.*, 1930—. Mem.: Amer. Soc. Biochemists; Amer. Physiol. Soc.; A.M.A.; A.A.A.S.; Sigma Xi;

A.A.K.; etc. Author: Living with the Weather, 1934; Med. Climatology, 1939; Climate Makes the Man, 1942; Reflective Radiant Conditioning, 1950. Contrb. to: Jour. A.M.A.; Amer. Jour. Physiol.; Human Biol.; Amer. Jour. Med. Sci.; Sci.; etc. Special Int.: Blood Clotting and Control of Hemorrhage; Climatic and Weather Effects on Man; Vitamin Requirements; Air Pollution and Community Health; Reflective Radiant Conditioning.

MILLS, Frederick Cecil, Prof. of Econ. and Statistics, Columbia Univ., N. Y., N. Y. **ECONOMICS.**

MILLS, Harlow B., Chf., Ill. Natural History Survey, Urbana, Ill. **ENTOMOLOGY, CONSERVATION.**

MILLS, James Edward, Chf. Chemist, Sonoco Products Co., Hartsville, S. C. **CHEMISTRY.**

MILLS, Roscoe Edward, Prof. of Engrng. Mat.; Research Assoc., Engrng. Experiment Station, Schl. of Civil Engineering, Purdue Univ., Lafayette, Ind. 141 East Oak Street, West Lafayette, Ind. **ENGINEERING.** b. Monitor, Ind., December 20, 1897. s. Edward and Olivia (Fretz) M. Edn.: B.S., Civil Engrng., Purdue Univ., 1920; M.S., *ibid.*, 1928. m. Ethel Katherine Baker of Dayton, Ind., June, 1922. d. Mr. and Mrs. Edward E. Baker. c.: Edward Lee; Lois Irene. Exp.: 1920-21, Jr. Engr., Buckeye Pipeline Co., Lima, Ohio, Pipeline Location, Construction and Tankyard Layouts; 1921-28, Rsch. Asst., Engrng. Expt. Sta., Purdue Univ., Highway Rsch., Cooperative Project with U. S. Bur. of Pub. Roads; 1928-37, Rsch. Asst., Engrng. Expt. Sta., *ibid.*; 1937-39, Instr. in Civil Engrng., *ibid.*; 1939-44, Asst. Prof., *ibid.*; 1944-48; Assoc. Prof. of Civil Engrng., *ibid.*; 1948—, Prof. of Engrng. Mat., *ibid.* Mem.: Amer. Soc. for Testing Materials; Amer. Concrete Institute; A.A.U.P.; Amer. Soc. for Engineering Education; Sigma Xi; Chi Epsilon; Triangle; Purdue Univ. Club; Mason. Contrb. to: Amer. Concrete Inst. Hobbies: Hunting; Fishing; Wood Working. Listed in: Who's Who in Engrng.; Who's Who in the Midwest; A.M.S.

MILLS, Wilford Richard, Asst. Prof. of Plant Pathol., Dept. of Botany, Pa. State Coll., State College, Pa. **PLANT PATHOLOGY.**

MILNE, Lorus Johnson, Rsch. Assoc., Dept. of Zool., Univ. of Vt., Burlington, Vt. **ZOOLOGY.**

MILNER, Ernestine Cookson, (Mrs. Clyde A.), Assoc. Prof. of Psychol., Guilford Coll., Guilford, Coll., N. C. **PSYCHOLOGY.** b. New Straitsville, Ohio, 1896. d. Charles W. and Madge (Davis) M. Edn.: A.B., Miami Univ., 1918; B.S., *ibid.*, 1919; M.A., Wellesley Coll., 1926. m. Clyde A. Milner, July 5, 1928. Exp.: Y.W.C.A. Secy., Miami Univ., Oxford, Ohio, 1918-19; Y.W.C.A. Secy., Ohio State Univ., Columbus, Ohio, 1919-23; Asst. Prof. of Psychol. and Dean of Women, Parsons Coll., Fairfield, Iowa, 1924-26; Asst. Prof. of Psychol. and Dean of Women, Earl-



ham Coll., 1926-30; Assoc. Prof. of Psychol., Guilford Coll., N. C., 1930—. Mem.: Amer. Psychol. Assn.; N. C. Psychol. Assn.; Southern Soc. of Phil. and Psychol.; Delta Zeta; Phi Beta Kappa; Altrusa. Special Int.: Personnel; Child Psychol.

MIMNO, Harry Rowe, Gordon McKay Prof. of Applied Physics, Harvard Univ., Cambridge, Mass. **RADIO PROPAGATION.**

MINAEFF, Michael George, Technical Dir., Zonite Products Corp., New Brunswick, N. J. **INDUSTRIAL CHEMISTRY.**

MINDLIN, R. D., Columbia Univ., New York, N. Y. **APPLIED MECHANICS.**

MINER, Carl Shelley, Dir., Miner Lab., 9 S. Clinton St., Chicago, Ill. CHEMISTRY.

MINER, John Rice, Assoc. Editor, Div. Publications, Mayo Clinic, 619 Seventh Ave., S. W., Rochester, Minn. BIOMETRY.

MINER, Leroy, 363 Marlboro St., Boston, Mass. DENTISTRY.

MINOR, Ralph Smith, Prof. Emer. Physics and Optometry, Univ. of Calif., 2514 Cedar St., Berkeley, Calif. OPTICS, OPTOMETRY.

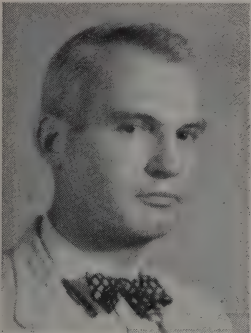
MINOT, George Richards, Prof. of Med., Harvard Univ. and Dir., Thorndike Memorial Lab., Boston City Hosp., Boston, Mass. INTERNAL MEDICINE.

MINSHALL, William Harold, Assoc. Botanist, Div. Botany, Sci. Service, Dominion Dept. of Agri., Ottawa, Ont., Can. PLANT PHYSIOLOGY.

MINSK, Louis Morton, Rsch. Assoc., Eastman Kodak Co., Kodak Park, Rochester 4, N. Y. ORGANIC CHEMISTRY. b. N. Y., N. Y., June 14, 1908. s. Harris B. and Gussie (Udelowitz) M. Edn.: B.S., Wesleyan Univ., 1929; M.A., ibid., 1930. m. Rose S. Strick, June 13, 1933. c.: Barbara; Marla. Exp.: Rsch. Fellow, Wesleyan Univ., 1929-30; Chemist, Conn. State Water Comm., Summers 1929 and 1930; Rsch. Chemist, Eastman Kodak Co., 1930—. Mem.: Amer. Chem. Soc.; N. Y. Acad. Sci.; Phi Beta Kappa; Sigma Xi. Contrb. to: Jour. Amer. Chem. Soc. Special Int.: Polymerization; The Reaction of Polymers; The Adaptation of Synthetic Polymers to the Photographic Industry.

MIRA, Julio Aurelio, Hd. and Prof., Dept. of Math., Manhattanville Coll. of the Sacred Heart, 133rd St. and Convent Ave., N. Y., N. Y. MATHEMATICS.

MIRICK, George Swope, Assoc. Prof. of Med., Johns Hopkins Univ., Schl. of Med., Chf. of Med. Service, Baltimore City Hosp., Hollins Rd., R.F.D. No. 7, Baltimore 9, Md. INTERNAL MEDICINE, INFECTIOUS DISEASE. b. Washington, D. C., Jan. 6, 1909. s. Harry Brown and Blanche (Swope) M. Edn.: A.B., Princeton Univ., 1931; M.D., Johns Hopkins Univ., Schl. of Med., 1935. m. Claire Mackenzie, Mar. 21, 1942. c.: Sally Mackenzie and Jennifer Swope. Exp.: Intern in Med., Johns Hopkins Hosp., Baltimore, Md., 1935-36; Asst. Resident and Resident in Med., Lane-



Stanford Hosp., San Francisco, Calif., 1936-39; Asst. to Rockefeller Inst. for Med. Rsch., 1940-46; Assoc. Prof. of Med., Johns Hopkins Univ., Schl. of Med., Baltimore, Md., 1946—; Acting Prof. of Bacteriol., ibid., 1949-50; Chf., Med. Service, Baltimore City Hosp., Baltimore, Md., 1952—; Consultant, Vet. Admin. and U. S. Public Health Service. Mem.: Soc. of Amer. Bacteriol.; Amer. Assn. of Immunol.; Soc. for Exptl. Biol. and Med.; A.A.A.S.; Amer. Soc. for Clin. Investigation; Harvey Soc.; N. Y. Acad. of Sci.; Amer. Fed. for Clin. Rsch.; Alpha Omega Alpha; Sigma Xi; Interurban Clin. Club. Contrb. to: Jour. of Exptl. Med.; Jour. of Clin. Investigation; Sci.; Proc. of Soc. for Exptl. Biol. and Med.; Jour. of Bacteriol.; Jour. of Immunol.; Amer. Jour. of Med. Sci.; Bull. of Johns Hopkins Hosp.; Jour. of Amer. Med. Assn.; Southern Med. Jour.; Amer. Jour. of Hygiene. War Record: Lt. j.g., Commdr., MC, U.S.N.R.; Naval Med. Rsch. Unit No. 2, Guam. Special Int.: Respiratory Diseases; Chemotherapy; Infectious Hepatitis.

MISER, Hugh D., Chf. Fuel Section, U. S. Geol. Survey, Washington, D. C. GEOLOGY.

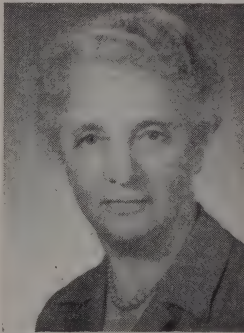
MIRICK, Gordon Richmond, Tchr. of Math., Friends Seminary, 423 W. 120th St., N. Y. City 27, N. Y. MATHEMATICS AND MECHANICS. b. Lyons, N. Y., June 14, 1894. s. William Perrine and Ellen (Richmond) M. Edn.: A.B., Univ. of Mich., 1920; M.A., ibid., 1923; M.A., Columbia Univ., 1930. m. Helen Cook, June 11, 1927. Exp.: Asst. in Math., Mich., 1914-15; Tchr., Math. and Chem., East H. S., Rochester, N. Y., 1919-22; Math. and Physics, Scarborough Schl., 1922-23; Math., Lincoln Schl. of Tchrs. Coll., Columbia Univ., 1923-42; Prin., Horace Mann Lincoln Schl., 1941-43; Staff, ibid., 1942-49; Assoc. Tchr. of Math., Columbia Univ., 1939-49; Asst. Dir. Tchrs. Coll., Schl. and Schl. Experimentation, ibid., 1943-48; Tchr. of Math., Friends Seminary, N. Y. C., N. Y., 1949—. Hon. Pos.: Mem. Comm. for the Reorganization of the Secondary Schl. of Chile, 1946. Mem.: Math. Assn.; Math. Soc.; Fellow, A.A.A.S.; Phi Delta Kappa. Co-Author: Plane Geometry and Its Uses, Solid Geometry and Its Uses, Algebra and Its Uses, 1930; Workbooks in Algebra, Geometry and Trigonometry, 1934. Contrb. to: Math. Tchr.; Tchrs. Coll. Record; The Clearing House; Metodos de Ensenanza en la Educacion Secundaria. War Record: Instr. in Math., Camp Zachary Taylor, W. W. I. Gen. Int.: Helped to Organize and was Exec. Dir. of the Curriculum Service Bur. for Internatl. Studies. Special Int.: Math. with Special Emphasis on a New Approach to Plane Geometry; Mechanics.



MISER, Wilson Lee, Prof. of Math., Vanderbilt Univ., Nashville, Tenn. MATHEMATICS.

MISES, R. V., Harvard Univ., Cambridge, Mass. APPLIED MATHEMATICS.

MISHULOW, Lucy, Sr. Bacteriologist, retired, 237 E. 20th St., N. Y., N. Y. BACTERIOLOGY AND IMMUNOLOGY. b. Russia, Sept. 25, 1886. d. Lazarus and Leah (Karlín) M. Edn.: A.B., Normal Coll., 1911. Exp.: Asst. Bacteriologist, Dept. of Health, N.Y., 1916-19; Bacteriologist, ibid., 1920-38; Sr. Bacteriologist, ibid., 1938—; retired, Sr. Bacteriologist; Instr. of Bacteriol. and Immunol., Univ. and Bellevue Hosp. Med. Coll., N. Y., 1918-35; Lectr., ibid., 1936; Examiner, Natl. Bd. Med. Examiners, 1928-47. Mem.: Soc. Amer. Bacteriologists (Emer.); Fellow (Until 1952), Amer. Public Health; Fellow, A.A.A.S. Contrb. to: Jour. Immunol.; Jour. Infectious Diseases; Jour. Preventive Med.; Jour. Amer. Med. Assn.; etc. Special Int.: Bacteriol. and Immunol., particularly in the Field of Vaccine Preparation, Immunological Response to Vaccination, Studies of the Safety of BCG Vac., and Cultural Characteristics of Tubercle Bacilli.

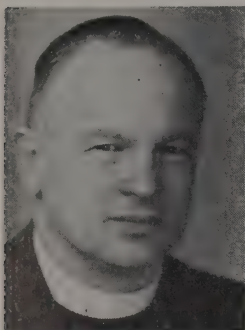


MITCHELL, Alfred King, 16 Keswick St., Garrett Park, Md. AERODYNAMICS.

MITCHELL, Allan Charles Gray, Prof. and Hd., Dept. of Physics, Ind. Univ., Bloomington, Ind. PHYSICS.

MITCHELL, Charles Lyman, Prin. Meteorologist, U. S. Weather Bureau, 24th and M Sts., N. W., Washington, D. C. METEOROLOGY.

MISIAK, Rev. Henry, Asst. Prof. of Psychol., Fordham Univ., 3103 Arlington Ave., N. Y. 63, N. Y.



PHYSIOLOGY. b. February 4, 1911, Dolsk, Poland. s. Stanislaus and Jadwiga (Neyman) M. Edn.: B.A., J. Wybicki Schl., Srem, Poland; M.Theol., Jan Kazimierz Univ., Lwow, Poland; Ph.D., Fordham Univ.; Study at: Univ. of Glasgow, Scotland; Columbia Univ., N. Y. Univ. Exp.: Instr. of Relig. and Philos., H. S., Poland, 1936-39; Instr. of Relig., Philos. and Psychol., Polish Coll. in Great Britain, 1940-44; Instr. of Exp. Psychol., Fordham Univ., 1946-49; Asst. Prof. of Exp.

Psychol., *ibid.*, 1949—. Mem.: Amer. Psychol. Assn.; Amer. Catholic Psychol. Assn.; Eastern Psychol. Assn.; A.A.A.S.; New York Acad. of Sci.; Polish Inst. of Arts and Sci. in Amer. Contrb. to: European and Amer. Jours. Ph.D. Dissertation: Age and Sex Differences in Monocular and Binocular Critical Flicker Frequency. Travel: Europe; N. Amer.; England. Hobbies: Touring by Automobile. Listed in: A.M.S.; Amer. Psychol. Assn. Dir.

MITCHELL, Cladde William, Surgeon, 818 Bonifant St., Silver Spring, Md. SURGERY.

MITCHELL, David Ray, Hd., Dept. of Mineral Engineering, The Pa. State Coll., Mineral Industries Bldg., State College, Pa. MINERAL DRESSING. b. June 12, 1898, Bells Landing, Pa. s. John F. and Gertrude (Johnson) M. Edn.: B.S., Pa. State Coll., 1924; M.S., *ibid.*, 1927; E.M., Univ. of Ill., 1930. m. Margaret L. Rishall of State Coll., Pa., Mar. 18, 1925. c.: David Ray, Jr.; Mary Patricia. Exp.: Bethlehem Mines Corp., 1924-26; Assoc. Prof. of Mining and Metallurgical Engr., Univ. of Ill., 1927-37; The Pa. State Coll., Prof. of Mining and Hd., Dept. of Mineral Engrng., 1938—. Hon. Pos.: Sec., Doal Div., A.I.M.E. Mem.: I.M.I.; C.M.I.A.; A.M.C.; Sigma Xi; Sigma Gamma Epsilon. Author: Coal Preparation, 1943. Contrb. to: Amer. Mining Congress Jour.; Mechanization; Coal Technology. War Record: 211 Field Signal Br., World War I. Listed in: Who's Who in the East; Who's Who in Engrng.; Young Men of Sci.; Who's Who in Amer.

MITCHELL, H. K., Kerckhoff Lab., Calif. Inst. of Tech., Pasadena, Calif. BIOCHEMICAL GENETICS.

MITCHELL, Harold Hanson, Prof. of Animal Nutrition, Univ. of Ill., Urbana, Ill. NUTRITION. b. Evanston, Ill., Jan. 22, 1886. s. Charles Page and Clara Minerva (Hanson) M. Edn.: Ethel Opal Kilbuey, July 8, 1910. c.: Donald Stanley; David Kilbuey; Robert Hanson (dec.); Marguerite Evelyn. Exp.: Asst. Chemist, Ill. Agril. Exp. Station, 1909-13; Asst. in Animal Nutrition, Univ. of Ill., 1913-18; Asst. Prof., *ibid.*, 1918-20; Assoc. Prof., *ibid.*, 1920-25; Prof. and Hd. Division, *ibid.*, 1925—. Mem.: A.A.A.S.; Amer. Inst. of Nutrition; Amer. Soc. of Animal Production; Amer. Chem. Soc.; Amer. Soc. Biol. Chemist; Soc. Exptl. Biol. and Med.; Phi Lambda Upsilon; Sigma Xi; Phi Kappa Phi. Author: Biochem. of the Amino Acids, with T. S. Hamilton, 1929; Nutrition and Climatic Stress, with Particular Reference to Man, with Marjorie Edman, 1951. Contrb. to: Jour. of Nutrition; Jour. Animal Sci.; Jour. Biol. Chem.; Archives of Biochem.; Nutrition Abstracts and Reviews; Jour. Amer. Dietetic Assn. Special Int.: Animal and Human Nutrition; Protein, Energy and Mineral Requirements and Utilization; Fluorine Toxicity.

MITCHELL, Henry Bedinger, Chmn. of Bd. and Treas., Griscom-Russell Co., 285 Madison Ave., N. Y., N. Y. EDUCATION, MATHEMATICS.

MITCHELL, John Pearce, Register and Prof. Emer. of Chem., Stanford Univ., Stanford, Calif.; 235 Embarcadero Rd., Palo Alto, Calif. CHEMISTRY.

MITCHELL, Lane, Schl. of Ceramic Engrng., Ga. Inst. of Tech., Atlanta, Ga. CERAMICS.

MITCHELL, Louis, Dean and Prof. of Civil Engrng., Coll. of Applied Sci., Syracuse Univ., Syracuse, N. Y. HYDRAULIC AND SANITARY ENGINEERING.

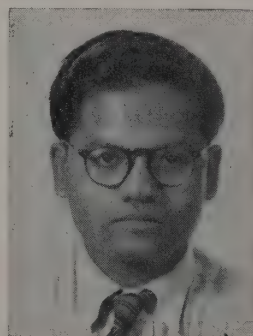
MITCHELL, Raymond Luther, Chemist, Rsch. Wood Cellulose, Forest Products Lab., Madison, Wis. ORGANIC CHEMISTRY.

MITCHELL, Roland Burnell, Hd. Dept. of Microbiology, U. S. Air Force School of Aviation Medicine, 234 Larkwood Drive, San Antonio 9, Tex. BACTERIOLOGY. b. March 24, 1910, Denton, Tex. s. Robert Marion and Robbie (Hawkins) M. Edn.: B.S., N. Tex. State Coll., 1932; M.A., Univ. of Tex., 1937; Ph.D., *ibid.*, 1939. m. Julianne Still of Houston, Tex., Sept. 6, 1938. d. Wm. Henry and Effie Moss Still. c.: Bonnie Ann; Susan. Exp.: Sci. Tchr., Tex. Pub. Schls., 1928-34; Supvr., Sci. Tchr. Trng., S. Tex. State Tchrs. Coll., 1934-37; Bacteriol., U. S. D. A., 1937-42; Dir., Waco-McLennan Co. Regional Tex. State Pub. Lab., 1942; Bacteriol. and Epidemiol., Med. Dept., U. S. Army, 1942-46; Asst. Dir. and Chf. Bacteriol., Bur. of Lab., Fla. State Bd. of Health, 1946-48; Prof. of Pub. Health Bacteriol., Univ. of Fla., 1947-48; Hd. Dept. Microbiol. and Lectr. to Post-Grad. Med. Students, U.S.A.F. Schl. of Aviation Med., 1948—; Fellow, A.P.H.A. Mem.: Sigma Xi; Soc. of Amer. Bacteriol.; A.A.A.S.; Soc. for Exp. Biol. and Med.; Aero Med. Assn.; Conf. of State and Provincial Pub. Health Lab. Dir.; Talon Frat. Contrb. to: Sci. Jours. Ph.D. Dissertation: Microbiol. of Houston Black Clay. War Record: Bacteriol. and Epidemiol., San. Corps, Med. Dept., U. S. Army, 1942-46; Entered as 1st Lt., Separated as Maj., 1946; Maj., U.S.A.F. (MSC-Reserve). Travel: U. S. Listed in: A.M.S.; A.A.A.S. Dir. Mem. Special Int.: Methods in Microbiology; Influence of Environmental Factors on Human Hosts and Their Parasites.

MITCHELL, Samuel Alfred, Leander McCormick Observatory, Univ. Sta., Charlottesville, Va.

MITCHELL, Theodora Bertis, Prof. of Zool. and Entomol., N. C. State Coll., Raleigh, N. C. ENTOMOLOGY.

MITRA, Ashesh Prosad, Visiting Prof. of Engrng. Rsch., 222 Elec. Engrng. Bldg., Pa. State Coll., State College, Pa. RADIOPHYSICS AND UPPER ATMOSPHERE.



b. Calcutta, India, Feb. 21, 1927. s. Ambika Charan and Subarna Prova (Biswas) M. Edn.: B.Sc., Calcutta Univ., 1946; M.Sc., *ibid.*, 1948. Exp.: Rsch. Asst., Inst. of Radio Physics and Electronics, Calcutta Univ., 1949-51; Colombo Plan Fellow, Radio-physics Lab., C.S.I.R.O., Sydney, Australia, 1951-52; Visiting Asst. Prof. of Engrng. Rsch., Pa. State Coll., State Coll., Pa., 1952—. Mem.: Sigma Xi; Indian Assn.

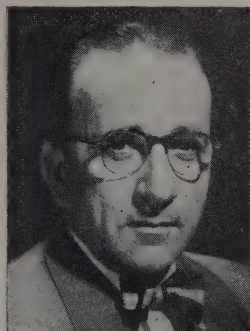
for the Cultivation of Sci.; Fellow, Indian Physical Soc. Contrb. to: Jour. Geophysical Rsch.; Jour. Atmospheric and Terrestrial Physics, Great Britain; Nature, England; Indian Jour. Physics; Jour. Scientific and Industrial Rsch., India. Special Int.: Upper Atmospheric Physics; Solar-terrestrial Relationships; Utilization of Galactic Radio Frequency Radiations for Ionospheric Studies; Physics of the Lower Ionosphere; Origin and Structure of the Ionospheric Layers; Atmospheric Photochem.; Recombination Processes in the Ionosphere.

MITTELMANN, Eugene, Dir. of Electronic Rsch. and Development, Ill. Tool Works, 2501 N. Keeler Ave., Chicago, Ill. RADIO ELECTRONICS.

MIXTER, George, Paige Memorial Library, Hardwick, Mass. SOCIAL, ECONOMIC SCIENCES.

MIXTER, William Jason, Bd. of Consultation, 180 Clyde St., Brookline, Mass. NEURO-SURGERY.

MITTELSTAEDT, Stanley George, Dean, Prof. of Pharm. and Pharm. Chem., Schl. of Pharm., Univ. of Ark., Little Rock, Ark. PHARMACY.



b. Connell, Wash., Oct. 15, 1909. s. Albert Frank and Amelia (Kirchner) M. Edn.: A.B., Northwest Nazarene Coll., 1934; B.S., Ph.C., State Coll. of Wash., 1937; M.S., ibid., 1938; Ph.D., Purdue Univ., 1948. m. Daisy Marie Brewer of Tipton, Ind., Aug. 12, 1940. d. Mrs. Elizabeth Brewer. c.: James Stanley; Carol Ann; Janet Lea. Exp.: Fellow, State Coll. of Wash., 1937-38; Asst. Instr., Purdue Univ., 1938-40; Acting Hd., Dept. of Chem., Boise Jr. Coll., 1940-42; Fellow, Amer. Found. for Pharm. Edn., 1946-48; Assoc. Prof. of Pharm. and Pharm. Chem., Univ. of Tex., 1948-51; Asst. Dean and Prof. of Pharm., Schl. of Pharm., Univ. of Ark., 1951-53; Dean, ibid., 1953. Mem.: Phi Kappa Phi; Sigma Xi; Rho Chi; Phi Lambda Upsilon; Phi Sigma Soc.; Kappa Psi. Co-author: Veterinary Drug Encyclopedia and Therapeutic Index. Contrb. to: Amer. Pharm. Jour.; A.C.S. Ph.D. Dissertation: The Preparation of Certain Fluoriodo Radiopaque Compounds. War Record: Aerial Navigator, U. S. Navy, 1942-46. Hobbies: Music; Photography. Special Int.: Fluoriodo Opaques.

Dept. of Chem., Boise Jr. Coll., 1940-42; Fellow, Amer. Found. for Pharm. Edn., 1946-48; Assoc. Prof. of Pharm. and Pharm. Chem., Univ. of Tex., 1948-51; Asst. Dean and Prof. of Pharm., Schl. of Pharm., Univ. of Ark., 1951-53; Dean, ibid., 1953. Mem.: Phi Kappa Phi; Sigma Xi; Rho Chi; Phi Lambda Upsilon; Phi Sigma Soc.; Kappa Psi. Co-author: Veterinary Drug Encyclopedia and Therapeutic Index. Contrb. to: Amer. Pharm. Jour.; A.C.S. Ph.D. Dissertation: The Preparation of Certain Fluoriodo Radiopaque Compounds. War Record: Aerial Navigator, U. S. Navy, 1942-46. Hobbies: Music; Photography. Special Int.: Fluoriodo Opaques.

MIYA, Tom S., Instr. in Pharmacol., Schl. of Pharmacy, Purdue Univ., Lafayette, Ind. PHARMACOLOGY, PHYSIOLOGY.

MOBERG, David Oscar, Asst. Prof., Chmn. of the Dept. of Social Sci., Bethel Coll., St. Paul E-4, Minn. SOCIOLOGY. b. Montevideo, Minn., Feb. 13, 1922. s. Fred L. and Anna (Sundberg) M. Edn.: B.A., Seattle Pacific Coll., 1947; M.A., Univ. of Wash., 1949; Ph.D., Univ. of Minn., 1952. m. Helen H. Heitzman, Mar. 16, 1946. c.: David Paul; Lynette M.; Jonathan M. Exp.: Clerk-Typist, Army of the U. S., 1942-46; Pastor, Sylvan Way Baptist Church, Bremerton, Wash., 1946-48; Assoc. Instr., Univ. of Wash., Seattle, Wash., 1948-49; Instr., Bethel Coll., St. Paul, Minn., 1949-52; Asst. Prof. of Sociol., ibid., 1952—. Hon. Pos.: Dir., Religious Edn. Poll, Wash. Public Opinion Lab., Univ. of Wash., 1948-49. Mem.: Amer. Sociological Soc.; Midwest Sociological Soc.; Comm. for the Scientific Study of Religion; Alpha Kappa Delta. Contrb. to: Midwest Sociologist; Amer. Sociological Review; Bethel Seminary Quarterly; Jour. of Criminal Law and Criminol.; Jour. of Gerontol.; Religious Edn.: Sociol. and Social Rsch. Gen. Int.: Mem. of the Comm. on Survey of Indians in St. Paul of the St. Paul Council of Human Relations; Leadership in the Calvary Bapt. Church. Special Int.: The Church as a Social Institution; Gerontol.

MODER, Joseph John, Jr., Assoc. Prof. of Industrial Engr., Ga. Inst. of Tech., Atlanta, Ga. ENGINEERING STATISTICS AND QUALITY CONTROL IN INDUSTRIAL ENGINEERING AND APPLICATIONS OF THE LIQUID CYCLONE IN THE CHEMICAL AND MINING INDUSTRIES. b. St. Louis, Mo., Dec. 12, 1924. s. Joseph J., and Elizabeth (Moch) M. Edn.: B.S., Wash. Univ., 1947; M. S., Northwestern Univ., 1949; Ph.D., ibid., 1950—. m. Florence E. Delburn, Sept. 15, 1951. c.: Frederick John. Exp.: U. S. Navy, 1944-46; Petrolite Corp., St. Louis, Mo., 1947; Graduate Asst., Northwestern Univ., Evanston, Ill., 1947-50; Assoc. Prof. of Ind. Eng., Ga. Tech., Atlanta, Ga., 1950—. Mem.: Amer. Inst. of Chem. Engr.; Amer. Soc. for Quality Control; Ga. Tech. Soc.; Sigma Xi; Tau Beta Pi; Phi Lambda Upsilon; Alpha Chi Sigma. Contrb. to: Industrial and Engr. Chem.; Chem. Engr.; Chem. Engr. Progress. War Record: Electronics Technician with the U. S. N. Gen. Int.: Dev. of a Sink-Float Method of Separating Close Specific Gravity Solid Materials with the Liquid-Cyclone. Special Int.: Statistical Design and Analysis of Experiments and Application

of the Liquid Cyclone in the Classification and Separation of Various Types of Solid Materials.

MOE, Chesney Rudolph, Prof. of Physics, San Diego State Coll., Calif., 4669 E. Talmadge Dr., San Diego 16, Calif. PHYSICS. b. Oct. 6, 1908, Rainy River, Ontario, Canada. s. Oscar and Edith (Miller) M. Edn.: A.B., Stanford, 1929; A.M., Stanford, 1931; Ph.D., Sou. Calif., 1941; Scripps Inst. of Oceanography, Summer, 1936. m. (1) Berthe Louise, August 24, 1935, deceased September 4, 1950. m. (2) Lillian Bernice, July 21, 1951. c.: Ronald Chesney; Donna Woolman. Exp.: Asst. in Physics, San Diego State Coll., 1929-30, Instr., 1931-35, Asst. Prof., 1935-39, Assoc. Prof., 1939-45; Prof. and Chmn. of the Dept., 1945—. Mem., Bd. of Rev., Marine Physical Lab., Univ. of Calif., 1946—. Mem.: Amer. Physical Soc.; Acoustical Soc. of Amer.; Amer. Geophysical Union; A.A.U.P.; Phi Delta Kappa; Soc. of Sigma Xi; Sigma Pi Sigma; Sr. Mem.: Inst. Radio Engineers. Contrb. to: Proc. Natl. Acad. Sci.; Jour. Acoust. Soc. Amer. Ph.D. Dissertation: Experimental Study of Subjective Tones Developed Within the Human Ear. War Record: Comdr., U. S. Naval Res.; 1942-46, 1951—. Listed in: A.M.S.; Who's Who in Amer.; Who's Who on the Pacific Coast. Special Int.: Acoustics.

MOE, Gordon Kenneth, Assoc. Prof. of Pharmacol., Univ. of Mich., Ann Arbor, Mich. PHARMACOLOGY.

MOE, Owen Arnold, Mgr., Tech. Sales Service, 3651 Glenhurst Ave., Minneapolis, Minn. ORGANIC AND PHYSICAL CHEMISTRY. b. Echo, Minn., Oct. 12, 1913. s. Lars and Sylvia (Husted) M. Edn.: A.B., St. Olaf Coll., 1935; Ph.D., Univ. of Minn., 1942. m. Unella Ellertson, June 27, 1942. c.: Owen Arnold, Jr.; Dorothy Ann; Mark Randall. Exp.: Instr. in Chem., St. Olaf Coll., Northfield, Minn., 1937-38; Post Doctorate Fellow, Northwestern Univ., Evanston, Ill., 1941-43; Rsch. Scientist, Gen. Mills, Inc., Minneapolis, Minn., 1943—. Head, Process Development 1950-52; Mgr., Tech. Sales Service, ibid., 1952—. Hd. Chem. Market Development Dept., 1953—. Mem. Amer. Chem. Soc.; A.A.A.S.; Sigma Xi; Phi Lambda Upsilon; Mem. Bd. of Dirs. and Pres. of Avcochem, Inc., (Chemical Manufacturers and Distributors), 1951—. Contrb. to: Jour. of Amer. Chem. Soc.; Analytical Chem.; Jour. of Organic Chem. Special Int.: Carbohydrate Chem.; Structure Proof and Derivatives of Polymeric Carbohydrates such as the Galactomannans and Starch; Amino Acids: New Synthetic Methods for Amino Acids; Fatty Nitrogen Chem.; Reaction Mechanism Studies.

MOENCH, Louis Gardner, Instr. Internal Med., Univ. of Utah, 115 East S. Temple St., Salt Lake City, Utah. INTERNAL MEDICINE.

MOFFIT, Fred Howard, Geologist, retired, Cosmos Club, Washington, D. C. ALASKAN GEOLOGY.

MOFFITT, Herbert Charles, Clinical Prof. Emer. Med., Med. Sch., Univ. of Calif., 1818 Broadway, San Francisco, Calif. INTERNAL MEDICINE.

MOGENDORFF, Nicholas, Prof. of Natural Sci., Univ. of Toledo, Toledo, Ohio. PLANT PATHOLOGY.

MOHLER, Nora May, Prof. and Chmn., Dept. of Physics, Smith Coll., Northampton, Mass. PHYSICS.

MOINAT, Arthur David, Asst. Prof. of Biol., Colo. State Coll. Branch, Hesperus, Colo. PLANT PHYSIOLOGY.

MOISE, E. E., Univ. of Mich., Ann Arbor, Mich. TOPOLOGY.

MOLBY, Fred A., Prof. of Physics, W. Va. Univ., Morgantown, W. Va. PHYSICS.

MOLDENKE, Harold Norman, Supvr. of Nature Activities and Dir. of Trailside Museum, Union County, N. J., Park Comm., 15 Glenbrook Ave., Yonkers 5, N. Y. TAXONOMIC BOTANY. b. Watchung, N. J., Mar. 11, 1909. s. Charles Edward and Sophia Meta (Heins) M. Edn.: B.S., Sus-

quehanna Univ., 1929; M.A., Columbia Univ., 1932; Ph.D., *ibid.*, 1934. m. Alma Lance Ericson, Sept. 2, 1942. c.; Andrew Ralph. Exp.: Asst. in Biol., Susquehanna Univ., 1926-29; Part-time Asst., N. Y. Botanical Garden, 1929-32; Asst. Curator, *ibid.*, 1932-37; Assoc. Curator, *ibid.*, 1937-48; Curator and Admin. of the Herbarium, *ibid.*, 1948-52; Supvr. of Nature Activities and Dir. of Trailside Museum, Union County, N. J., Park Commn., 1952—; Mem. Faculty, Extension Div., N. J. State Tehrs. Coll., Newark, N. J., 1952—. Mem.: Torrey Botanical Club; New England Botanical Club; Botanical Soc. Amer.; Amer. Soc. of Plant Taxonomists; A.A.A.S.; N. Y. Acad. Sci.; N. Y. Mycological Soc.; Soc. for the Study of Speciation; John Burroughs Memorial Assn.; Amer. Geographic Soc.; Natl. Geographic Soc.; Amer. Polar Soc.; Soc. for the Study of Evolution; Asociacion Sudamericana de Fitotaxonomistas (Buenos Aires); Sociedad Amigos de Flora Brasileira (Sao Paulo); Sociedad Botanica de Mexico; Sociedad Cubana de Botanica; Instituto Ecuatoriana de Ciencias Naturales; Internatl. Soc. of Plant Taxonomists; Centro de Estudiantes del Doctorado en Ciencias Naturales; Sigma Xi; Pi Gamma Mu. Author: Wild Flowers, 1949; Plants of the Bible, 1952. Contrb. to: Bull. Torrey Botanical Club; Amer. Jour. Bot.; Chronica Botanica; Jour. N. Y. Botanical Garden; etc. Gen. Int.: Have traveled and botanized in 47 states of the U. S., 17 countries of Central and South Amer., and 15 countries of Europe; Have collected, identified, and distributed to 72 botanical museums of the world over 75,000 botanical specimens; Have described over 300 species and varieties new to science; Have had a genus and 4 species named after me; Considered world specialist in the plant families Verbenaceae, Avicenniaceae, Stilbaceae; Symphoremaceae (containing in all 110 genera, 4655 species and varieties); Have published much on plants of the Bible, tautonyms, the classification of plants, state floras, vernacular plant names, medicinal plants, plants strategic to the war effort, ancient silphium, nomenclature of plants, general nature study, evolution.

MOLINA, Edward Charles, retired, 141 Dodd St., East Orange, N. J. MATHEMATICAL STATISTICS.

MOLITOR, Hans, Dir., Merck Inst. Therapeutic Rsch., Rahway, N. J. PHARMACOLOGY, TOXICOLOGY.

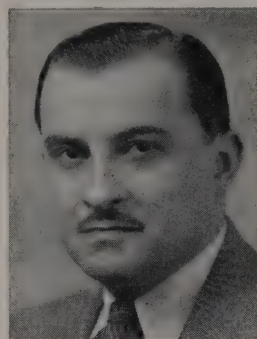
MOLLOY, Charles Thomas, Hd. Phys. Rsch. Dept., Vitro Corp. of Amer., 233 Broadway, N. Y. 7, N. Y.



ACOUSTICS AND APPLIED MATHEMATICS. b. N. Y. C., Nov. 22, 1914. s. Aloysius and Eleanor (Cashen) M. Edn.: B.S., Cooper Union Inst. of Tech., 1935; M.S., N. Y. Univ., 1938; Ph.D., *ibid.*, 1948. m. Eleanor A. Hartley, July 15, 1936. c.: Charles; Robert. Exp.: Rsch. Chemist, Muralo Co., N. Y. C., 1935-38; Rsch. Engr., Johns Manville Co., N. J., 1938-42; Physicist, Brooklyn Navy Yard, N. Y., 1942-45; Instr., L. I. Univ., L. I., N. Y., 1942-45; Staff, Bell Telephone Lab., N. Y., 1945-50; Staff, Vitro Corp. of Amer., N. Y. C., 1950—; Adj. Prof., Grad. Schl., Poly. Inst. of Brooklyn, N. Y., 1950—. Mem.: Assn. for Computing Mach.; Sr. Mem., Inst. of Radio Engrs.; Fellow, Acoustical Soc. of Amer.; Amer. Math. Soc.; Math. Assn. of Amer. Contrb. to: Jour. of the Acoustical Soc. of Amer.; Arch. of Otolaryngol. War Record; Civilian with U. S. Navy. Special Int.: Applied Math.; Acoustics; Propagation of Sound in Lined Tubes; Radiation Theory; Loud Speaker Design; Hearing.

MONEYMAKER, Berlen Clifford, Chf. Geologist, Tenn. Valley Authority, 510 Union Bldg., Knoxville, Tenn. ENGINEERING, GEOLOGY.

MONACK, Albert James, Asst. Prof. of Engrng., Fairleigh, Dickinson Coll., 287 Mortimer Ave.,



Rutherford, N. J. CHEMICAL AND CERAMIC ENGINEERING. b. Dec. 30, 1904, Charleroi, Pa. s. N. James and Stephanie (Clement) M. Edn.: B.S., W. Va. Univ., 1927; M.S., Univ. of Ill., 1929. m. Wendy Monack of Charleroi, Pa., Nov. 3, 1926. d. F. W. and Irma Pieper. Exp.: Spec. Rsch. Asst., Univ. of Ill., 1929-32; Rsch. Engr., Western Elect. Co., 1935-39; Rsch. and Development Engr., Radio Corp. of Amer., 1939-42; Instr. in Chem., Cooper Union, 1939-42; Vice-Pres. and Chief Engr., Mycalex Corp. of Amer., 1942-46; Asst. Prof. of Engrng., Fairleigh Dickinson Coll., 1947—. Mem.: Amer. Phys. Soc.; Amer. Ceram. Soc.; Soc. Amer. Milit. Engr.; Tau Beta Pi; Phi Lambda Upsilon; Sigma Xi. Contrb. to: Sci. Jour. Gen. Int.: Inventor, Sealing Iron to Glass; Electrical Insulating Compositions. Hobby: Oil Painting. Listed in: A.M.S. Special Int.: Elec. Insulation; Glass; Ceramics.

MONK, George Spencer, Assoc. Prof. of Physics, Univ. of Chicago, Chicago, Ill. PHYSICS.

MONNIG, Oscar Edwin, Secy., Monnig Dry Goods Co., 1010 Morningside Dr., Fort Worth, Tex. METEORICS.

MONROE, Clarence John, Assoc. Prof. of Physical Chem., Schl. of Mines and Metallurgy, Univ. of Mo., Rolla, Mo. PHYSICAL CHEMISTRY.

MONROE, Ezra, Chemist, The Dow Chem. Co., Midland, Mich. CHEMISTRY. b. Jan. 21, 1910, Soda Springs, Idaho. s. James and Mary (Baird) M. Edn.: B.S., Univ. of Idaho, 1933; M.S., Univ. of Mich., 1934; Ph.D., *ibid.*, 1937. m. Edith Irwin. Exp.: Frederick Stearns and Co., Fellow, Univ. of Mich.; The Dow Chem. Co., Midland, Mich., 1936—. Mem.: Rho Chi; Sigma Xi; Phi Lambda Upsilon; Phi Delta Chi. Contrb. to: Amer. Chem. Soc. Special Int.: Synthetic organic chem., mediates and intermediates, process development.

MONROE, William S., retired, 105 S. LaSalle St., Chicago, Ill.

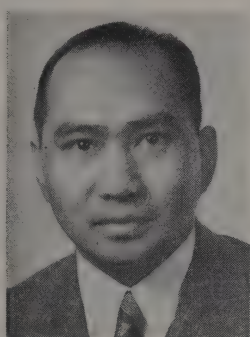
MONTAGNA, William, Prof. of Biol., Arnold Biol. Lab., Brown Univ., Providence, R. I. CYTOPHYSIOLOGY, HISTOLOGY AND CYTOCHEMISTRY. b. Rocca casale, Italy, July 6, 1913. s. Charles and Adele (Giannangelo) M. Edn.: A.B., Bethany Coll., 1936; Ph.D., Cornell Univ., 1944. m. Martha Helen Fife, Sept. 1, 1939. c.: Eleanor, Margaret, James and John. Exp.: Instr. in Zool., Cornell Univ., Ithaca, N. Y., 1944-45; Instr. in Anatomy, Long Island Coll. of Med., New York, 1945-47; Asst. Prof., *ibid.*, 1947; Asst. Prof. in Biol., Brown Univ., Providence, R. I., 1948-49; Assoc. Prof., *ibid.*, 1949-52; Prof., *ibid.*, 1952—. Mem.: Fellow, N. Y. Acad. of Sci. Mem.: A.A.A.; Amer. Assn. of Zool.; A.A.A.S.; N. Y. Acad. of Sci. Contrb. to: Anat. Rec.; Amer. Jour. of Anat.; Jour. of Morphol.; Jour. of Exptl. Zool.; Jour. of Natl. Cancer Inst.; Sci. Jour. of Invest. Dermatol.; Fertil. and Steril. and Quart. Jour. Micro. Sci. Special Int.: Hist. and Cytochem. Cytophysiol. Cytochem. Dynamics of Skin Growth, Cytol. and of Human Male Gonads.

MONTAGUE, Harriet Frances, Prof. of Mathematics, Univ. of Buffalo, Buffalo, New York. MATHEMATICS. b. Buffalo, New York, June 9, 1905. d. Laurence and Alice (Haffa) M. Edn.: B.S., Univ. of Buffalo, 1927; M.A., *ibid.*, 1929; Ph.D., Cornell Univ., 1935. Exp.: Grad. Asst., Univ. of Buffalo, 1927-29; Instr., *ibid.*, 1929-39; Asst. Prof., *ibid.*, 1939-44; Assoc. Prof., *ibid.*, 1944-47; Prof., *ibid.*, 1947—. Mem.: Sigma Xi; Phi Beta Kappa; Pi Mu Epsilon; Math. Assn. of Amer.; Amer. Math. Soc.; Natl. Coun. Tehrs. of Math.

A.A.U.P.; A.A.U.W. Contbr. to: Bull. Amer. Math. Soc.; Amer. Math. Monthly; Math. Mag. Ph.D. Dissertation: Certain Non-Involutorial Cremona Transformations of Hyperspace. Listed in: A.M.S. Special Int.: Algebra and Geometry.

MONTAGUE, William Pepperell, Barnard Coll., Columbia Univ., N. Y., N. Y. **PSYCHOLOGY**.

MONTEROSO, Juan Cargado, Chf., Rubber Rsch. Section, Office of the Quartermaster Gen., Dept. of the Army, Washington



25, D. C. **CHEMISTRY**. b. Manila, Philippines, Aug. 26, 1909. s. Manuel and Paula (Cargado) M. Edn.: A.B., Univ. of Calif., 1935; M.S., ibid., 1937; Ph.D., ibid., 1942. m. Anita Pablo on June 2, 1947. c.: Juan P., Jr. Exp.: Rsch. Chem., Works Progress Admin., 1937-40; Tech. Asst., Univ. of Calif., 1940-41; Intelligence Div., U. S. Navy, 1941-42; Rubber Technologists, Mare Island Rubber Lab., 1942-48; Rubber Chemist, Naval Rsch. Lab., Washington, D. C., 1948-49; Prin. Chemist, Rsch. and Dev. Div., Office of the Quartermaster Gen., Dept. of the Army, Washington 25, D. C., 1949—. Mem.: Amer. Chem. Soc.; A.A.A.S.; Sigma Xi; Washington Rubber Group; Chem. Soc. of Washington. Contbr. to: Industrial and Engrng. Chem.; Rubber Chem. and Tech.; India Rubber World; Rubber Age. War Record: Intelligence Div., Dept. of the Navy, 1941-42. Special Int.: High Polymer Chem.; Elastomer Rsch. and Development for Military Applications; Compounding and Vulcanization of Rubber.

MONTES, Gustavo Edmundo, Chem. Engrg. Rsch. and Engrng. Dept., Ethyl Corp., P. O. Box 341, Baton Rouge, La.



CHEMICAL ENGINEERING. b. El Paso, Tex., Nov. 20, 1917. s. E. M. and Francisca (Rey) M. Edn.: B.S., Univ. of Tex., 1940; M.S., ibid., 1942; Ph.D., ibid., 1946. m. Marcia Schattenstein, Nov. 7, 1942. c.: Barbara; Gregory. Exp.: Rsch. Fellow and Chem. Engr. Bureau of Industrial Chem., Univ. of Tex., 1940-47; Chem. Engr. Rsch. and Dev. Dept., Elliott Co., 1947-48; Chem. Engr. Rsch. and Engrng. Dept., Ethyl Corp., 1948—. Hon. Pos.: Public Relations Comm., A. I. Ch. E., 1952. Mem.: Amer. Inst. of Chem. Engrs.; Amer. Chem. Soc.; Sigma Xi; Phi Lambda Upsilon; Omega Chi Epsilon. Special Int.: Chem. Engrng.; Petro Chem.; Gaseous Electrochem.

MONTGOMERY, Basil Elwood, Assoc. Prof. of Entomol., Purdue Univ., La Fayette, Ind. **ENTOMOLOGY**.

MONTGOMERY, Charles Edgar, Prof. and Hd., Dept. of Biol., Northern Ill. State Tchrs. Coll., DeKalb, Ill. **PLANT ECOLOGY**.

MONTGOMERY, Earle T., Engrng. Expt. Sta., Ohio State Univ., Columbus 10, Ohio. **CERAMICS**.

MONTGOMERY, Raymond Brainsin, Visiting Prof. of Oceanography, Brown Univ., Providence 12, R. I. **OCEANOGRAPHY**. b. May 5, 1910, Philadelphia, Pa. s. Thomas Harrison and Priscilla (Brainsin) M. Edn.: A.B., Harvard, 1932; S.M., Mass. Inst. of Tech., 1934; Sc.D., ibid., 1938. m. Mary E. Perkins, Apr. 22, 1944. c.: Kate; Mary T.; Eleanor and Sarah. Exp.: Jr. Oceanographer, Woods Hole Oceanographic Inst., 1938-40; Phys. Oceanographer,

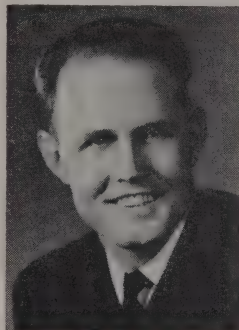
1940-53; Asst. Prof. of Meteorol., N.Y.U., 1940-42; Assoc. Prof. of Meteorol., 1943-44; Staff Mem., Radiation Lab., Mass. Inst. of Tech., 1944-45; Visiting Prof. of Oceanography, Brown Univ., 1949-54. Mem.: Amer. Meteorol. Soc.; Royal Meteorol. Soc. Contbr. to: Numerous oceanographical and meteorological journals. Special Int.: Ocean circulation, turbulence in atmosphere and ocean.

MONTGOMERY, Robert J., 1851 Aloma Ave., Winter Park, Fla. **CERAMICS**.

MONTGOMERY, Thomas Seats, Hd., Dept. of Edn., Sam Houston State Tchrs. Coll., Huntsville, Tex. **EDUCATION, GUIDANCE**.

MOODY, Agnes Claypole, retired, 2826 Garber St., Berkeley, Calif. **ZOOLOGY**.

MOODY, Alton B., Deputy Dir., Div. of Navigational Sci., U. S. Navy Hydrographic Office, Washington 25, D. C. **NAVIGATION**. b. Thatcher, Ariz., July 28, 1911. s. William Alfred and Sarah Emily (Blake) M. Edn.: B.Sc., U. S. Naval Acad., 1935. m. Ruth Leah Isbell on Jan. 1, 1938. c.: Catherine Patricia; Virginia; Evelyn; William Alton; David Rupert. Exp.: In Chg. of Private Navigation School which trained many navigators for the armed forces, 1938-45; Naval Officer and Navigation Instr., Lecturer at U. S. Naval Acad., 1941-46; Deputy Dir., Division of Navigational



Sci., U. S. Navy Hydrographic Office, Washington 25, D. C., 1946—. Mem.: Inst. of Navigation; Artic Inst. of N. Amer.; Amer. Polar Soc. Author: Navigation and Nautical Astronomy, 1948. Contbr. to: U. S. Naval Inst. Proc.; Navigation; Internat. Hydrographic Rev.; Shipmate; Mast; The Ensign; Jour. of the Inst. of Navigation; Motor Boating. Special Int.: Polar Navigation; Navigation Methods; Ship Groundings.

MOODY, Clarence Lemuel, Div. Geologist, Ohio Oil Co., Shreveport, La. **PETROLEUM GEOLOGY**.

MOODY, Paul Amos, Prof. of Zool., Univ. of Vt., Burlington, Vt. **ZOOLOGY**.

MOODY, Robert Orton, Prof. Emer. Anatomy, Univ. of Calif., 2826 Garber St., Berkeley, Calif. **ANATOMY**.

MOOERS, Charles Ansel, Dir., Emer., Tenn. Agri. Expt. Sta., Univ. of Tenn., Rt. 10, Chapman Hwy., Knoxville, Tenn. **AGRONOMY**.

MOOK, Paul V(incent), Plant Pathol., U. S. Dept. of Agri., 360 Prospect St., New Haven, Conn. **PATHOLOGY**. b. Mar. 5, 1901, Saegertown, Pa. s. Wallace and Julia Alberta (Floyd) M. Edn.: B.Sc., Allegheny Coll., 1923; M.Sc., Univ. of Md., 1926. m. Louise W. Cooke, June 6, 1931. c.: Sidney A. and Anita L. Exp.: Biol. Asst., Allegheny Coll., Meadville, Pa., 1923; Grad. Asst. in Zool., Univ. of Md., Coll. Park, Md., 1924-26; Grad. Asst. in Botany, ibid., 1926-28; 1930-31; Instr. in Botany, Geo. Washington Univ., 1928-30; Plant Pathol., U. S. D. A., New Haven, Conn., 1933—. Mem.: Phi Beta Phi; Phi Kappa Phi; Amer. Phytopathol. Soc.; Soc. Amer. Foresters; Torrey Bot. Club. Contbr.: Numerous journals of botany, phytopathol., entomol., and zool. Special Int.: Diseases of shade of forest trees; sapstains and molds in lumber; bldg. decays; heart and sap roots of forest trees.

MOOMAW, Leroy, Assoc. Agronomist and Supt., Dickinson Expt. Sta., U. S. D. A. and N. Dak. Agri. Expt. Sta., Dickinson, N. Dak. **DRY LAND MANAGEMENT**.

MOON, M'Della, Prof. and Biol., Bluffton Coll., Bluffton, Ohio. **BOTANY, ZOOLOGY**.

MOON, Merl P., Prof. and Chmn., Dept. of Bacteriol. and Hygiene, Still Coll., Des Moines, Iowa. **BACTERIOLOGY.**

MOON, Parry, Prof. of Elec. Engrng., Mass. Inst. of Tech., Cambridge, Mass., **ILLUMINATION ENGINEERING.**

MOON, Virgil Holland, Prof. of Pathol., Jefferson Med. Coll., Philadelphia, Pa. **PATHOLOGY.**

MOONEY, Melvin, Physicist, U. S. Rubber Co., Passaic, N. J. **PHYSICS.**

MOONEY, Robert Lee, Hd., Physics Dept. and Prof. of Physics, Coll. of William and Mary, Williamsburg, Va. **THEORETICAL PHYSICS.**

MOORE, Alice Elizabeth, Section Hd., Dept. of Virus Study, Div. of Exptl. Pathol., Sloan-Kettering Inst., 444 East 68th St. Memorial Center, N. Y. 21. N. Y. **VIRUS DISEASE IN RELATION TO TUMOR GROWTH.** b. Bellevue, Ohio, June 8, 1908. d. John Patrick and Chella Ann (Snyder) M. Edn.: B.A., Ohio State Univ., 1930; M.A., *ibid.*, 1935; M.D., N. Y. Univ. Coll. of Med., 1942. Exp.: Hd., Yellow Fever Lab., Rockefeller Foundation, 1944-45; Assoc. Prof. of Biol., Cornell Univ. Med. Coll., 1952—; Section Hd., Dept. of Virus Study, Div. of Exptl. Pathol., Sloan-



Kettering Inst., N. Y., N.Y., 1948—. Mem.: A.A.-A.S.; Soc. for Cancer Rsch.; Soc. for Exptl. Biology and Med. Sci. Contbr. to: Cancer; Proc. Soc. for Exptl. Biol. and Med. Sci.; Amer. Jour. of Tropical Med. Special Int.: Inhibition of Tumor Growth by Neurotropic Viruses.

MOORE, Bruce Victor, Executive Officer, Edn. and Training Bd., Amer. Psychological Assn., Washington, D. C., **INDUSTRIAL PSYCHOLOGY.** b. Sept. 9, 1891, Kokomo, Ind. s. Harles Oscar and Effie Mariah (Trees) M. Edn.: B.A., Ind. Univ., 1914; M.A., *ibid.*, 1917; Ph.D., Carnegie Inst. of Tech., Univ. of Berlin, 1921. m. Elsie Jeanette Kohler, Aug. 20, 1924. c.: Mary Ellen. Exp.: Asst. Prof., Pa. State Coll., State Coll., Pa., 1920-23; Assoc. Prof., *ibid.*, 1923-28; Prof. and Hd. of Dept., *ibid.*, 1928-52. Mem.: Amer. Psychol. Assn.; A.A.U.P.; D. C. Psychol. Assn.; Sigma Xi; Phi Beta Kappa; Phi Kappa Phi; Phi Delta Kappa. Author: How to Interview (with W. V. Bingham), 1931; Readings in Industrial Psychol. (with W. G. Hartmann), 1931. Special Int.: Personnel selection and surveys of employee attitudes.

MOORE, Carl Richard, Prof. of Zool., Univ. of Chicago, Chicago 37, Ill. **ZOOLOGY; EMBRYOLOGY; BIOLOGY OF SEX AND ENDOCRINOLOGY.** b. Greene County, Mo., Dec. 5, 1892. s. Jonathan and Sarah Frances (Harris) M. Edn.: B.S., Drury Coll., 1913; M.S., *ibid.*, 1914; Ph.D., Univ. of Chicago, 1916. Hon. Deg.: S.C.D., Drury Coll., 1948. m. Edith Naomi Abernethy of Batavia, Ill., July 2, 1920. c.: Harris Mason; Ellen Abernethy. Exp.: Univ. of Chicago, Assoc., 1916-18; 1918-22, Instr., *ibid.*; 1922-26, Asst. Prof.; 1926-28, Assoc. Prof.; 1928—, Prof. Hon. Pos.: Chmn., Dept. Zool., since 1934. Mem.: Natl. Acad. Sci.; A.A.A.S.; Amer. Acad. of Arts and Sci.; Amer. Assn. of Zool.; Amer. Assn. of Anatomists; Sigma Xi; Gamma Alpha; A.K.K. Awards: Recipient 1st Frances Amory Award, 1941, 4th Award Amer. Urological Assn., 1950. Hobbies: Fishing; Hunting. Listed in: Who's Who; A.M.S.

MOORE, Charles James, Prof. Emer. Chem., Hunter Coll., N. Y., N. Y.; Box 1, York Harbor, Maine. **INORGANIC CHEMISTRY.**

MOORE, Charles Napoleon, Prof. of Math., Dir. Grad. Studies Math., Univ. of Cincinnati, Cincinnati, Ohio. **THEORY INFINITE PROCESSES.**

MOORE, Clarence Eugene, Prof. of Biol., Memphis State Coll., Memphis, Tenn. **BOTANY, GENETICS.**

MOORE, Clyde B., Prof. of Edn., Stone Hall Schl. of Edn., Cornell Univ., Ithaca, N. Y. **PSYCHOLOGY.**

MOORE, Dwight G., Mineral Products Div., Natl. Bureau of Standards, Washington 25, D. C. **CERAMICS.**

MOORE, Dwight Manson, Prof. Botany and Hd. Dept., Univ. of Ark., Fayetteville, Ark. **TAXONOMY, PLANT PHYSIOLOGY.**

MOORE, Earl N., Assoc. Prof. of Poultry Diseases, Cornell Univ., Veterinary Coll., Ithaca, N. Y.

MOORE, Edmond Eugene, Hd., Special Project Rsch., Abbott Lab., 1435 North Ave., Waukegan, Ill. **CHEMISTRY.**

MOORE, Elwood S., Prof. of Geol. and Hd. Dept., Dir., Royal Ontario Museum Geol. and Mineralogy, Univ. of Toronto, Toronto, Ont., Can. **ECONOMIC GEOLOGY.**

MOORE, Emmett Burris, Prof. and Chmn., Dept. of Civil Engrng., State Coll. of Wash., Pullman, Wash. **STRUCTURAL ENGINEERING.** b. Gallatin Co., Mont., Dec. 10, 1900. s. William and Mary Elizabeth (Burris) M. Edn.: B.S., Mont. State Coll., 1924; C.E., *ibid.*, 1928; M.S., State Coll. of Wash., 1933. m. Iris Marie Brown, Jan. 15, 1925. d. Perry and Nellie Brown. c.: Emmett Burris, Jr. Exp.: Asst. Commandant of Cadets, Western Military Acad., Alton, Ill., 1918-20; Asst. Co. Engr., Gallatin Co., Mont., 1924-29; Instr. in Civil Engrng. and Acting Head, Dept. of Ind. Engrng., Mont. State Coll., 1929; Instr., Asst. Prof., Assoc. Prof., and Prof., Dept. of C. E., State Coll. of Wash., 1929—; Chmn., *ibid.*, 1945—. Mem.: Phi Kappa Phi; Tau Beta Pi; Sigma Tau; Amer. Soc. for Engrng. Edn.; Sigma Alpha Epsilon, Natl. Pres., 1949-51; Wash. State Coun. for Hwy. Research. Author: A Manual of Structural Design in Steel, 1940. Listed in: Who's Who in Engrng.; Who's Who in Amer.; Who's Who on Pacific Coast; Who's Who in the West.



MOORE, Ernest Carroll, Prof. Emer. Edn. and Philos., Univ. of Calif., 516 Woodruff Ave., Los Angeles, Calif. **ADMINISTRATION AND HISTORY OF EDUCATION.**

MOORE, G. Paul, **SPEECH AND HEARING.**

MOORE, George Edward, Rsch. Physicist, Bell Telephone Lab., Murray Hill, N. J. **PHYSICS; THERMIONICS; GASEOUS ELECTRONICS; THERMODYNAMICS.** b. Oct. 28, 1903, Pittsburgh, Pa. s. George E. and Frances Emma (Halis) M. Edn.: B.S., Calif. Inst. of Tech., 1927; M.A., Columbia Univ., 1931. m. Margaret Rebecca White, Aug. 28, 1931. c.: Kathleen; Stephen and John. Exp.: Member Tech. Staff to Rsch. Physicist, Bell Telephone Lab., Murray Hill, N. J., 1927—. Fellow: Amer. Phys. Soc. Mem.: Inst. of Radio Engrs. Contbr. to: Phys. Rev.; Jour. of Chem. Physics.

MOORE, George Mitchell, Assoc. Prof. of Zool., Univ. of N. H., Durham, N. H. **LIMNOLOGY.**

MOORE, George Thomas, Dir., Mo. Botanical Garden and Dir., Henry Shaw Schl. of Botany, Wash. Univ., St. Louis, Mo. **BOTANY, HORTICULTURE.**

MOORE, Harold Emery, Jr., Assoc. Prof. of Botany, Bailey Hortorium, N. Y. State Coll. of Agri., Cornell Univ., Ithaca, N. Y. **PLANT TAXONOMY.** b. July 7, 1917, Winthrop, Mass. s. Harold E. and Helen J. (Margeson) M. Edn.: B.S., Univ. of Mass., 1939; M.A., Harvard, 1940; Ph.D., *ibid.*, 1942. Exp.:

Tech. Asst., Gray Herbarium, Harvard Univ., 1947-48; Asst. Prof. of Botany, Bailey Hortorium, Cornell Univ., Ithaca, N. Y., 1948-51; Assoc. Prof., *ibid.*, 1951—. Mem.: Amer. Soc. of Plant Taxonomists; Sigma Xi; Internatl. Assn. for Plant Taxonomy; Soc. for the Study of Evolution; New England Botanical Club. Contrb. to: *Gentes Herbarum*; *Rhodora*. Special Int.: Taxonomy of Cultivated Plants; Flora of east central Mexico; *Palmae*; *Geranium*.

MOORE, Henry Frank, retired, Linville Falls, N. C. **ZOOLOGY**.

MOORE, Herbert Charles, Assoc. Prof. of Dairy Husbandry, 12 Bagdad Rd., Durham, N. H. **DAIRY MANUFACTURING**. b. Frankfort, Ind., September 24, 1900. s. Charles S. and Jossie L. (Hoover) M. Edn.: B.S., Purdue Univ., 1923; M.S., Univ. of Minn., 1925. m. Florence L. Smith of Frankfort, Ind., Sept. 3, 1929. d. Mr. and Mrs. C. K. Smith. c.: Mary E.; Charles S. Exp.: Instr., Rutgers Univ., 1925-26; Chem., Paulus Dairy, 1926-28; Instr., Dairy Husb. and Asst. Dairy Husb., Agri. Expt. Sta., Univ. of N. H., 1928-39; Asst. Prof., Dairy Husbandry and Asst. Dairy Husb., *ibid.*, 1939-43; Assoc. Prof., Dairy Husbandry and Assoc. Dairy Husb., *ibid.*, 1943—. Mem.: Amer. Dairy Sci. Assn.; Alpha Zeta; Tau Kappa Epsilon; Mason. Contrb. to: *Jour. of Dairy Sci.*; *Jour. of Milk and Food Tech.* Special Int.: Composition of Milk, Quality Control.

MOORE, Herbert Fisher, Rsch. Prof. Engrng. Materials Emer., Univ. of Ill., 803 Indiana Ave., Urbana, Ill. **ENGINEERING MATERIALS**.

MOORE, Howard Roswald, Section Hd. and Chem. Consultant, U. S. Naval Air Development Center, 200 W. Montgomery Ave., Hatboro, Pa. **PLASTICS AND SURFACE CHEMISTRY**. b. Chicago, Ill., Oct. 4, 1901. s. Eugene Howard and Jessie (Compton) M. Edn.: S.B., Univ. of Chicago, 1921; S.M., *ibid.*, 1922; Ph.D., *ibid.*, 1924. m. Mary Collette Brode, Dec 13, 1930. c.: Howard, Jr.; Evangeline; Jean; William. Exp.: Photochemist, Eastman Kodak Co., 1925-27; Chemist, Bureau of Standards, 1927-30; Colloid Chemist, Celanese Corp. of Amer., 1930-33; Natl. Aniline and Chem. Co., 1934-35; Tech. Dir., Kay and Ess Co., 1936-37; Chemist, Phila. Naval Shipyard, 1938-48; Section Hd. and Chem. Consultant, Aero. Electronic Electrical Lab., U. S. Naval Air Development Center, Johnsville, Pa., 1948—. Mem.: A.C.S.; Fellow, Amer. Inst. Chemists; Soc. Plastics Inst.; Amer. Chem. Soc.; Sigma Xi. Contrb. to: *Jour. Amer. Chem. Soc.*; *Analytical Chem.*; *Indus. and Engrng. Chem.*; *Jour. Optical Soc. Amer.* Gen. Int.: Textured Winkle Finishes; Invention of Surface Coating Analyzer and Electrothermal Fire Tester; Hot and Cold Processes of Producing Surface Conversion Coatings on Steel to Prolong Paint Durability; Low-Temperature Process for Expanded Plastics; Application of Plastics in Design of Explosive Bombs. Special Int.: Improved Plastics and Ceramics Materials for Radomes and Irdomes for Guided Missiles; Applications of High Polymers and other Non Metallic Materials and Constructions to Electronic and Acoustic Devices; Formulation of Marine Paints; Inhibitive Pickling Process for Mild Steel-Improvements in Phosphating of Steel.

MOORE, James Garfield, Prof. of Horticulture, Univ. of Wis., Madison, Wis. **HORTICULTURE**.

MOORE, Jared Sparks, Prof. of Philos., Western Reserve Univ., Cleveland, Ohio. **PHILOSOPHY**.

MOORE, Jerry Hamilton, Dir., Fiber Rsch., Railway Supply and Mfg. Co., 335 W. Fifth St., Cincinnati, Ohio. **COTTON BREEDING AND FIBERS**.

MOORE, John I., P. O. Box 753, Midland, Tex. **GEOLOGY, GEOGRAPHY**.

MOORE, John Percy, Prof. Emer. Zool., Univ. of Pa., Philadelphia, Pa.; Highland Ave., Rt. 2, Media, Pa. **ZOOLOGY**.

MOORE, John William, Assoc. Scientist, Dept. of Botany, Univ. of Minn., Minneapolis, Minn. **PLANT TAXONOMY**.

MOORE, Joseph Ernest, Hd. and Prof., Dept. of Psychol., Ga. Schl. of Tech., Atlanta, Ga. **PSYCHOLOGY**.

MOORE, Joseph W., retired, 75 Willett St., Albany, N. Y. **PSYCHIATRY**.

MOORE, Lewis Eugene, Consulting Engr., Private Bus., 113 Beaumont Ave., Newtonville 60, Mass. **BRIDGE AND HIGHWAY ENGINEERING**. b. Jan. 24, 1880, Amboy, Ill. s. Lewis Theodore and Martha Myrick (Wells) M. Edn.: B.S., Univ. of Wis., 1900; C.E., 1906. m. Rowena Grace Karns, Aug. 25, 1903. c.: Luther Samuel. Exp.: Instr. of Mechanics, Univ. of Wis., 1903-04; Instr., Mechanics and Hydraulics, Univ. of Ill., 1904-07; Asst. Prof. and Assoc. Prof., Mass. Inst. of Tech., 1907-14; Bridge and Signal Engr., Mass. Dept. Public Utilities, 1914-21; Consulting Engr., Private Business, 1921—. Mem.: Amer. Soc. Civil Engrs.; Boston Soc. of Civil Engrs.; Amer. Milit. Engrs. Author: *The Design of Plate Girders*, 1913. War Record: U. S. Army, 1917-18; 1941-43.

MOORE, Maurice Lee, Vice-Pres., Vick Chem. Co. 122 E. 42nd St., N. Y. 17, N. Y. **MEDICINAL CHEMISTRY**. b. Sept. 11, 1909, Laurel Hill, Fla. s. Daniel R. and Maggie A. (Steele) M. Edn.: B.S., Univ. of Fla., 1930; M.S., *ibid.*, 1931; Ph.D., Northwestern Univ., 1934. m. Charlotte M. Holg, Dec. 2, 1933. c.: Daniel Richmond; Margaret Anne; and Amanda Lee. Exp.: Rsch. Chem., Sharp and Dohme, 1936-43; Dir. of Organic Rsch., Frederick Stearns and Co., 1943-47; Asst. Dir. of Rsch., 1945-47; Dir. of Rsch. and Development Lab., Smith, Kline and French Lab., 1947-51; Vice-Pres., Vick Chem. Co., N. Y., N. Y., 1951—. Mem.: Amer. Chem. Soc.; Amer. Pharm. Assn.; N. Y. Acad. of Sci.; Amer. Drug Manufacturers Assn.; Rsch. and Development Sect., A.A.A.S. Contrb. to: *Jour. of the Amer. Chem. Soc.*; *Jour. of Organic Chem.*; *Jour. of Pharmacol. and Expt. Therapeutics*. Special Int.: Med. chem. rsch. and rsch. admin.

MOORE, Morris, Dept. of Dermatology, Schl. of Med., Wash. Univ., St. Louis, Mo. **MEDICAL MYCOLOGY**.

MOORE, Nina May Alderton, Mathematician, Natl. Bureau of Standards, 2707 Adams Mill Rd., N. W., Washington 9, D. C. **MATHEMATICS AND PHYSICS**. b. Aug. 19, 1890, Berkeley Springs, W. Va. s. Joseph Alderton and Arah E. (Easter) A. Edn.: A.B., Mt. Holyoke Coll., 1914; M.A., Columbia Univ., 1915; Ph.D., Univ. of Calif., 1921. m. William Harrison Moore, July 16, 1934. Exp.: Tchng. Fellow, Univ. of Calif., 1919-21; Hd. of Math., Mills Coll., 1921-34; Hd. of Math. and Phys., W. Liberty State Coll., 1943-45; Natl. Bureau of Standards, 1945—. Mem.: Phi Beta Kappa; Pi Mu Epsilon; Chi Beta Phi. Author: *Involuntary Quartic Transformations in space of Four Dimensions*, 1921. Contrb. to: A.A.A.S. Special Int.: Geometric relationships in space of four or more dimensions and analytical proof of same.

MOORE, Norman Slawson, Clinical Director, Cornell Univ., 512 East State Street, Ithaca, New York. **MEDICINE**. b. Ithaca, New York, April 17, 1901. s. Veranus and Mary (Slawson) M. Edn.: A.B., Cornell Univ., 1923; M.D., *ibid.*, 1926. m. Bernice Barkee, 1932. Exp.: Internship, Second Med. Div., Bellevue Hosp., 1926-28; Asst. Residency, Hosp. of the Rockefeller Inst., 1928-29; Practice of Int. Med., Ithaca, N. Y., 1929-40; Physician-in-Chf., Cornell Univ. Infirmary and Clinic, 1940—; Prof. of Clin. Med., Dept. of Clin. and Preventive Med., *ibid.*, 1940—; Consulting Physician, Tompkins County Med. Hosp., 1940—; Hd. of Dept. of Clin. and Preventive Med. 1943—; Prof. of Clin. Med., Schl. of Nutrition, Cornell Univ., 1945—; Chmn., Tompkins County Pub. Health Comm., 1935-47; Chmn., Tompkins County Bd. of Health, 1947—. Mem.: Gamma Chapt., Phi Sigma Kappa; Cornell Club of N. Y.; Ithaca Country Club.; A.A.A.S.; Harvey Soc.; Amer. Coll. of Physicians; Diplomate, Amer. Bd. Internal Med. Listed in: *Who's Who in Amer.*; *Who's Important in Med.*

MOORE, Raymond Cecil, Prof. of Geol., Univ. of Kans., Lawrence, Kans. **INVERTEBRATE PALEONTOLOGY, STRATIGRAPHY**.

MOORE, Robert A., Wash. Univ. Med. Schl., St. Louis 10, Mo. **PATHOLOGY AND BACTERIOLOGY.**

MOORE, Robert Lee, Distinguished Prof. of Pure Math., Univ. of Texas, Austin, Tex. **MATHEMATICS.** b. Dallas, Tex., Nov. 14, 1882. s. Charles J. and Louisa Ann (Moore) M. Edn.: B.S., Univ. of Tex., 1901; M.A., *ibid.*, 1901; Ph.D., Univ. of Chicago, 1905. m. Margaret MacLellan Key, Aug. 19, 1910. Exp.: Fellow, Univ. of Tex., 1901-02; Tehr., H. S., Marshall, Tex., 1902-03; Fellow, Univ. of Chicago, 1903-05; Asst. Prof. of Math., Univ. of Tenn., 1905-06; Instr., Princeton Univ., 1906-08; Instr., Northwestern Univ., 1908-11; Instr., Univ. of Pa., 1911-16; Asst. Prof., *ibid.*, 1916-20; Assoc. Prof. of Pure Math., Univ. of Tex., 1920-23; Prof., *ibid.*, 1923-37; Distinguished Prof. of Pure Math., *ibid.*, 1937—. Mem.: Natl. Acad. Sci.; Amer. Math. Soc.; Polish Math. Soc.; A.A.A.S. Author: Foundations of Point Set Theory, 1932. Contrb. to: Trans. Amer. Math. Soc.; Bull. Amer. Math. Soc.; Annals of Math.; Amer. Jour. Math.; etc. Special Int.: Point Set Theory; Foundation of Math. and Theory of Functions of a Real Variable.

MOORE, Robert Milo, Prof. of Surgery, Univ. of Tex., Schl. of Med., Galveston, Tex. **SURGERY.** b. Olathe, Kans., Nov. 18, 1902. s. Robert Melville and Ida Belle (Miller) M. Edn.: M.D., Wash. Univ., 1926. m. Ruth Elizabeth Williams, 1931. c.: Peter Melville and Stephen Williams. Exp.: Interne in Surgery, Barnes Hosp., St. Louis, Mo., 1926-27; Asst. Resident Surgeon, *ibid.*, 1929-30; Med. Fellow of Natl. Rsch. Coun., Dept. of Physiol., Harvard Med. Schl., Cambridge, Mass., 1927-29; Assoc. Prof. of Exptl. Surgery, Univ. of Tex., Galveston, Tex., 1930-44; Prof. of Surgery, *ibid.*, 1944-47; Chmn., Dept. of Surgery, *ibid.*, 1947—. Mem.: Amer. Surgical Assn.; Southern Surgical Assn.; Amer. Coll. of Surgeons; Southern Surgeons Club; A.A.A.S.; Amer. Physiol. Soc.; Repr. of Amer. Surgical Assn. on Amer. Bd. of Surgery, 1947-53; Tex. Acad. of Sci.; Nu Sigma Nu; Alpha Omega Alpha; Sigma Xi. Contrb. to: Amer. Jour. Physiol.; Southern Med. Jour.; Annals of Surgery; Arch. of Surgery; Surgery, Gynecol. and Obstetrics; Surgery; Med. Records and Annals; Tex. Reports on Exptl. Biol. and Med.; Proc., Soc. of Exptl. Biol. and Med.; Amer. Surgeon; The Southern Surgeon. Special Int.: Physiol. of Shock, of Autonomic Nervous System, of Embolism; Abdominal Surgery.

MOORE, Robert Thomas, Assoc. Vertebrate Zool., Calif. Inst. of Tech., Meadow Grove Pl., Flintridge, Pasadena, Calif. **ORNITHOLOGY.**

MOORE, Thomas E., Dir. of Rsch., The Ransom & Randolph Co., P. O. Drawer 905, Toledo, Ohio. **DENTAL MATERIALS.** b. Jewett, Ohio, Apr. 19, 1889. s. Samuel G. and Laura E. (Peeples) M. Edn.: B.A., Mount Union, 1910; M.S., State Univ. of Iowa, 1913. m. Bertha G. Schaub on June 14, 1913. c.: Kenneth; Madelyn. Exp.: Instr. of Chem., Charles City Coll., 1910-12; Instr. of Chem., Ohio State Univ., 1913-14; Instr. of Chem., Toledo H. S., 1914-18; Chem., The Ransom & Randolph Co., 1918-22; Dir. of Rsch., *ibid.*, 1922—. Hon. Pos.: Chmn., Toledo Section of the Amer. Chem. Soc., 1922; Chmn., Dental Materials Group, Internatl. Assn. for Dental Rsch., 1944-46. Mem.: The Amer. Chem. Soc.; Internatl. Assn. for Dental Rsch.; Amer. Soc. for Metals; Kiwanis. Special Int.: Dental Materials—Precision Casting.

MOORE, Thomas Verner, Prof. of Psychol., Catholic Univ. of Amer., Washington, D. C. **PSYCHOLOGY.**

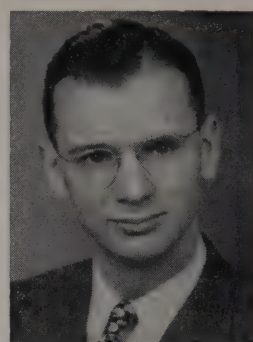
MOORE, Walter J., Catholic Univ. of Amer., Washington 17, D. C. **CHEMISTRY.**

MOORE, Walter Lee, Assoc. Prof. of Math., Univ. of Louisville, Louisville, Ky. **TEACHING MATHEMATICS.**

MOORE, Wilbur E., **SPEECH AND HEARING.**

MOORE, William Dewey, Pathologist, Bureau Plant Indus., U. S. D. A., 501 S. Andrews Ave., Fort Lauderdale, Fla. **PLANT PATHOLOGY.**

MOOS, Gilbert Ellsworth, Asst. Prof. of Chem., N. Y. Lawrence Univ., 28 Farmer St., Canton, N. Y.



HIGH POLYMER CHEMISTRY. b. Hasbrouck Heights, N. J., May 1, 1915. s. Bernard and Florence Margaret (Dalrymple) M. Edn.: B.S., St. Lawrence Univ., 1936; S.M., M. I. T., 1937; Ph.D., *ibid.*, 1939. m. Ruth Carolyn Feintheil on June 17, 1944. c.: Carolyn Ruth. Exp.: Instr. in Chem., Rollins Coll., Winter Park, Fla., 1939-40; Rsch. Assoc., M. I. T., Cambridge, Mass., 1940; Rsch. Chemist and Group Leader, Amer. Oak Leather Co., Cincinnati, Ohio, 1941-42; Rsch. Chemist, then Section Hd., Celanese Corp. of Amer., 1942-52; Asst. Prof. of Chem., St. Lawrence Univ., 28 Farmer St., Canton, N. Y., 1952—. Chmn.-Elect., 1952, Western Md. Section, Amer. Chem. Soc. Mem.: Amer. Chem. Soc.; N. Y. Acad. of Sci.; A.A.A.S.; Sigma Xi; Gamma Sigma Epsilon; Alpha Mu Gamma. Contrb. to: Jour. Amer. Chem. Soc.; Jour. Chem. Edn. Special Int.: Tanning Methods; Synthetic Organic Chem.; Polymerization of Styrene and other Vinyl Monomers; Synthesis of New and other Vinyl Monomers; Synthesis of New Plastics and Fibers; Dry Spinning of Cellulose Acetate.

MOOSE, Joe Eugene, Chmn., Chem. Dept., Univ. of Nev., Reno, Nev. **CHEMISTRY.** b. Poolville, Tex., May 28, 1895.



s. Joe and Lou (Kendrick) M. Edn.: A.B., Sou. Meth. Univ., 1917; M.S., Univ. of Ill., 1922; Ph.D., *ibid.*, 1924. m. Mary Jane Cox of Urbana, Ill., Aug. 9, 1924. d. D. P. and Eugena C. c.: Joe David. Exp.: Prin., Mineral Wells H. S., Tex., 1919; Asst. and Assoc. Prof., Univ. of Okla., 1924-29; Rsch. Chem., Swann Rsch. Co., 1929-35; Rsch. Chem. Engr., Monsanto Chem. Co., 1935-45; Prof., Univ. of Nev., 1945—. Hon. Pos.: Pres., Rotary Club; Chmn., Nev. Basic Sci. Bd. Mem.: Sigma Xi; Phi Lambda Upsilon; Phi Kappa Phi; Alpha Epsilon Delta; A.C.S.; A.A.U.P.; Amer. Inst. Chem. Eng.; A.A.A.S.; Sigma Alpha Epsilon; Gamma Alpha; Alpha Chi Sigma; Rotary. Contrb. to: Jour. of A.C.S. Ph.D. Dissertation: A Redetermination of the Heats of Oxidation of Certain Metals. War Record: 2nd Lt., ORC, 3rd Anti Aircraft, C.A.C., 1917-19, World War I. Hobbies: Golf; Gardening. Listed in: A.M.S.; Who's Who in the West; Who's Who in Amer. Special Int.: Phosphorus, Phosphates, Pyrolysis.

MOOTS, Elmer Earl, Hd., Dept. of Math. and Engrng., Cornell Coll., Mt. Vernon, Iowa. **MATHEMATICS, CIVIL ENGINEERING.**

MORE, Charles Church, Prof. of Structural Engrng., Univ. of Wash., Seattle, Wash. **ENGINEERING.**

MORE, Kenneth R., Dept. of Physics, Univ. of British Columbia, Vancouver, B. C., Can. **PHYSICS.**

MORE, Robert Hall, Prof. of Pathol., Richardson Lab., Queen's Univ., Kingston, Can. **PATHOLOGY.** b. Kitchener, Ont., Can., Dec. 16, 1912. s. Robert Hall and Nellie E. (Lackner) M. Edn.: M.D., Univ. of Toronto, 1939; M.Sc., McGill Univ., 1942. m. Dorothy McOrmond, 1943. c.: David; Patricia; Christopher. Exp.: Jr. Intern., Toronto General Hosp., 1939-40; Douglas Fellow in Pathol., McGill Univ., 1940-42; Sr. Intern. in Surgery, Toronto General Hosp., 1942-43; Lectr. in Pathol., McGill Univ., 1943-46; Pathologist, Woman's General Hosp.,

Montreal, 1945-46; Assoc. in Rsch., Dept. of Pathol., Cornell Univ. Med. Coll., 1946-47; Miranda Fraser Asst. Prof. of Comparative Pathol., McGill Univ., 1947-49; Prof. and Hd. of Dept., Queen's Univ., 1951—. Mem.: Montreal Medico-Chirurgical Soc.; Amer. Assn. of Pathologists and Bacteriologists; Quebec Assn. of Pathologists; Amer. Soc. of Exptl. Pathologists; Pathol. Soc. of Great Britain and Ireland; Canadian Assn. of Pathologists; Ont. Assn. of Pathologists. Special Int.: The Pathol. of Hypersensitivity and Collagen Diseases of Man; Chronic Liver Disease.

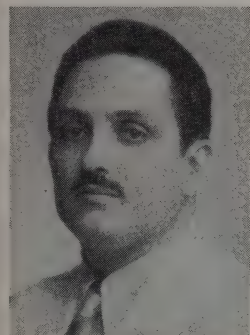
MOREHEAD, James Caddall, retired, 318 W. Main St., Salem, Va. MATHEMATICS.

MOREHOUSE, Alanson David, Pres., Restlawn, Inc., 808 Graham Bldg., Jacksonville, Fla. ENGINEERING, GEOGRAPHY, SOCIAL AND ECONOMIC SCIENCES.

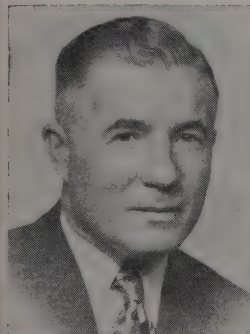
MOREHOUSE, Walter Bertram, Consulting Engr., Internatl. Telephone and Telegraph Corp., 67 Broad St., N. Y., N. Y. PHYSICS.

MORELAND, C. F., Dept. of Botany, La. State Univ., University, La. BOTANICAL SCIENCES.

MORENO, Abelardo, Prof. of Fauna and Ornithol., Hd. Prof. of Zool. and Dir. of Museo Poy, Catedra "U", Schl. of Science, Havana Univ., Havana, Cuba. ZOOLOGY. b. Calabazar de Sagua, Las Villas, Cuba, Feb. 13, 1913. s. Juan M. and Enriqueta M. Edn.: Dr. Nat. Sci., Havana Univ., 1934. m. Ramona Fernandez. Exp.: Prof. of Natural Hist., Marti H. S., Squa la Grande, Cuba, 1928-33; Asst. Prof. of Natural Hist., H. S., Havana, Cuba, 1933-34; Prof., Sepulveda H. S., ibid., 1933-39; Prof. of Natural Hist., Edison H. S., ibid., 1935-42; Asst. Prof. of Zool., Schl. of Sci., Havana Univ., ibid., 1937-39; Auxiliary Prof., ibid., 1939-44; Hd. of Zool. Lab., ibid., 1939-45; Prof. of Fauna of Cuba and Cuban Ornithol., ibid., 1941—; Hd. Prof. of Zool., Catedra "U", ibid., 1945—; Dir. of Museo Poy, ibid., 1948—. Mem.: Havana Zool. Park; Amer. Ornithol. Comm.; Cuban Natl. Comm., etc. Contbr. to: Pelipo Poy i; Revista Universidad de la Habana; The Auk; Atence le la Habana; Revista Andajio, etc.



MOREY, Glen H., Pres., Glas-Col Apparatus Co., Inc., 711 Hulman St., Terre Haute, Ind. RESEARCH CHEMIST, PHYSICAL AND ORGANIC. b. Alma, Mich., Apr. 21, 1902. s. John Gardner and Ollie (Williams) M. Edn.: B.S., Univ. of Chicago, 1929; M.S., ibid., 1930; Ph.D., ibid., 1932. m. Ruth J. Kemp, Aug. 11, 1928. c.: John Gardner, II. Exp.: Instr. in Chem., Carnegie Inst. of Tech., 1930; In Chg. Dev. Chem. Exhibits, A Century of Progress Expos., 1932-33; Rsch. Chemist, Phillips Petroleum Co., 1933-36; Rsch. Chemist, Commercial Solvents Corp., 1936-45; Founder,



Pres., Glas-Col Apparatus Co., Inc., 1945—. Mem.: Sigma Xi; Amer. Chem. Soc.; Fellow, A.A.A.S. Contbr. to: Jour. Amer. Chem. Soc.; Indus. and Engrng. Chem. Gen. Int.: Over 80 Patents in the Chemical and Related Fields; Inventor of the Heating Mantle—A Major Contribution to Lab. Safety. Special Int.: Thermodynamics of Hydrocarbon Re-

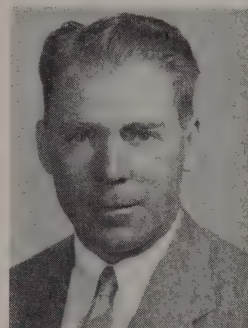
actions, Chemical Equilibria, Organic Syntheses, Laboratory Safety.

MORESI, Cyril Killian, Consulting Geologist, P. O. Box 755, Lafayette, La. PETROLEUM GEOLOGY. b. Jeanerette, La., July 22, 1907. s. L. A. and Celestine (Bouvier) M. Edn.: B.S., La. State Univ., 1931; M.S., ibid., 1932. m. Elizabeth Nattin on Sept. 21, 1935. Exp.: Rsch. Geologist, La. Dept. of Conservation, 1931-33; La. State Geologist, 1934-40; Consulting Geologist, New Orleans, La., 1940-42; Consulting Geologist, Lafayette, La., 1946—, Mem.: Amer. Assn. of Petroleum Geologists; South La. Geol. Soc.; La. Engrng. Soc.; Rotary; Theta Xi. Co-author: Geology of Iberia, Lafayette and St. Martin Parishes, 1931. War Record: U. S. Navy, 1942-45.

MOREY, Carroll Andrew, Dean and Hd., Geol. and Chem. Dept., Findlay Coll., Findlay, Ohio. GEOLOGY, MINERALOGY, CHEMISTRY.

MOREY, Glen Henry, Prop., Glas-Col Apparatus Co., 1700 S. Seventh St., Terre Haute, Ind. CHEMISTRY.

MORGAN, Alvin Hanson, Electronic Scientist, 4609 8th Rd., S., Arlington, Va. ELECTRONICS, FREQUENCY, TIME STANDARDS, RADIO PROPAGATION. b. Highmore, S. Dak., July 8, 1908. s. Kinsley Monroe and Cleora Adelaide (Hanson) M. Edn.: B.S., Kans. State Coll., 1937; M.S., Georgetown Univ., 1952. m. Nelle Ruth, Nov. 25, 1937. c.: Alice Ruth; Joel Craig; Eric Hanson. Exp.: Seismograph Engr., Shell Oil Co., Tulsa Okla., 1937-41; Electronic Engr., U. S. Air Corps, 1941-42; Radar Officer, ibid., 1942-46; Asst. Chf., Sec. 14.7, NBS, 1946-51; Electronic Scientist, in Chg. of Freq. and Time Standards, NBS, 1951—. Mem.: I.R.E.; C.C.I.R.; U.R.S.I. Contbr. to: N.B.S. Publications and Tech. Reports. War Record: U. S. Air Force Officer. Special Int.: Electronic Circuits, Freq. and Time Standards, Wave Propagation.



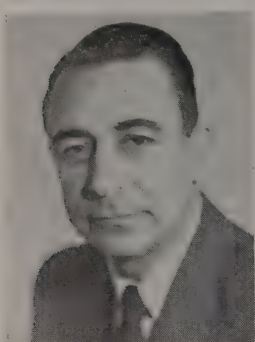
MORGAN, Ann Haven, Prof. of Zool., Mount Holyoke Coll., South Hadley, Mass. AQUATIC INSECTS.

MORGAN, Arthur Ernest, Pres., Community Service, Inc., Yellow Springs, Ohio. b. Cincinnati, Ohio, June 20, 1878. s. John D. and Anna Frances (Wiley) M. Hon. Deg.: D.Sc., Univ. of Colo., 1923; Dr. of Engrng., Case Schl. of Applied Sci., 1932; D.Sc., Univ. of N. C., 1937; LL.D., Antioch Coll., 1943. m. Lucy Griscom on July 6, 1911. c.: Ernest; Lucy; Griscom; Frances. Exp.: Practiced in St. Cloud, Minn., 1902-07; Supvng. Engr., U. S. Govt. Drainage Investigations, 1907-09; Pres., Morgan Engrng. Co., 1909-15; Pres., Dayton Morgan Engrng. Co., 1915—; Chf. Engr., Miami Conservancy Dist., 1913-21; Chf. Engr., Pueblo Conservancy Dist., 1921-25; Pres., Antioch Coll., 1920-36; Chmn., Tenn. Valley Authority, 1933-38; Pres., Community Service, Inc., 1940—. Hon. Pos.: First Pres., Progressive Edn. Assn., 1921; Chmn., Ohio Mental Hygiene Com., 1916-20. Mem.: Fellow, A.A.A.S.; Amer. Soc. of Civil Engrs.; Amer. Eugenics Soc. Author: The Drainage of the St. Francis Valley in Ark., 1909; The Miami Valley and the 1913 Flood, 1918; My World, 1927; A Compendium of Antioch Notes, 1930; The Seedman, 1933; The Long Road, 1936; The Small Community, 1942; Small Community Econ., 1943; Edward Bellamy, A Biography, 1944; The Philosophy of Edward Bellamy, 1945; Nowhere Was Somewhere: How History Makes Utopias and How Utopias Make History, 1946; A Business of My Own, 1946; Hist. of the Miami Conservancy Dist., 1951. Contbr. to: Civil Engrng. Gen. Int.: Mem. of Exec. Com., League to Enforce Peace, which drafted plan for League of Nations and presented it to Pres. Wilson,

1915; Originated, with Samuel S. Fels, The Fels Fund project for rsch. in child dev., Yellow Springs, Ohio, 1928.

MORGAN, Charles, Asst. Prof. of Engrng., San Diego State Coll., San Diego, Calif. **MECHANICAL ENGINEERING**. b. Aug. 22, 1922, Savannah, Ga. s. Charles and Marjorie (Gaddis) M. Edn.: M.E., Stevens Inst. of Tech., 1944; M.S., Univ. of Calif., 1949. m. Barbara Owen of Modesto, Calif., July 7, 1946. d. Jess and Hazel Owen. c.: Marjorie Gail; Madeline Liouse. Exp.: Engr., De Laval Steam Turbine Co., 1946-47; Instr., San Diego State Coll., 1949-51; Asst. Prof., ibid., 1952—; Eng., Convair Aircraft Corp., 1951. Mem.: Phi Delta Kappa; Sigma Xi; Amer. Soc. Engr. Edn.: A.A.A.S.; A.S.M.E.; S.A.E. Travel: Asia. Hobbies: Sailing. Special Int.: Fluid Mechanics.

MORGAN, Charles Frederick, Prof. of Physiology and Director of the Dept. of Physiology, Georgetown Univ. Schl. of Medicine, Washington, D. C. **ENDOCRINOLOGY**. b. Cherokee, Okla., Nov. 30, 1911. s. Charles and Rosa (Tryee) M. Edn.: B.A., Univ. of Wichita, 1933; Ph.D., Univ. of Chicago, 1942. m. Alberta Charlot Cowman of Wichita, Kan., June 3, 1934. d. Elmer and Alice Cowman. c.: John Charles; Alice Fay. Exp.: Fellowship, Univ. of Chicago, 1939-40; Tch. Asst., ibid., 1940-42; Instr., Georgetown Univ. Schl. of Med., 1942-43; Asst. Prof., 1943-45;



Assoc. Prof., 1945-47, ibid.; Prof. Physiol. and Acting Chmn., Dept. of Physiol., 1947-48; Prof. of Physiol. and Chmn. Dept. of Physiol., 1948—. Hon. Pos.: Pres., Comm. for Health and Rsch. of the Dist. of Columbia. Mem.: Amer. Physiol. Soc.; Soc. for Exptl. Biol. and Med.; Assn. for Study Internal Secretions; Amer. Assn. of Anatomists; Amer. Soc. of Zool.; A.A.A.S.; Amer. Soc. Pharm. and Expt. Therapeutics; Sigma Xi; Beta Beta Beta; Chesterbrook Woods Citizen Assn. Author: Applications of Physiology, 1949. Contrb. to: Jour. of Morph.; Amer. Jour. of Anat.; Anatomical Record; Jour. of Clin. Endocrinol.; Federated Proceedings; Jour. of Oral Surgery. Ph.D. Dissertation: The Normal Development of the Ovary of the Opossum and Its Reaction to Sex Hormones. Hobbies: Photography; Tennis. Listed in: A.M.S.; Who's Who in Chicago and Vicinity; Who's Who in the Midwest; Who Knows—and What.

MORGAN, Clellen Leo, Chf. Clinical Psychologist, Veterans Admin., Mental Hygiene Clinic, Philadelphia, Pa. **CLINICAL PSYCHOLOGY**. b. Lakeville, Ohio, Aug. 9, 1903. s. Bradie and Stella (Austin) M. Edn.: B.A., Univ. of Denver, 1929; M.A., State Univ. of Iowa, 1930; Ph.D., ibid., 1931. m. Olive John in 1928. c.: Jocelyn; Dale; Alice; Patricia. Exp.: Assoc. Prof., Purdue Univ., 1931-47; Lectr., Univ. of Mich., 1947-48; Asst. Branch Chf. Clinical Psychol., Veterans Admin., 1948-49; Chf. Clinical Psychol., Veterans Admin., Mental Hygiene Clinic, Philadelphia, 1949-52; Chf. Clinical Psychologist, Veterans Admin. Gen. Hosp., Philadelphia, 1952—. Mem.: Fellow, Amer. Psychol. Assn.; A.A.A.S.; Fellow, Rorschach Exchange and the Soc. for the Study of Projective Techniques; Fellow, Sigma Xi; Fellow, Eastern Psychol. Assn.; Fellow, Pa. Psychol. Assn.; Diplomate in Clinical Psychol., Amer. Bd. of Examiners in Clinical Psychol., Inc. Contrb. to: Ednl. Psychol.; Experimental Edn.; Applied Psychol. Special Int.: Psychol. of Learning; Clinical Psychol.; Ednl. Psychol.

MORGAN, Clifford Thomas, Assoc. Prof. and Chmn., Dept. of Psychol., Johns Hopkins Univ., Baltimore, Md. **PSYCHOLOGY**.

MORGAN, H. R., U. S. Naval Observatory, Washington, D. C. **ASTRONOMY**.

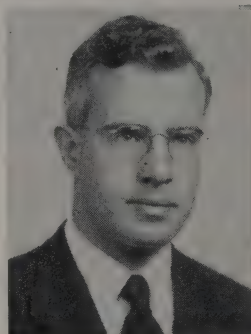
MORGAN, George David, Assoc. Prof. of Biol., Davison Univ., Granville, Ohio. **ZOOLOGY**.

MORGAN, Herbert R., Prin. Astronomer, retired, 2252 Hall Pl., N. W., Washington, D. C. **ASTRONOMY**.

MORGAN, Hugh Jackson, Prof. of Med., Schl. of Med., Vanderbilt Univ., Nashville, Tenn. **INTERNAL MEDICINE**.

MORGAN, Jerome John, Prof. of Chem. Engrng., Columbia Univ., N. Y., N. Y. **CHEMICAL ENGINEERING**.

MORGAN, John Davis, Jr., Dir., Materials Review Div., Office of Defense Mobilization, Washington 25, D. C. **MINING ENGINEERING — STRATEGIC AND CRITICAL MATERIALS**. b. Newark, N. J., Feb. 14, 1921. s. Col. John D. and Caroline F. (Schaller) M. Edn.: B.S., Pa. State Coll., 1942; M.S., ibid., 1947; Ph.D., ibid., 1948; E.M., ibid., 1950; Grad. Extension Course in Economic Mobilization, Industrial Coll. of the Armed Forces, 1953. Exp.: Asst. for Materials and Stockpile Policies, Natl. Security Resources Bd., Exec. Office of the Pres., Washington 25, D. C., 1948-51; Dir., Materials Review Div., Defense Production Admin., Washington 25, D. C., 1951-53. Mem.: Amer. Inst. Mining and Metallurgical Engrs.; Pan-Amer. Inst. Mining Engrng. and Geology; Scientific Rsch. Soc. of Amer.; Sigma Xi; Tau Beta Pi; Sigma Tau; Pi Mu Epsilon; Phi Lambda Upsilon; Sigma Gamma Epsilon; Phi Kappa Phi; Phi Eta Sigma. Author: The Domestic Mining Industry of the U. S. in World War II, 1949. Contrb. to: Mining Engrng.; Mining Congress Jour.; Canadian Mining Jour.; Military Engr.; Ordnance. War Record: 2nd Lt. through Major, Corps of Engrs., U. S. Army, World War II. Gen. Int.: Mining Engrng.—Strategic and Critical Materials—Natl. Mineral Policies.



MORGAN, Joseph Wayland, Assoc. Prof. of Chem., Wittenberg Coll., Springfield, Ohio. **CHEMISTRY, PHYSICAL**.

MORGAN, Karl Ziegler, Hd., Health Physics Section, Clinton Labs., 112 Maple Lane, Oak Ridge, Tenn. **PHYSICS**.

MORGAN, Kenneth Brown, Chmn. of Math. Dept., Mount Kisco High Schl., 29 Carpenter Avenue, Mount Kisco, N. Y. **MATHEMATICS**. b. West Edmeston, New York, Apr. 6, 1901. s. Fay and Lotta (Brown) M. Edn.: B.A., Hamilton Coll., 1922; M.A., Tchrs. Coll., Columbia Univ., 1929; Ed.D., ibid., 1947. m. Henrietta Stephen of N. Andover, Mass., Aug. 4, 1934. d. Georgina and Alexander Stephen. c.: Thornton Nichols; Audrey Louise. Exp.: Vice-Prin., King Ferry Voc. Schl., N. Y.; Prin., S. Otislic H. S., N. Y.; Prin., Hammond H. S., N. Y.; Instr., Math., Potsdam State Tchrs. Coll., Chmn., Math. Dept., Mount Kisco H. S. Hon. Pos.: Chmn., Math. Section, Westchester Co. Tchrs. Assn. Mem.: Phi Delta Kappa; N.E.A.; Mason. Ed.D. Dissertation: Mathematics Clubs. Travel: Europe; Haiti; Canal Zone; Colombia. Hobbies: Stamp Collecting; Hiking; Gardening.



MORGAN, Sister M. Sylvia, Pres. and Dir. of Sci., Marywood Coll., Scranton, Pa. **ORGANIC CHEMISTRY**.

MORGAN, Oliver Moorehouse, Asst. Domestic Sales Mgr., Natl. Aniline Div., Allied Chem. and Dye Corp., 40 Rector St., N. Y. 6, N. Y. TEXTILE, DETERGENTS AND INTERMEDIATES.



b. Ripley, Ont., Can., July 24, 1906. s. Levi and Agnes (Braden) M. Edn.: B.A., Univ. of Western Ont., 1927; M.A., ibid., 1928; Ph.D., McGill Univ., 1930. m. Gladys R. Ferrier on Sept. 6, 1933. c.: Robert Edward; Catharine Agnes; Ruth Victoria. Exp.: Natl. Rsch. Council, Ottawa, Can., 1930-34; Rsch. Chemist, Natl. Aniline Div., Allied Chem. and Dye Corp., 1934-44; Mgr., Detergent Application Rsch., ibid., 1944-50; Mgr., Detergent Sales, ibid., 1950-51; Asst. Domestic Sales Mgr., ibid., 1952—. Mem.: Amer. Chem. Soc.; Amer. Inst. of Chemist.; Amer. Assn. of Textile Chemists and Colorists. Contrb. to: Can. Jour. Rsch.; Amer. Dye. Reporter; Mod. Brewery Age; Ind. Engr. Chem.; Food Industries; The Iron Age; Amer. Dyestuff Reporter; Rayon Textile Monthly; Brewers' Digest; Amer. Wool and Cotton Reporter; Natl. Saftey News; etc. Gen. Int.: Scholarships Natl. Rsch. Council of Can. Special Int.: Textiles, Detergents and Intermediates.

MORGAN, Theodore Harding, Prof. and Hd., Dept. of Elec. Engrng., Worcester Poly. Inst., Worcester, Mass. ELECTRICAL ENGINEERING.

MORGAN, William James, Psychologist, Psychol. Strategy Bd., Washington, D. C.; Permanent Home Address: Route 3, Box 405, Vienna, Va. PSYCHOLOGY. b. Rochester, New York, April 30, 1910. Edn.: A.B., Univ. of Rochester, 1933; Ph.D., Yale Univ., 1937. m. Antonia Bell of Guildford, England, November 2, 1944. c.: William James Jr.; Jean Elizabeth; Robert Macnair. Exp.: Chief, Psychological Clinic, Trng. Schl., Vineland, N. J., 1936-38; Assoc., Psychological Corp., N. Y., N. Y., 1938-39; Psychologist, Pub. Schl., Rochester, N. Y., 1939-41; Dir., Psychol. Test Bur.,



Rochester, N. Y., 1941-42; Army of the U. S., Major, ETO and CT, 1942-46; Organized Various Trng. Staff, Psychol. Assessment Units, and Testing and Evaluation Dir. for U. S. Govt., Wash., D. C. 1947—. Mem.: A.A.A.S.; Fellow, Amer. Psychol. Assn.; N. Y. State Assn. for Applied Psychologists; Eastern Psychological Assn.; British Inst. of Indus. Psychol.; Sigma Xi. Contrb. to: Psychol. Jours. Ph.D. Dissertation: Principles of Conditioning in Human Goal Behavior. War Record: see above. Travel: England; France; Germany; Austria; Switzerland; Italy; Belgium; Egypt; India; China. Gen. Int.: Decorations: Silver Star, Bronze Star, Croix de Guerre with Silver Star. Hobbies: Tennis, Color Photography, Writing, Skiing.

MORGAN, William McLennan, Prof. of Organic Chem., Mt. Union Coll., Alliance, Ohio. ORGANIC CHEMISTRY.

MORGAN, William R., 1343 Brookwood, Birmingham, Mich. CERAMICS.

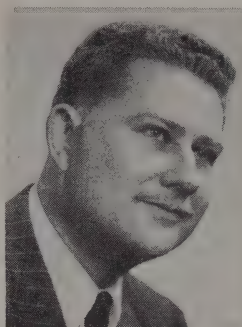
MORGAN, William Wilson, Prof. of Astron., Yerkes Observatory, Univ. of Chicago, Williams Bay, Wis. ASTRONOMY.

MORGULIS, Sergius, Prof. and Chmn., Dept. of Biochem., Coll. of Med., Univ. of Nebr., Omaha, Nebr. BIOCHEMISTRY.

MORITZ, Alan R., 2085 Adelbert Rd., Cleveland 6, Ohio. PATHOLOGY AND BACTERIOLOGY.

MORLEY, Alonzo J., SPEECH AND HEARING.

MORLEY, Russell Alvin Elbridge, Rsch. Geologist, Dir., Morley Rsch. Lab., 399 N. 18th St., Salem, Ore. GEOLOGY; METEORITICS. b. Salem, Ore., June 3, 1923. s. Robert and Opal Louise (Brown) M. Mem.: A.A.A.S.; Mineralogical Soc. Amer.; Amer. Malacol. Union; Mineralogical Soc. of Great Britain and Ireland; Kans. Acad. Sci.; Meteoritical Soc.; Amer. Meteor. Soc.; Fellow, British Interplanetary Soc.; Assoc. Mem., U. S. Naval Inst.; U. S. Natl. Museum. Contrb. to: Popular Astron.; Trans. Kans. Acad. Sci.; Earth Sci. Digest; etc. Special Int.: Recovery and



Classification of Meteorites; Methods for Recording Exact Location of Meteoritic Discoveries; Methods and Techniques in Determining Specific Gravity of Meteorites; The Mineralogy of Meteoric Minerals; The Origin, Paragenesis, and Mineralogy of Natural Occurring Terrestrial Iron and Nickel-Iron; Paleornithology of Flightless Birds; Comparison between Contemporary and Fossil Mollusca; Design and Development of Scientific Instruments and Equipment.

MORRA, Ernest, Store Sales Mgr., Liggett Drug Co., Inc., 2 Park Ave., N. Y., N. Y. PHARMACY.

MORRELL, Joseph A., Rsch. Dir., R. J. Strassenburgh Co., 195 Exchange St., Rochester 14, N. Y. PHYSIOLOGY; PHARMACOLOGY; ENDOCRINOLOGY. b. Harriston, Ont., Can., Nov. 9, 1897. s. Richard and Jessie Della (Howes) M. Edn.: B.A., Univ. of Toronto, 1921; M.A., ibid., 1922; Ph.D., ibid., 1924. m. Della W. Beekman, Aug. 9, 1934. Exp.: Rsch. Chemist, E. R. Squibb and Sons Biol. Labs., New Brunswick, N. J., 1924-42; Rsch. Chemist, Laboratories Lex, Havana, Cuba, 1942-46; Rsch. Dir., R. J. Strassenburgh Co., Rochester, N. Y., 1947—. Mem.: Endocrine Soc.; Soc. Exptl. Biol. and Med.; Amer. Chem. Soc.; Amer. Heart Assn. War Record: Canadian Engrs. Divisional Signal Corps, 1916-19. Special Int.: Endocrinol.; Vitamins; Cardiovascular Diseases.

MORRELL, William E., Assoc. Prof. of Phys. Sci. 1605 W. Clark St., Champaign, Ill. CHEMICAL AND SCIENCE EDUCATION. b. Logan, Utah, July 30, 1909. s. J. William and Maude (Egbert) M. Edn.: B.S., Utah State Agri. Coll., 1933; Ph.D., Univ. of Calif., 1938. m. Evelyn Reeder of Weston, Idaho, May 19, 1933. d. J. F. and Anna R. c.: Michael; Laurence; Marilyn. Exp.: Instr., Chicago City Coll., 1938-42; Instr., Univ. of Ill., 1942-43; Asst. Prof. of Chem., ibid., 1943-49; Assoc. Prof. of Phys. Sci., ibid., 1949—; Coun. in the Student Counseling Bur., ibid., 1947—. Mem.: A.C.S.; A.A.A.S.; Sigma Xi; Phi Beta Kappa; Phi Kappa Phi. Contrb. to: Jour. of Chem. Edn.; Sci. J.A.C.S.; Jour. Chem. Physics. Ph.D. Dissertation: The Distribution of Molecules in a Model Liquid. B. The Polymerization of Gaseous Hydrogen Fluoride. Travel: Germany, 1929-32. Hobbies: Music. Listed in: A.M.S.

MORREY, Charles Beadfield, Chmn. Emer., Dept. of Bacteriol., Ohio State Univ., Columbus, Ohio, 317 N. Dixie Rd., South Miami, Fla. BACTERIOLOGY.

MORRILL, Austin Winfield, Consulting Entomologist and Mgr., Calif. Biol. Service, Glendale, Calif. ENTOMOLOGY.

MORRILL, Charles V., Assoc. Prof. of Anatomy, Cornell Univ. Med. Coll., 1300 York Ave., N. Y., N. Y. ANATOMY.

MORRIS, Charles Stephen, Prof. and Hd., Physics Dept., Manchester Coll., North Manchester, Ind. PHYSICS.

MORRIS, Delyte W., SPEECH AND HEARING.

MORRIS, Earl Halstead, Rsch. Investigator, Carnegie Inst., Washington, D. C. ARCHAEOLOGY.

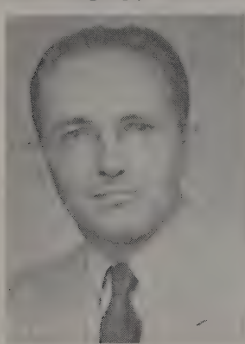
MORRIS, Frank Ray, Hd., Dept. of Math. and Engrng., Prof. of Math., Fresno State Coll., Fresno, Calif. GEOMETRY.

MORRIS, Harley J., Chf. Plant Chemist, Amer. Viscose Corp., Meadville, Pa. CHEMISTRY.

MORRIS, Harold P., Sr. Nutrition Chemist, Natl. Cancer Inst., Bethesda, Md. NUTRITION, CANCER.

MORRIS, Harry Elwood, Hd., Dept. of Botany and Bacteriol., Mont. Expt. Sta., Mont. State Coll., Bozeman, Mont. PLANT PATHOLOGY.

MORRIS, Henry Madison, Jr., Prof. and Hd., Dept. Civil Engrng., Southwestern La. Inst., Lafayette, La.



ENGINEERING HYDRAULICS AND HYDROLOGY; GENERAL CIVIL ENGINEERING. b. Dallas, Tex., Oct. 6, 1918. s. H. M. and Ida (Hunter) M. Edn.: B.S. in C.E. with distinction, Rice Inst., 1939; M.S. in C.E., Univ. of Minn., 1948; Ph.D., *ibid.*, 1950. m. Mary Louise Beach, Jan. 24, 1940. c.: Henry; Kathleen; John; Andrew; Mary Ruth. Exp.: Internatl. Boundary Commn., El Paso, Tex., 1939-42; Instr., Rice Inst., 1942-46; Instr., later Asst. Prof., Univ. of Minn., 1946-50; Prof. and Hd., Civil Engrng. Dept., Southwestern La. Inst., 1950—. Mem.: A.A.A.S.; Amer. Soc. Civil Engrs.; Amer. Soc. for Engrng. Edn.; Amer. Geophys. Union; Amer. Scientific Affiliation; La. Engrng. Soc.; Phi Beta Kappa; Sigma Xi; Tau Beta Pi. Author: *That You Might Believe*, 1946; *Hydraulics of Flow in Culverts*, 1948; *Bible and Modern Sci.*, 1951. Contrb. to: Proc. Amer. Soc. Civil Engrs.; etc. Special Int.: *Hydraulics of Flow in Conduits*; Engrng. Hydrology; Relation of Modern Sci. to Bible and Christianity.

MORRIS, Joseph Chandler, Hd., Dept. of Physics, Tulane Univ., New Orleans, La. PHYSICS.

MORRIS, Max, Assoc. Prof. of Math., Case Schl. Applied Sci., Cleveland, Ohio. MATHEMATICS.

MORRIS, Richard, Prof. Emer. Math., Rutgers Univ., New Brunswick, N. J.; 12 Johnson St., Highland Park, N. J. AUTOMORPHIC FUNCTIONS.

MORRIS, Ross Elliott, Prin. Rubber Technologist, Rubber Lab., Mare Island Naval Shipyard, Vallejo, Calif. RUBBER TECHNOLOGY. b. Los Angeles, Calif., July 17, 1910. s. Burnie Mott and Mary Ida (Pierce) M. Edn.: B.S., Calif. Inst. of Tech., 1931; M.S., *ibid.*, 1932; Good-year Fellow in Rubber Chemistry, Univ. of Akron, 1932-33. m. Helen E. Field on July 7, 1933. c.: Marilyn. Exp.: Rsch. Chem., Goodyear Tire and Rubber Co., Akron, Ohio, 1933-34; Rubber Compounder, *ibid.*, 1934-35; Chf. Compounder, Goodyear Tire and Rubber Co., Los Angeles, Calif., 1935-38; Chf. Chemist, Kelly Springfield Tire Co., Cumberland, Md., 1938-39; Dir., Mare Island Naval Shipyard, Rubber Lab., 1939—. Hon. Pos.: Chmn., Northern Calif. Rubber Group, 1949, Dir., Rubber Div., Amer. Chem. Soc., 1948. Mem.: Northern

Calif., Rubber Group; Amer. Chem. Soc. Contbr. to: Indus. and Engrng. Chem.; Rubber Age; Rubber World; Rubber Chem. and Technology. Special Int.: Rubber Chem. and Tech.

MORRIS, Steward G., Chemist, Eastern Regional Rsch. Lab., Mermaid Lane, Philadelphia, Pa. CHEMISTRY.

MORRISON, Benjamin Yee, Prin. Horticulturist in Chg. Div. Plant Exploration and Introduction, U. S. D. A., Plant Indus. Sta., Beltsville, Md. ORNAMENTAL HORTICULTURE.

MORRISON, Charles Alexander, Physicist, Eastman Kodak Co., Rochester, N. Y. PHOTOGRAPHIC PHYSICS.

MORRISON, Frank Barron, Prof. of Animal Husbandry, Nutrition, Cornell Univ., Ithaca, N. Y. ANIMAL HUSBANDRY.

MORRISON, Gordon, Dir. of Rsch. and Seed Breeding, Burgess Seed and Plant Co., Galesburg, Mich. APPLYING PRINCIPLES OF HEREDITY IN DEVELOPING AND MAINTAINING VEGETABLE VARIETIES. b. Alpena, Mich., Sept. 3, 1895. s. John A. and Flora (McDougal) M. Edn.: B.S., Mich. State Coll., 1923. m. Mattie Vincent, June 7, 1924. c.: Joseph Vincent; Donna Margaret. Exp.: Genetics Researcher, Carnegie Institution of Wash., 1923-26; Geneticist, Ferry-Morse Seed Co., 1926-43; Dir. of Seed Breeding and Research, Burgess Seed and Plant Co., Galesburg, Mich., 1943—. Mem.: Fellow, A.A.A.S.; Genetics Soc. Amer.; Alpha Gamma Rho; Alpha Zeta; Seminar Botanicus. Author: *Cabbage Varieties*, 1934; *Tomato Varieties*, 1938; *Quick Freezing and Family Food Gardening*, 1948. Contrb. to: Econ. Botany; Farm Jour.; Market Growers Jour.; Seed World; etc. War Record: Corps of Engrs., U. S. Army, 1917-19; A.E.F., 1918-19. Gen. Int.: Write and Lecture toward Popular Edn. in Horticulture; Garden Columnist, *Detroit Free Press*; Sometime Lechr., Univ. of Mich. Extension Div. Special Int.: Apply Principles of Heredity in Developing Varieties of Vegetables to Meet Changing Requirements of Growers and Consumers; Write Much for Trade Magazines on Botany for Seedsmen and Practical Seed Breeding for Seedsmen.

MORRISON, Harold, Entomologist, Bureau Entomol. and Plant Quarantine, Washington, D. C. SYSTEMATIC ENTOMOLOGY.

MORRISON, Harriet Barthelmess, Consulting Psychologist, Village Sta., Rt. 2, Derry, N. H. PSYCHOLOGY, EDUCATION.

MORRISON, John Cayce, Asst. Commissioner of Rsch., State Edn. Dept., Crumitie Rd., Albany, N. Y. EDUCATIONAL RESEARCH.

MORRISON, Paul Cross, Prof. of Geography and Assistant to the Dean, Mich. State Coll., 520 Sycamore Lane, East Lansing, Mich. GEOGRAPHY. b. Racine, Ohio, August 26, 1906. s. Tilden H. and Emma (Cross) M. Edn.: B.S., Ohio State Univ., 1928; M.A., *ibid.*, 1933; Ph.D., Clark Univ., 1941. m. Florence Batey of E. Liverpool, Ohio, 1933. d. Joe and Cora B. c. Nancy Jo. Exp.: Instr. Geog., Ohio State Univ., 1930-31; *ibid.*, Mich. State Coll., 1931-39; Fellow, Clark Univ., 1937-38; Asst. Prof., Mich. State Coll., 1939-45; Assoc. Prof., *ibid.*, 1945-50; Asst. to Dean, 1944—; Prof. of Geog., *ibid.*, 1950—. Mem.: Assn. Amer. Geog.; Amer. Geog. Soc. of N. Y.; Alpha Sigma Phi; Natl. Council of Geography Tchrs.; Mich. Acad. of Sci. and Arts and Letters. Contrb. to: Econ. Geog.; Jour. of Geog.; Mich. Acad. of Sci., Arts, and Letters. Ph.D. Dissertation: *The Limestone Quarrying Indus. of Mich.* Travel: Central Amer.; Costa Rica;

MORRISON, Gordon, Dir. of Rsch. and Seed Breeding, Burgess Seed and Plant Co., Galesburg, Mich.



APPLYING PRINCIPLES OF HEREDITY IN DEVELOPING AND MAINTAINING VEGETABLE VARIETIES. b. Alpena, Mich., Sept. 3, 1895. s. John A. and Flora (McDougal) M. Edn.: B.S., Mich. State Coll., 1923. m. Mattie Vincent, June 7, 1924. c.: Joseph Vincent; Donna Margaret. Exp.: Genetics Researcher, Carnegie Institution of Wash., 1923-26; Geneticist, Ferry-Morse Seed Co., 1926-43; Dir. of Seed Breeding and Research, Burgess Seed and Plant Co., Galesburg, Mich., 1943—. Mem.: Fellow, A.A.A.S.; Genetics Soc. Amer.; Alpha Gamma Rho; Alpha Zeta; Seminar Botanicus. Author: *Cabbage Varieties*, 1934; *Tomato Varieties*, 1938; *Quick Freezing and Family Food Gardening*, 1948. Contrb. to: Econ. Botany; Farm Jour.; Market Growers Jour.; Seed World; etc. War Record: Corps of Engrs., U. S. Army, 1917-19; A.E.F., 1918-19. Gen. Int.: Write and Lecture toward Popular Edn. in Horticulture; Garden Columnist, *Detroit Free Press*; Sometime Lechr., Univ. of Mich. Extension Div. Special Int.: Apply Principles of Heredity in Developing Varieties of Vegetables to Meet Changing Requirements of Growers and Consumers; Write Much for Trade Magazines on Botany for Seedsmen and Practical Seed Breeding for Seedsmen.

MORRISON, Harold, Entomologist, Bureau Entomol. and Plant Quarantine, Washington, D. C. SYSTEMATIC ENTOMOLOGY.

MORRISON, Harriet Barthelmess, Consulting Psychologist, Village Sta., Rt. 2, Derry, N. H. PSYCHOLOGY, EDUCATION.

MORRISON, John Cayce, Asst. Commissioner of Rsch., State Edn. Dept., Crumitie Rd., Albany, N. Y. EDUCATIONAL RESEARCH.

MORRISON, Paul Cross, Prof. of Geography and Assistant to the Dean, Mich. State Coll., 520 Sycamore Lane, East Lansing, Mich. GEOGRAPHY. b. Racine, Ohio, August 26, 1906. s. Tilden H. and Emma (Cross) M. Edn.: B.S., Ohio State Univ., 1928; M.A., *ibid.*, 1933; Ph.D., Clark Univ., 1941. m. Florence Batey of E. Liverpool, Ohio, 1933. d. Joe and Cora B. c. Nancy Jo. Exp.: Instr. Geog., Ohio State Univ., 1930-31; *ibid.*, Mich. State Coll., 1931-39; Fellow, Clark Univ., 1937-38; Asst. Prof., Mich. State Coll., 1939-45; Assoc. Prof., *ibid.*, 1945-50; Asst. to Dean, 1944—; Prof. of Geog., *ibid.*, 1950—. Mem.: Assn. Amer. Geog.; Amer. Geog. Soc. of N. Y.; Alpha Sigma Phi; Natl. Council of Geography Tchrs.; Mich. Acad. of Sci. and Arts and Letters. Contrb. to: Econ. Geog.; Jour. of Geog.; Mich. Acad. of Sci., Arts, and Letters. Ph.D. Dissertation: *The Limestone Quarrying Indus. of Mich.* Travel: Central Amer.; Costa Rica;

Canada. Hobbies: Stamp Collecting. Listed in: A.M.S.; Who Knows—and What.

MORRISON, Spencer H., Assoc. Prof. of Dairying, Dairy Dept., Univ. of Ga., Athens, Ga. **ANIMAL NUTRITION AND PHYSIOLOGY; BIOCHEMISTRY.** b. Madison, Wis., April 17, 1919. s. F. B. and Elsie Rhea (Bullard) M. Edn.: B.S., Cornell Univ., 1939; M.S., *ibid.*, 1946; Ph.D., *ibid.*, 1949. m. Catherine Fleming of Leith, Ontario, Canada, May 18, 1946. d. Stuart and Cassie Fleming. c. Spencer H., II; Wm.; Robert Stuart; Frank Barron. Exp.: Tchng. and Rsch. Asst., Animal Husb., Cornell Univ., 1946-48; Assoc., *ibid.*, Univ. of Calif., 1948-49; Assoc. Prof. of Dairying, Univ. of Ga., 1949—. Mem.: Amer. Soc. of Animal Prod.; Amer. Chem. Soc.; Amer. Dairy Sci. Assn.; A.A.A.S.; Sigma Xi; Mason. Ph.D. Dissertation: The Effect of Methods of Curing Upon the Nutritive Value of Hay.

MORRISON, Wendell C., Rsch. Engr., RCA Laboratories, Random Rd., R.F.D. 1, Princeton, N. J.



ELECTRICAL ENGINEERING. b. Sioux City, Iowa, Sept. 13, 1915. s. James C. and Pearl (Kethledge) M. Edn.: A.B., Morning-side Coll., 1937; B.S., Univ. of Iowa, 1939; M.S., *ibid.*, 1940. m. Charlotte Petersen. c.: Jeanne Ann. Exp.: Engr., Burlington Instrument Corp., 1939; Student Engr., RCA, Victor Div., 1940-41; Rsch. Engr., RCA Laboratories, 1941—. Mem.: Inst. of Radio Engrs.; Sigma Xi; Tau Beta Pi; Eta Kappa Nu; Sigma Pi Sigma. Contr.

to: Proc. of the I.R.E.; RCA Rev. Special Int.: Speech Privacy; High Frequency Antennas; Antenna Pattern Calculators; Television Terminal Equipment; UHF Transmitters.

MORROW, Aubrey Lyndon, Geologist, Magnolia Petroleum Co., Dallas, Tex. **GEOLOGY.**

MORROW, Martha G. (Mrs. G. Chandler Furman), Staff Writer of Sci. Service, 1719 N. St., N. W., Washington 9, D. C.



ASTRONOMY. b. May 2, 1912, Atlanta, Ga. d. Gilham H. and Martha (Langston) M. Edn.: A.B., Wellesley Coll., 1935. m. G. Chandler Furman, Jan. 21, 1949. Exp.: Asst., Preparation of Material for Church Rev., 1941-43; Staff Writer, Sci. Service, Washington, D. C., 1943—. Mem.: Press Gallery, U. S. Senate and House of Representatives; Amer. Astronomical Soc.; A.A.A.S.; Philos. Soc. of Wash.; Natl. Assn. of Sci. Writers; Women's Natl.

Press Club. Author: *Inferior Mirages*, 1939. Gen. Int.: Foreign Correspondent for Sci. Service, Japan, Guam and London, 1949-50. Special Int.: Popularization of Astron. and Making all Sci. More Vivid and Designing Simplified Experiments to Dramatize New Scientific Developments.

MORSE, Arthur Henry, Prof. of Obstetrics and Gynecology, Yale Univ. Schl. of Med., New Haven, Conn. **OBSTETRICS AND GYNECOLOGY.**

MORSE, David Sherman, Prof. of Mathematics, Union Coll., Schenectady, New York. **MATHEMATICS.** b. September 16, 1892, Roxbury, New York. s. Herbert G. Morse and Carrie E. (Dean). Edn.: A.B., New York Univ., 1917; M.A., Harvard, 1918; Pd.M., N. Y. Univ., 1917; Ph.D., Cornell, 1923. m. Nellie L. Ayling, Syracuse, N. Y.,

1918. d. Dr. and Mrs. W. J. Ayling. Exp.: Instr. in Math., Union Coll., 1918-20; Instr. in Math., Cornell Univ., 1920-24; Asst. Prof. Math., Union Coll., 1924-27; Assoc. Prof., Math., *ibid.*, 1927-31; Prof. of Math., *ibid.*, 1931—. Marie Louise Bailey Prof. of Math., 1952—; Chairman, Department of Mathematics, 1944—; Chmn. Div. of Sci., 1943—; Summer Sessions, N. Y. Univ., 1916-17; Cornell, 1920-24; Syracuse, 1927; Fellow, A.A.A.S. Mem.: Amer. Math. Soc.; Math. Assn. of Amer.; Phi Kappa Phi; Phi Beta Kappa; Phi Beta Kappa Senator, 1944-46; Sigma Xi. Contr. to: Amer. Jour. of Math. Ph.D. Dissertation: Relative Inclusiveness of Certain Definitions of Summability. Travel: U. S., Canada; England; France; Germany; Italy; Switzerland.

MORSE, H. Howe, State Soil Scientist, 79 N. Third Street, Old Federal Bldg., Columbus, Ohio. **SOIL CLASSIFICATION.** b. Kirtland, Ohio, Mar. 26, 1900. s. George Hammond and Mary L. (Perrine) M. Edn.: B.S., Ohio State Univ., 1930; Ph.D., Mich. State Univ., 1934. m. Elizabeth Drake on Dec. 15, 1934. Exp.: Jr. Soil Scientist, Asst. Soil Scientist, Survey Supvr., 1934-37; Asst. Regional Soil Scientist, 1937-42; Conservationist in Project Planning, 1942-44; State Soil Scientist, 1944—. Mem.: Amer. Soc. Agron.; Sigma Xi; Soil Sci. Soc. of Amer.; Ohio Acad. of Sci.; Alpha Gamma Rho. Contr. to: Soil Sci.; Proc. Soil Soc. of Amer. Special Int.: Soil Classification; Land Use Planning; Program Planning.

MORSE, Harold Marston, The Inst. for Advanced Study, Princeton, N. J.

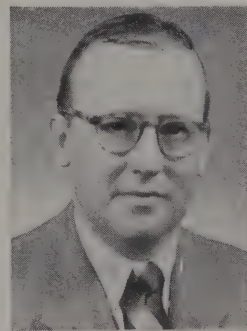
MORSE, Leighton B., Assoc. Prof. of Physics, City Coll. of N. Y., 139th St. and Convent Ave., N. Y., N. Y. **PHYSICS.**

MORSE, Marston, Prof. of Math., Inst. Advanced Study, Princeton, N. J. **MATHEMATICS.**

MORSE, Mary Louise, Prof. of Chem., Nebr. State Tchrs. Coll., Kearney, Nebr. **ORGANIC CHEMISTRY.**

MORSE, Minerva, Rsch. Assoc. in Pediatrics, Univ. of Chicago, 920 E. 59th St., Chicago, Ill. **BIO-CHEMISTRY.**

MORSE, Roy Earl, Rsch. Dir., William J. Strange Co., 342 No. Western Ave., Chicago 12, Ill. **FOOD TECHNOLOGIST**



—MEAT AND MEAT PRODUCTS. b. Boston, Mass., Nov. 3, 1916. s. Louis and Esther (Briggs) M. Edn.: B.S., Univ. of Mass., 1940; M.S., *ibid.*, 1941; Ph.D., *ibid.*, 1948. m. Mary Farrell, Sept. 14, 1948. c.: Michael William; Timothy Roy; Andrew Leonard. Exp.: Packaging Rsch., Owens-Illinois Glass Co., San Francisco, Calif., 1941; Instr., Ore. State Coll., Corvallis, Ore., 1941-42; Instr., Food Technol., Univ. of Mass., Amherst, Mass., 1946-48;

Assoc. Prof. of Food Technology, Univ. of Ga., Athens, Ga., 1948-49; Head, Food Technology Laboratory, Monsanto Chemical Co., Anniston, Ala., 1949-51; Rsch. Director, Kingan and Co., Indianapolis, Ind., 1951-53; Rsch. Dir., William J. Strange Co., 1953—. Mem.: Inst. of Food Technologists; Amer. Chem. Soc.; A.A.A.S.; Amer. Inst. of Chemists (F); Soc. Amer. Bacteriologists; Soc. for Industrial Microbiol.; Amer. Management Assn.; Sigma Xi; Kappa Sigma; Rotary. Contr. to: Trans. Amer. Assn. Cereal Chemists; Jour. Milk and Food Technologists; Poultry Sci.; Food Industries; Food Rsch.; Food Technology; etc. War Record: 1st Lt., Army Air Corps, Aerial Photographer, European Theater. Special Int.: Chem. and Bacteriol. of Foodstuffs with special Emphasis on Meat and Meat Products, Bakers Yeast and Canned Foods.

MORSE, Roy Robert, Area Mgr., Shell Oil Co., Inc., P. O. Box 2099, Houston, Tex. **GEOLOGY.**

MORSE, Stanley Fletcher, Consulting Agriculturist, Box 851, Winter Park, Fla. **FARM MANAGEMENT AND ECONOMICS.**

MORSE, Stanley Wallace, Prof. of Phys. Sci. and Chmn. Natural Sci. Div., San Francisco State Coll., San Francisco, Calif. **CHEMISTRY AND SCIENCE EDUCATION.** b. Philadelphia, Pa., June 21, 1898. s. Frank and Jennie (Richards) M. Edn.: A.B., Hanover Coll., 1920; M.A., Stanford Univ., 1926; Ph.D., *ibid.*, 1932. m. Agnes Carson, June 27, 1923. c.: Jeananne Kelly and Marjorie Lou Rich. Exp.: Instr., Hanover Coll., 1919; Tchr., H. S., W. Va., 1920-21; Chem. and Phys., Ind., 1921-25; Tehng. Asst. Chem., Stanford Univ., Calif., 1925-26; Faculty, San Francisco State Coll., San Francisco, Calif., 1926—. Mem.: Amer. Chem. Soc.; A.A.A.S.; A.A.-U.P.; Calif. Acad. of Sci.; N.S.T.A.; Beta Theta Pi; P.S.A.C.T.; Sigma Xi; Phi Lambda Upsilon. Author: Water, Its Conservation and Use, 1937; Chemical Symbolism and Calculations, 1950. Contrb. to: Jour. Biol. Chem.; Biochem. Jour.; Jour. Chem. Edn.; Schl. Sci. and Math.; Sci. Edn. Special Int.: Sci. Edn.; Specialty Chem. and Tchr. Trng.

MORSE, William Clifford, Prof. of Geol. (Dir., Miss. Geol. Survey), Univ. Miss. b. Starr, Ohio.



s. James Woodard and Jennie (Brown) M. m. Martha Rarik of New Plymouth, Ohio (dec.). c.: Paul Franklin (dec.). m. (2) Dorothea Bagnell, August 22, 1951. Edn.: Ohio State Univ., B.A., 1906; *ibid.*, M.A., 1908; Univ. of Chicago, 1911 (summer), 1913-14; Mass. Inst. of Technology, 1926-27, Ph.D., 1927. Exp.: Fellow in Zool., Ohio State Univ., 1906-07; Fellow and Asst. in Geol., *ibid.*, 1907-08; Instr. in Geol., *ibid.*, 1908-13; Univ. Scholar in Geol., Univ. of Chicago, summer,

1911; Instr. in Geology, Wash. Univ., St. Louis, 1914-16; Asst. Prof. in Geol., Wash. Univ., 1916-18; Prof. and Hd. of Dept. of Geol., Miss. State Coll., 1918-34; Visiting Prof. of Geol., Univ. of N. C., 1930-31; Prof. and Hd. of Dept. of Geol., Univ. of Miss., 1934-52; Prof. Geol., *ibid.*, 1934—; Dir., Miss. Geological Survey, *ibid.*, 1934—; State Geologist, 1934—. Mem.: Sigma Xi; Fellow Ohio Acad. of Sci.; A.A.A.S.; Paleontological Soc.; Amer. Assn. of Petroleum Geol.; Fellow, Geological Soc. of Amer.; Sigma Gamma Epsilon. Ph.D. Dissertation: Paleozoic Rocks of Miss. Author: Textbook on Geol. Contrb. to: Ohio Naturalist; Jour. of Geol.; Ohio State Acad. of Sci.; Ky. Geol. Survey Bull.; State Highway Dept. of Ohio, Report; Ohio Geol. Survey Bull.; Stone, Sci.; Miss. A. & M. Forum; Bull. Amer. Assn. Petroleum Geol.; Miss. St. Geol. Survey, Bull.; Owen Sound Daily Sun-Times; Canadian Geog. Jour. Rschs. of Gen. Int.; Stratigraphy Devonian and Miss. Beds in Ohio, Ky., Miss., Tenn., Ala. War Record: Instr., Topographic Mapping and Map Interpretation, S.A.T.C. and S.N.T.C. Travel: Conducted Appalachian and Pac. Field Trips; Canada. Spec. Int.: Tehng. and Gen. Geol.

MORSE, Noel, 568 South St., Needham, Mass. **ANTHROPOLOGY.**

MORTENSEN, Ernest, Supt., Substation 19, Tex. Agri. Expt. Sta., Winterhaven, Tex.

MORTON, Joshua Romine, Emeritus Prof. of Chem., Ohio Univ., 2 Forest St., Athens, Ohio. **CHEMISTRY.** b. Wilkesville, Ohio, Oct. 18, 1877. s. William Aaron and Emma (Dilworth) M. Edn.: B.S., Ohio Univ., 1905; M.S., *ibid.*, 1912. m. Nellie Angeline Long, May 27, 1896. s. Doris Morton Setter; Frances Morton O'Neill; Emma Morton Trace. Exp.: Tehng. in Public Schls. of Ohio, 1896-1899; Prin., Wilkesville Acad., Ohio, 1900-01; Asst. and Instr. of Chem., Ohio Univ., Athens, Ohio,

1904-06 and 1910-12; Hd. Sci. Dept., Zanesville H. S., 1906-09; Asst. Prof. of Chem., *ibid.*, 1912-14; Assoc. Prof., *ibid.*, 1914-17; Prof., *ibid.*, 1917-48; Hd. Sci. Dept.; Emeritus Prof., *ibid.*, 1948—. Mem.: Fellow, A.A.A.S.; Amer. Chem. Soc.; Lambda Chi Alpha; Mason. Author: Qualitative Analysis, 1917. Co-author: A Lab. Program for Gen. Chem., 1944. Special Int.: Absorption of Ba ion in Qualitative Analysis; the Cobalt Chlorides; Eutectic Mixtures of Sodium Phosphates and Ammonium Nitrate.

MORTON, Harry Edward, Prof. of Bact., Schl. of Med., Univ. of Pa. Home: 4114 Schl. Lane, Drexel Hill, Pa. **MEDICAL BACTERIOLOGY.** b.



Aug. 4, 1906, Wayne, Mich. s. Edward and Stella (Hasselbach) M. Ancestry: Father's family migrated from England; Mother's from Germany. Edn.: Life Certificate, Mich. State Normal Coll., 1925; B.S., Pharm., Univ. of Mich., 1930; M.S., Bact., Grad. Schl., Univ. of Mich., 1931; Sc.D., Bact., Grad. Schl., Univ. of Mich., 1935. m. Leah Spencer, Rochester, Mich., 1934. d. Arthur W. and Lena Spencer. c.: David Harry; Roger Spencer.

Exp.: Bacteriologist, Parke, Davis & Co., 1926-27; Instr. in Med. Bact., Schl. of Med., Univ. of Pa., 1931-35; Assoc. in Bact., *ibid.*, 1935-37; Asst. Prof. in Med. Bact., *ibid.*, 1937-42; Assoc. Prof. in Med. Bact., *ibid.*, 1942-50; Prof. in Med. Bact., 1950—; Consultant Bacteriologist, Inst. for the Study of Venereal Disease, Univ. of Pa., Cooperating with the U. S. Pub. Health Serv., 1948—; Consultant to Com. on Therapeutic Agents, Amer. Vet. Med. Assn., 1950—. Hon. Pos.: Sec.-Treas., Eastern Pa. Chapt., S.A.B., 1936-45; Pres., 1946-48; Councilor, Soc. of Amer. Bacteriologists, 1942-46; Chmn., Comm. on Materials for Visual Instrn. in Microbiol., S.A.B., 1942—; Mem., Comm. on Antiseptics, A.P.H.A., 1943-44; Mem. Com. on Motion Pictures Biol. Pholog. Assn., 1945—; Sec., Pa. Chapt. of Sigma Xi, 1947-51; Ed. of Sect. "Visual Instrn in Microbiol., Immunology, and Pub. Health," Biol. Absts., 1944—; Lectr. in Post Grad. Div., Schl. of Dentistry, Univ. of Pa., 1947—; Mem. Sectional Com., Z-15 "Standards for Graphical Presentation" and Subcom., Z-15.1 "Lantern Slides," Amer. Standards Assn., 1950—. Mem.: A.A.A.S.; Amer. Assn. of Pathologists and Bacteriologists; Electron Microscope Soc. of Amer.; A.A.U.P.; Amer. Chem. Soc.; Soc. Amer. Bact.; Eastern Pa. Chapt., S.A.B.; Allied Sci. Section, U. S. Section International Coll. Surgeons; Soc. Experimental Biol. and Med.; Physiol. Soc., Phila.; Amer. Pub. Health Assn.; Pa. Acad. of Sci.; Natl. Geog. Soc.; Biol. Phot. Assn.; Sigma Xi; Rho Chi; Phi Rho Sigma; Phi Sigma Epsilon; Univ. of Mich. Club of Phila. Contrb. to: Jour. Bact.; Bact. Rev.; Amer. Jour. Clin. Pathologists; Sci.; Jour. Amer. Med. Assn.; Proc. of the Soc. for Exptl. Biol. and Med.; Amer. Jour. of Syphilis, Gon., and Ven. Disease; Jour. Dent. Rsch.; Jour. Urology. Ph.D. Dissertation: Observation on the Life Hist. of the Diphtheria Bacillus. Listed in: A.M.S.; Who's Who in Amer. Special Int.: Pleuropneumonia, like organisms, disinfectants, antibiotics.

MORTON, Robert Lee, Prof. of Edn., Ohio Univ., Athens, Ohio. **EDUCATION, PSYCHOLOGY, MATHEMATICS.**

MOSBY, Henry Sackett, Biol., Fish and Wildlife Service, Prof. of Conservation, Va. Poly. Inst., Va. Cooperative Wildlife Rsch. Unit, VPI Dept. Biol., Blacksburg, Va. **WILDLIFE MANAGEMENT AND FORESTRY.** b. Oct. 28, 1913, Lynchburg, Va. s. Alexander West and Janie Leyburn (Sackett) M. Edn.: B.S., Hampden Sydney Coll., 1935; B.S.F. and M.F., Univ. of Mich., 1937; Ph.D., *ibid.*, 1941. m. Virginia Anderson Brown, July 12, 1941. c.: Henry Sackett, Jr.; Virginia Anderson and Walter Brown. Exp.: Dist. Biol.,

Va. Game Comm., 1938-42; Act. Supt. of Game, ibid., 1942-43; Dist. Game Tech., ibid., 1946-47; In Chg., Va. Cooperative Wildlife Rsch. Unit, Blacksburg, Va., 1947—. Mem.: Wildlife Soc.; A.A.U.P.; V.S.O.; Wilson Ornithol. Club. Contrb. to: Trans. of N. Amer. Wildlife Conferences. Special Int.: Population Principles of Wild Game, Particularly Upland Game Birds.

MORY, Austin Van Hoesen, Retired, 27 Kendrick Pl., Amherst, Mass. **INDUSTRIAL CHEMISTRY.**



b. Near Masonville, Iowa, Nov. 15, 1869. s. Robert and Isabel (Van Hoesen) M. Edn.: B.S., Rose Poly. Inst., 1894; Ch.E., ibid., 1914. m. Georgia Graham, 1900. m. Lena Chapman, 1935. c.: Isabel. Exp.: Analyst, Ill. Steel, 1895; Asst. Chemist, Armour and Co., Chicago, Ill., 1896-1901; Chf. Chemist, Armour Packing Co., Kansas City, 1901-07; In Chg., U. S. Food and Drug Inspection Lab., Kansas City, Mo., 1907-11; Mgr., Merchandise Control Lab., Sears, Roebuck and Co.,

Chicago, Ill., 1911-19; Hd., Chem. Div., Procter & Gamble, Cincinnati, Ohio, 1920-21; Dir., Tech. Bureau, Biscuit and Cracker Mfgs. Assn., 1921-23; Assoc. Dir. of Rsch., Bakelite Corp., Bloomfield, N. J., 1924-33; Dir. of Rsch., General Printing Ink Corp., N. Y., N. Y., 1934-37; Consulting Chemist, Chicago, 1937-46; Vice-Pres., Lucien I. Yeomans, Inc., Chicago, Industrial Engrs., 1946-52; Retired, 1952—. Hon. Pos.: Chmn., Chicago Section, Amer. Chem. Soc., 1916-17; Pres., Chicago Chemists Club, 1923; Chmn., Com. on Society Procedure, Amer. Chem. Soc., 1923; Mem., Editorial Advisory Bd., Indus. and Engrng. Chem., 1918-37; Secy.-Treas., Amer. Chem. Soc. Endowment Com., 1925. Mem.: Fellow, A.A.A.S.; Emer., Amer. Chem. Soc. Gen. Int.: Staffing a General Merchandise Control Lab. with Young Chemists and Chemical Engrs. May be a Bit Unusual but it was Very Successful in a Large Mail Order House Which Early (1911) Recognized the Value of Its Lab. as a Trng. Schl. for Future Executives; When World War II Was upon Us, The Exec. Vice-Pres. of This Same House Was Appointed Chmn. of the War Production Bd. When Asked How He, a Man of Chem. Engrng. Trng. Came to Be So Successful in Business He Was Wont to Reply, "By Applying Lessons Learned in the Chemical Lab." A Number of the "Graduates" of the Same Lab. Have Become Highly Successful Executives Both in Mfg. and Merchandising. Special Int.: Slight Acquaintance with the Production and Evaluation of Edible Fats and Oils; Fertilizers; Phenolic Resins and Varnishes; Printing Inks; Textiles.

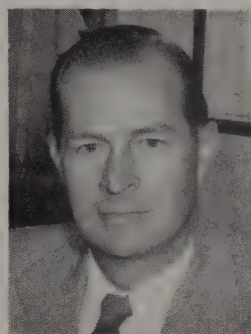
MOSCHCOWITZ, Eli, Asst. Prof. of Clinical Med., Columbia Univ., 25 W. 68th St., N. Y., N. Y. **INTERNAL MEDICINE.**

MOSELEY, Maynard F., Asst. Prof. of Botany, Univ. of Calif., Santa Barbara Coll., Santa Barbara, Calif. **PLANT MORPHOLOGY, ANATOMY, AND PHYLOGENY.** b. Boston, Mass., July 15, 1918. s. Maynard F. and Muriel (Chase) M. Edn.: B.S., Univ. of Mass., 1940; M.S., Univ. of Ill., 1942; Ph.D., ibid., 1942. m. Jean McCaskill, Aug. 15, 1949. c.: Margery C. Exp.: Instr., Dept. of Botany, Cornell Univ., 1947-49; Instr. in Botany, Univ. of Calif., Santa Barbara Coll., Santa Barbara, Calif., 1949-51; Asst. Prof., ibid., 1951—. Mem.: Botanical Soc. Amer.; Amer. Inst. Biological Sciences; Internatl. Assn. of Wood Anatomists; Phi Kappa Phi; Sigma Xi. Contrb. to: Botanical Gazette; Lloydia. War Record: Med. Dept., U. S. Army, 1942-46. Special Int.: Wood Anatomy and Its Use in Phylogeny.

MOSER, Frank, Rsch. Chemist, Pittsburgh Plate Glass Rsch. Lab., Creighton, Pa. **ADHESIVES AND SOIL TECHNOLOGY.** b. Dallas Center, Iowa, Feb. 1, 1901. s. Jacob and Minnie (Weber) M. Edn.: B.S., Iowa State Coll., 1927; M.S., Purdue

Univ., 1929; Ph.D., Cornell Univ., 1932. m. Marion Peterson, Sept. 10, 1927. c.: Sandra; Robert. Exp.: Asst. in Agron., Purdue Univ., 1927-29; Dir. of Sci. and Agri., State Tchrs. Coll., Dickinson, N. Dak., 1929-30; Asst. in Agron., Cornell Univ., 1930-33; Supvr., Special Real Estate, Northwestern Mutual Life Ins. Co., Milwaukee, Wis., 1933-36; Assoc. Agronomist, Clemson Agri. Coll., Clemson, S. C., 1936-44; Rsch. Chemist, Pittsburgh Plate Glass Co., 1944—. Mem.: Amer. Chem. Soc.; Amer. Soc. for Testing Materials and Amer. Soc. Agron.; Sigma Xi; Phi Delta Kappa; Lions. Contrb. to: Soil Sci.; Jour. Amer. Soc. Agron.; etc. Special Int.: Fundamentals of Adhesion; Testing and Selecting Glass Adhesives; Soil Conservation Practices and Calcium and Phosphorus Requirement of Plants.

MOSEMAN, Albert Henry, Chf. of Bur., Bur. of Plant Indus., Soils and Agril. Engrng., U. S. Dept.



of Agri., Beltsville, Md. **AGRONOMY AND PLANT GENETICS.** b. Oakland, Nebr., Jan. 27, 1914. s. John George and Bertha (Hopp) M. Edn.: B.Sc., Univ. of Nebr., 1938; M.S., ibid., 1940; Ph.D., Univ. of Minn., 1944. m. Jean Reyerson, Mar. 21, 1942. c.: Janet Ann; John Hilton; Donna Jean. Exp.: Rsch. Agron., Bur. of Plant Indus., Soils and Agril. Engrng., Beltsville, Md., 1936-44; Asst. to Chf., ibid., 1944-50; Special Asst. to Chf., ibid., 1950-51; Chf. of Bur., ibid., 1951

—. Mem.: Amer. Soc. of Agron.; Amer. Genetic Assn.; A.A.A.S.; Soc. of Sigma Xi. Contrb. to: Flax Facts; Jour. of Amer. Soc. of Agron. Special Int.: Breeding and Genetics of Wheat, Small Grains and Flax.

MOSER, Frank Hans, Dir. of Rsch. and Development, Standard Ultramarine Co., Huntington, W. Va. **ORGANIC CHEMISTRY.** b. Chicago, Ill., Aug. 4, 1907. s. Felix and Antonia (Weiser) M. Edn.: A.B., Hope Coll., 1928; M.S., Univ. of Mich., 1929; Ph.D., ibid., 1932. m. Margaret Cecelia Gordon on June 14, 1930. c.: Joyce Elizabeth; John Gordon. Exp.: Sr. Chemist, Natl. Aniline and Chem. Co., Buffalo, N. Y., 1932-38; Chemist, Standard Ultramarine Co., Huntington, W. Va., 1938-42; Intermediate Dept. Supvr., ibid., 1942-52; Dir. Rsch. and Develop., ibid., 1952. Hon. Pos.: First Chmn., Central Ohio Valley Section of Amer. Chem. Soc., 1947. Mem.: Sigma Xi; Phi Lambda Upsilon; Amer. Chem. Soc.; Amer. Inst. of Chemists; W. Va. Acad. of Sci.; Rotary; Guyan Country Club. Contrb. to: Jour. of the Amer. Chem. Soc.; U. S. Patents. Special Int.: Pigment Intermediates; Pigments; Phthalocyanine Colors.

MOSER, Henry M., **SPEECH AND HEARING.**

MOSES, Clarence Flavel, Prof., Muskingum Coll., New Concord, Ohio. **CONSERVATION.**

MOSETTIG, Erich, Prin. Chemist, Natl. Inst. of Health, Bethesda, Md. **ORGANIC CHEMISTRY.**

MOSHER, Raymond Mylar, Hd. and Prof., Dept. of Psychol., State Coll., San Jose, Calif. **PSYCHOLOGY.**

MOSKEY, Henry Eugene, Veterinary Med. Dir., Food and Drug Admin., Federal Security Agency, Washington, D. C. **PATHOLOGY AND PARASITOLOGY.** b. Hyattsville, Md., Aug. 14, 1892. s. Constante E. and Mary (Pawloska) M. Edn.: V.M.D., Schl. of Veterinary Med., Univ. of Pa., 1920. m. Louise Pollard on May 6, 1935. c.: Frederick Eugene. Exp.: Veterinarian, Bur. of Animal Industry, U. S. Dept. of Agri., 1920-27; Veterinary Med. Dir., Food and Drug Admin., Federal Security Agency, Wash., D. C., 1928—. Mem.: A.V.M.A. War Record: Medical Corps, 1918. Special Int.: Toxicity and Therapeutic Value of Drugs in the Prevention and Treatment of Diseases

of Animals; Special Trng. in Pathol. and Pathogenic Bacteriology also Parasitology.

MOSKOWITZ, Samuel, Sr. Chem. Engr., N. Y. State Dept. of Labor, 80 Centre St., N. Y. 13, N. Y. **INDUSTRIAL HYGIENE**, b. Aug. 26, 1905, N. Y. C. s. Isaac and Pauline G. (Katz) M. Edn.: B.S., N. Y. Univ., 1926; M.S., *ibid.*, 1927; Ph.D., *ibid.*, 1930; Ch.E., *ibid.*, 1938. m. Dora Luntz, May 16, 1931. c.: Saul; David Lyon; and Paul Andrew. Exp.: Tchng. Fellow, N. Y. Univ., N. Y. C., 1926-30; Chf. Chemist, Pediatric Rsch. Jewish Hosp. of Brooklyn, 1931-33; Chemist and Chem. Engr., N. Y. State Dept. of Labor, N. Y. C., 1934—. Mem.: Sigma Xi; Amer. Indust. Hygiene Assn.; Esplanade Dem. Club. Contrb. to: Jour. of Amer. Chem. Soc.; Jour. Ind. Hygiene and Toxicol.; Ind. Med.; Ind. Bulletin; Monthly Rev. Ind. Hygiene; Jour. Amer. Med. Assn.; Painter and Decorator. Special Int.: Occupational disease prevention.

MOSS, William Lorenzo, 2815 Jefferson Rd., Athens, Ga. **MEDICINE**.

MOSSMAN, Donald Davis, Asst. Prof. of Chem., Hunter Coll., N. Y., N. Y. **CHEMISTRY**.

MOSSMAN, Dorothea R., Asst. Prof. of Chem., Brooklyn Coll., Brooklyn, N. Y. **CHEMISTRY**.

MOSSMAN, Harland W., Assoc. Prof. of Anatomy, Univ. of Wis., Madison, Wis. **ANATOMY**, **EMBRYOLOGY**.

MOSTOFI, Fathollah K., Chf., Genito-Urinary Pathol. Section, Armed Forces Inst. of Pathol., Washington 25, D. C. **PATHOLOGY WITH SPECIAL REFERENCE TO GENITO-URINARY DISEASES**, b. Teheran, Iran, Aug. 10, 1911. s. Farajullah Khan and Kursum (Khanum) M. Edn.: A.B., Univ. of Nebr., 1934; B.S., *ibid.*, 1938; M.D., Harvard Univ., 1939. m. Dorothy Ida Krock, June 30, 1940. c.: Keith. Exp.: Intern., St. Luke's Hosp., Bethlehem, Pa., 1939-40; House Officer, Pathol., Peter Bent Brigham Hosp., Boston, Mass., 1940-41; Resident, Pathol., Boston Lying-in-Hospital, Boston, Mass., 1941-42; Resident, Pathol., Free Hosp. for Women, *ibid.*, 1942—; Resident, Pathol. Children's Hosp., *ibid.*, 1942-43; Asst. Pathologist, Mass. General Hosp., *ibid.*, 1943-44; Consultant, Mass. Eye and Ear Infirmary, *ibid.*, 1944; U. S. Army, Chf. of Laboratory, 1944-46; Chief of Histopathology Center, 1946-47, all Z. I.; Rsch. Fellow, NCI, 1947-48, Consultant, NCI, 1948-50; Chf., Genito-Urinary Pathol. Sect., Armed Forces Inst. of Pathol., Washington, D. C., 1948—. Hon. Pos.: Secy.-Treas., Internatl. Assn. Med. Museums. Mem.: A.M.A.; Amer. Soc. of Clin. Pathologists; Coll. of Pathologists; Amer. Assn. of Pathologists and Bacteriologists; Internatl. Assn. of Med. Museums. Author: Yearbook of Harvard Med. Schl., 1939. Contrb. to: Archives of Pathol.; Jour. A.M.A.; Jour. of Natl. Cancer Inst.; Jour. of Clinical Pathologists. Special Int.: Pathol., General and Cancer.

MOTE, Don Carlos, Prof. of Entomol. and Hd. Dept., Entomologist in Chg. Agri. Expt. Sta., Ore. State Coll., Corvallis, Ore. **ENTOMOLOGY**.

MOTTLAU, August York, Rsch. Chemist, Physical Methods of Analysis, Standard Oil Development



Co., Rsch. Div., Linden, N. J. **PHYSICAL METHODS OF ANALYSIS**, b. N. Y., N. Y., July 10, 1910. s. August John and Mary Alice (Williams) M. Edn.: B.S., Univ. of Pittsburgh, 1934. m. Margaret Abbott, June 12, 1934. c.: August Thomas; Hugh Dane. Exp.: Rsch. Chemist, Standard Oil Development Co., 1934—. Mem.: Electron Microscope Soc. of Amer.; Amer. Chem. Soc.; Esso Rsch. Club; Sigma Tau. Contrb. to: Jour. Applied Physics; The Rubber Age; Analytical Chem. Four U. S. Patents. Special Int.:

Infrared Spectroscopy; Electron Microscopy; Electron Diffraction; X-ray Diffraction; X-ray Absorption.

MOTT, Willard Sherwood, Dev. Metallurgist, Amer. Brake Shoe Co., Springdale, Conn. **FOUNDRY METALLURGY**, b. Bridgeport, Conn., Sept. 21, 1918. s. Gilbert H. L. and Edla Mildred (Culver) M. Edn.: B.S., M. I. T., 1941. m. Charlotte Ollave Douglass on Mar. 14, 1942. c.: Susan; Linda; Karen. Exp.: Metallurgical Asst., Amer. Manganese Steel Div., *ibid.*, 1941-42; Plant Metallurgist, *ibid.*, 1942-43; Asst. Metallurgist, *ibid.*, 1943-47; Dev. Metallurgist, *ibid.*, 1947—. Special Int.: Rsch. on Behavior of Molten Metals in the Foundry; Specialized Knowledge in Application of Ferrous Foundry Products.

MOTZ, Lloyd, Assoc. Prof. of Astronomy at Columbia Univ., Adjunct Prof. of Physics, Polytech. Institute of Brooklyn, 815 W. 181 St., N. Y., N. Y. **ASTRO-PHYSICS; FIELD THEORY; OPTICS**, b. Susquehanna, Pa., June 5, 1910. s. Solomon and Minnie (Seltzer) M. Edn.: B.S., C. C. N. Y., 1930; Ph.D., Columbia Univ., 1936. m. Minne Rosenbaum of N. Y. City, June, 1934. d. Toba and Samuel Rosenbaum. c.: Robin Owen; Julie Ann. Exp.: Univ. Fellow in Physics, Columbia Univ.; Instr. in Physics, Coll. of the City of N. Y.; Lectr. in Astr., Columbia Univ.; Dir. of Various Optical Firms During the War Yrs.; Asst. Prof. of Astr., Columbia Univ.; Adjunct Prof. of Physics, Polytech. Inst. of Brooklyn; Assoc. Prof. Astronomy, Columbia Univ. Mem.: Phi Beta Kappa; Sigma Xi; The Amer. Phys. Soc.; A.A.A.S.; Amer. Astronomical Soc.; The Fed. of Amer. Sci.; The Amer. Jewish Cong. Contrb. to: The Phys. Rev.; The Astrophysical Jour. Ph.D. Dissertation: Quantization of Varying Magnetic Fields. Travel: Germany. Hobbies: Reading; Chess; Bridge; Tennis. Listed in: A.M.S. Special Int.: Internal Constitution of Stars; Unified Field Theory.

MOULTON, Gail Francis, Geologist, Petroleum Dept., Chase Natl. Bank, 18 Pine St., N. Y., N. Y. **PETROLEUM, GEOLOGY**.

MOULTROP, Irving E., retired, 28 Adams St., Belmont, Mass. **MECHANICAL AND ELECTRICAL ENGINEERING**.

MOUNT, George Haines, Personnel Counselor, Alpha Beta Food Mkts., 136 N. Commonwealth, Los Angeles, Calif. **PSYCHOLOGY**, b. May 1, 1879, Fairfield, Iowa. s. Jedediah and Margaret Ann (Dey) M. Edn.: M.Di., Iowa State Tchrs. Coll., 1905; M.A., State Univ. of Iowa, 1908; Ph.D., *ibid.*, 1910. m. Frances Hill, Jan. 13, 1932. c.: John William; George Edwin and Mary Ann. Exp.: Instr. in Sci., Algona, Iowa H. S., 1903-05; Prin. Schl., Kanawha, Iowa, 1905-07; Asst. in Edn., State Univ. of Iowa, 1908-10; Prof. of Psychol. and Edn., Northern State Normal, Mich., 1910-11; Prof. of Psychol., Iowa State Tchrs. Coll., 1911-21; Prof. Phil. and Psychol., Dubuque Iowa Univ., 1921-24; Prof. Psychol., Duke Univ., 1924-25; Prof., Univ. of Southern Calif., 1925-33; Consulting Psychol., 1942-43; Psychol., Santa Ana Army Air Base, 1942-44; Dir. Personnel Inst., Inc., 1944-47; Dir. of Personnel, Alpha Beta Food Mkts., 1947-51; Personnel Counselor, *ibid.*, 1951—. Mem.: Amer. Psychol. Assn.; Sigma Xi; Phi Delta Kappa; Psi Chi; Pi Gamma Mu; Phi Kappa Phi.

MOURSUND, Walter H., Jr., Dir. of Basic Sci. Med. Dept., Rsch. and Grad. Schl., Army Med. Center, Washington, D. C. **INTERNAL MEDICINE**.

MOURSUND, Walter Henrik, Sr., Dean and Prof. of Hygiene and Preventive Med., Coll. of Med., Baylor Univ., Box 156, Houston, Tex. **PREVENTIVE MEDICINE**.

MOUZON, James Carlisle, Chf., Atomic Warfare Team, Operation Analysis Div., Hq. U.S.A.F., Washington, D. C. **PHYSICS**, b. Jan. 8, 1907, San Antonio, Tex. s. E. D. and Mary Elizabeth (Mike) M. Edn.: A.B., Southern Methodist, 1927; Ph.D., Calif. Inst. of Tech., 1932. m. Elizabeth Walker, Sept. 10, 1932. c.: Elizabeth M. and Margaret W. Exp.: Sci. Instr., Wesley Coll., Greenville, Tex., 1927-28; Grad. Fellow, Calif. Inst. of Tech., Pasadena, Calif., 1929-32; Instr. and Asst. Prof., Physics

Dept., Duke Univ., Durham, N. C., 1932-41; Contract Employee, Naval Ord. Lab., Washington, D. C., 1941-42; Assoc. Prof., Duke Univ., Durham, N. C., 1942-44; Dir. of Rsch., Brown Instrument Co., Philadelphia, Pa., 1944-49; Sci. Warfare Adv., Rsch. and Development Bd., Dept. of Defense, Washington, D. C., 1949-50; Chf., Atomic Warfare Team, Operations Analysis Div., Hq., U. S. A. F., Washington, D. C., 1950—Mem.: Sigma Xi; Fellow, Amer. Phys. Soc.; Wash. Phil. Soc.; A.A.A.S.; Cosmos Club; Operations Rsch. Soc. of Amer.; Sigma Alpha Epsilon. Author: Characteristics of Conversion Amplifiers and Self Balancing Potentiometers, 1948. Contrb. to: Phys. Rev.; Annalen der Physik; Rev. of Sci. Instruments; Jour. of the Optical Soc. of Amer. Gen. Int.: Patents on, Magnetic Submarine Detector; Measurement and control Equipment. Special Int.: Operations rsch.; ionization of gases by positive ions; electronics; nuclear physics; submarine detection; radiation pyrometry; lab. and indust. instruments and controls.

MOWBRAY, Albert Henry, Prof. of Ins., Univ. of Calif., Berkeley, Calif. **INSURANCE.**

MOWERY, David, Monsanto Chem. Co., St. Louis, Mo. **AGRICULTURAL, CHEMICAL RESEARCH.**

MOWRER, Orval Hobart, Rsch. Prof., 445 Gregory Hall, Univ. of Ill., Urbana, Ill. **PSYCHOLOGY.** b. Unionville, Mo., Jan. 23, 1907. s. John Andrew and Sallie Ann (Todd) M. Edn.: A.B., Univ. of Mo., 1929; Ph.D., Johns Hopkins Univ., 1932. Hon. Deg.: M.A., Harvard Univ., 1947. m. Willie Mae Cook, Sept. 9, 1931. c.: Linda; Kathryn; Todd. Exp.: Natl. Rsch. Fellow, Northwestern Univ., Evanston, Ill., 1932-33; Princeton, 1933-34; Sterling Fellow, Yale Univ., New Haven, Conn., 1934-36; Staff, Inst. of Human Relations and Instr., Dept. of Psychol., ibid., 1936-

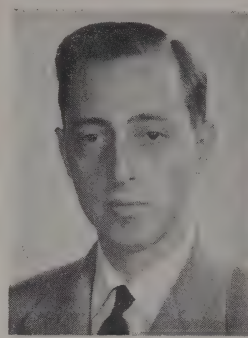
40; Grad. Schl. of Edn., Asst. Prof., Harvard, Cambridge, Mass., 1940-43; Assoc. Prof., ibid., 1943-48; Editor, Harvard Ednl. Rev., ibid., 1945-48; Rsch. Prof., Univ. of Ill., Urbana, Ill., 1948—; Special Consultant, U. S. Public Health Service, Walter Reed Hosp., 1952—. Mem.: Amer. Psychol. Assn.; A.A.A.S.; A.A.U.P.; Amer. Orthopsychiatric Assn.; Lambda Chi Alpha. Author: Frustration and Aggression, co-author of 39; Psychol. Patterns for Modern Living, 1949; Learning Theory and Personality Dynamics, 1950; Psychotherapy—Theory and Rsch., 1953. Contrb. to: Jour. Exptl. Psychol.; Psychol. Rev.; Jour. of Comparative and Physiol. Psychol.; Jour. of Genetic Psychol.; Amer. Jour. of Orthopsychiatry; Jour. of Abnormal and Soc. Psychol.; Jour. of Consulting Psychol. Special Int.: Vestibular Physiol.; Psychol. of Learning; Psychotherapy; Personality Theory.

MOWRY, David Thomas, Chemist, Dev. Dept. Phosphate Dev., Monsanto Chem. Co., St. Louis, Mo. **ORGANIC AND AGRICULTURAL CHEMISTRY.** b. Pyeongyang, Korea, Mar. 11, 1917. s. Dr. E. M. and Lois (Thomas) M. Edn.: B.A., Coll. of Wooster, 1938; M.S., Ohio State Univ., 1940; Ph.D., ibid., 1941. m. Eloise Pike on Apr. 28, 1950. c.: Carol Lynn; Sarah Lois; Thomas Cassel. Exp.: Monsanto Chem. Co., Rsch. Chemist, 1941-44; Group Leader, ibid., 1944-52. Mem.: Phi Beta Kappa; Sigma Xi; Amer. Chem. Soc.; A.A.A.S.; Chem. Soc. (London); Engrs. Club of Dayton. Contrb. to: Jour. Amer. Chem. Soc.; Jour. Biol. Chem.; Chem. Rev.; Soil Sci. Special Int.: Organic Synthesis, High Polymers, Agri. Chem.

MOWRY, Harold, Dir., Fla. Agri. Expt. Sta., Gainesville, Fla. **AGRICULTURE.**

MOYER, Helen Axtell, Prof. of Biol., Skidmore Coll., Saratoga Springs, N. Y. **BIOLOGY, ZOOLOGY.**

MOWRY, Robert Wilbur, Asst. Prof. of Pathol., Washington Univ., Schl. of Med., St. Louis 10, Mo.

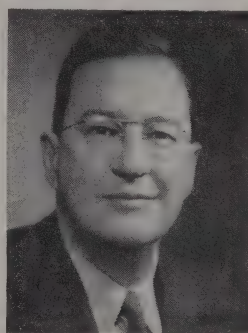


PATHOLOGY AND HISTOCHEMISTRY. b. Griffin, Ga., Jan. 10, 1923. s. Dr. Roy B. and Mary F. (Tipton) M. m. Margaret Neilson in June, 1949. c.: Janet Lee. Exp.: Intern. Jefferson-Hillman Hosp., Birmingham, Ala., 1946-47; Asst. Resident in Pathol., ibid., 1947-48; Sr. Asst. Surgeon, U. S. Public Health Service, Natl. Institutes of Health, Bethesda, Md., 1948-52; Asst. Prof. of Pathol., Washington Univ. Schl. of Med., St. Louis, Mo., 1952—.

Mem.: The Histochem. Soc.; Amer. Assn. of Pathologists and Bacteriologists; Internatl. Assn. of Medical Museums. Contrb. to: Amer. Jour. of Pathol.; Proc. Soc. of Exptl. Biology and Med.; Jour. of Lab. and Clinical Med.; Lab. Investigation; Bull. of the Internatl. Assn. of Med. Museums. War Record: U. S. Army, 1943-46. Special Int.: Histochem. Methods and Applications of Histochem. to Pathol.; Special Interests Include Histochem. of Polysaccharides and the Pathol. of the Kidney.

MOXLEY, Stephen Dewey, Vice-Pres., Amer. Cast Iron Pipe Co., Box 2603, Birmingham, Ala. **MECHANICAL ENGINEERING.** b. June 3, 1898, Arnot, Pa. s. Richard and Elizabeth (Thomas) M. Edn.: B.S., Univ. of Ala., 1921; M.S., ibid., 1922. m. Marion Bishop, June 16, 1924. c.: Gladys; Stephen, Jr. and Thomas. Exp.: Apprentice Engr., T. C. L. and R. R. Co., 1913-18; Draftsman to Chf. Engr., Amer. Cast Iron Pipe Co., 1923-27; Asst. to Vice-Pres., 1935—; Vice-Pres., 1946—. Mem.: Tau Beta Pi; Kiwanis. Contrb. to: Numerous technical papers. Gen. Int.: Six patents on pipe mfg. equipment.

MUDD, Stuart, Prof. of Microbiol., Schl. of Med., Univ. of Pa., Philadelphia 4, Pa. **MICROBIOLOGY.**



b. St. Louis, Mo., Sept. 23, 1893. s. Harvey Gilmer and Margaret de la Plaux (Clark) M. Edn.: B.S., Princeton, 1916; A.M., Washington Univ., 1918; M.D., Harvard, 1920. m. Emily Borie Hartshorne, Sept. 12, 1922. c.: Emily Borie; Stuart Harvey; Margaret Clark; John Hodgen. Exp.: Rsch. Fellow, Harvard, Cambridge, Mass., 1920-23; Assoc., Rockefeller Inst., 1923-25; Assoc. in Pathol., Henry Phipps Inst., Univ. of Pa., Philadelphia, Pa., 1925-31; Asst. Prof. of

Exptl. Pathol., ibid., 1925-31; Assoc. Prof. of Bacteriol., ibid., 1931-34; Prof., ibid., 1934-51; Prof. of Microbiol., ibid., 1951—. Mem.: A.A.A.S.; Amer. Public Health Assn.; Coll. of Physicians of Philadelphia; N. Y. Acad. of Sci.; Harvey Soc.; Soc. of Amer. Bacteriol.; Phi Beta Kappa; Sigma Xi; Alpha Omega Alpha. Contrb. to: Jour. of Bacteriol.; Jour. Immunol.; Amer. Jour. of Public Health; Jour. Amer. Med. Assn. Special Int.: Applications of Electron Microscope; Cytol. of Microorganisms; Mechanisms of Antigen-Antibody Reactions.

MOYER, Wendell William, Dir. of Rsch., Central Rsch. Dept., Crown Zellerbach Corp., Camas, Wash. **CARBOHYDRATES.** b. Glidden, Iowa, July 19, 1903. s. Elmer W. and Cora (Kepford) M. Edn.: B.S., Findlay Coll., 1924; A.B., Univ. of Ill., 1926; M.S., ibid., 1927; Ph.D., ibid., 1929. m. Gladys DeRodes on June 18, 1927. c.: Shirley; Wendell, Jr.; Janet; Phillip; Margo. Exp.: Post-doctorate Fellow, Harvard Univ., 1929-30; Natl. Rsch. Fellow, Univ. of Munich, Germany, 1930-31; Rsch. Assoc.,

Dept. of Chem., Princeton Univ., 1931-33; Project Leader, Solvay Process Co., Syracuse, N. Y., 1933-37; Rsch. Dir., A. E. Staley Mfg. Co., Decatur, Ill., 1937-47; Dir. of Rsch., Crown Zellerbach Corp., Camas, Wash., 1947—. Hon. Pos.: Councilor of the Univ. of Ill. Section of the Amer. Chem. Soc., 1943, 1948, 1949. Mem.: Amer. Chem. Soc.; Technical Assn. of Pulp and Paper Indus.; Amer. Soc. for Testing Materials; A.A.A.S.; Technical Section of the British Paper and Bd. Makers Assn.; Northeastern Wood Utilization Council. Contrb. to: Jour. Amer. Chem. Soc.; T.A.P.P.I.; Chem. Engrng. News. Special Int.: Carbohydrate Chem.; Natural Products

MUCKENHOUP, Carl Frederick, Chmn. and Prof., Dept. of Physics, Northeastern Univ., Boston, Mass. ELECTRONICS.

MUDD, Harvey Seeley, Pres., Cyprus Mines Corp., 1206 Pacific Mutual Bldg., Los Angeles, Calif. MINING.

MUEHLBERGER, Clarence W., Toxicologist, Mich. Dept. of Health Labs., 463 Rosewood Ave., East Lansing, Mich. TOXICOLOGY.

MUELLER, Conrad George, Jr., Assoc. Prof. in Psychol., Columbia Univ., New York 27, N. Y.



PSYCHOLOGY. b. St. Louis, Mo., Oct. 19, 1920. s. Conrad George and Mamie A. (Berneking) M. Edn.: A.B., Washington Univ., 1941; M.A., ibid., 1942; Ph.D., Columbia Univ., 1948. m. Roberta Daley, May 18, 1945. c.: Stephan Scott; Richard Alan. Exp.: Rsch. Psychol., Natl. Defense Rsch. Comm., 1942-45; Ensign, U. S. Naval Reserve, 1945-46; Fellow, Natl. Rsch. Council, 1946-47; Instr., Asst. Prof., Assoc. Prof. in Psychol., Columbia Univ., N. Y. C., 1947—.

Hon. Pos.: Consulting Ed., Jour. of Comp. and Physiol. Psychol. Mem.: Amer. Psychol. Assn.; East Psychol. Assn.; A.A.A.S.; Soc. of Exptl. Psychol.; Phi Beta Kappa; Sigma Xi. Contrb. to: Jour. of Optical Soc. of Amer.; Proc. of Natl. Acad. of Sci.; Amer. Jour. of Psychol.; Psychol. Bull.; Jour. of Gen. Psychol.; Jour. of Psychol.; Jour. of Gen. Physiol.; Jour. of Comp. Psychol. War Records: U. S. Naval Reserve, 1945-46. Special Int.: Sensory Processes; Learning; Statistical Methods.

MUELLER, Edward, retired, Burton Halls, 10 Dana St., Cambridge, Mass.

MUELLER, Frederick Marion, Stone and Webster Engrng. Co., Box 929, San Francisco, Calif. ENGINEERING.

MUELLER, Fritz W. Hellmut, Dir. of Rsch. and Development, Ansco, A Div. of General Aniline and Film Corp., Binghamton, N. Y. RESEARCH AND DEVELOPMENT ON PROCESSES FOR PHOTOGRAPHIC FILM AND PAPER EMULSIONS. b. Dresden, Germany, Apr. 18, 1905. s. Fritz Müller and Gertrud (Müller) M. Edn.: Univ. of Leipzig, Germany, 1924-28; Univ. of Freiburg (Br.), Germany, 1929-30; Ph.D., ibid., 1929. m. Dorothea Hofmann, Oct., 1935. c.: Peter; Sabina. Exp.: Rsch. Asst., Univ. of Freiburg, Germany, 1929-30; Rsch. Asst., Univ. of Calif., 1930-33; Instr. in Biochem., ibid., 1932-33; Rsch. Assoc., Univ. of Leipzig, Germany, 1933-35; Rsch. Chemist, Agfa Plant, Germany, 1935-36; Asst. Dept. Hd., Ansco Div., Binghamton, N. Y., 1937-43; Dir. of Rsch., ibid., 1944-46; Dir. of Rsch. and Development, ibid., 1946—. Mem.: Amer. Chem. Soc.; Fellow of Photographic Soc. of Amer.; A.A.A.S.; Southern Tier Technical Soc.; Amer. Phys. Soc.; Sigma Xi; Binghamton C. of C. Contrb. to: Zeitschr. f. Physiol. Chem.; Jour. of Pharmacol. and Exptl. Therapeutics; Jour. Optical Soc. Amer.; etc. Gen. Int.: Based on Koslowsky's Discovery of Gold Sensitization, Designed Emulsion Formulæ for Superpan Supreme

and Ultra-speed Pan Film for Which Ansco Received Technical Award of Acad. of Motion Picture Arts and Sciences, 1938. Special Int.: Gelatins; Optical and Chemical Sensitization of Photographic Emulsions; Toxicity of Photographic Developers; etc.

MUELLER, George J(efferis), Engrng. and Physicist Consultant, (retained by Douglas Aircraft Co., Santa Monica, Calif.) P.



O. Box 14031, Barrington, Station, Los Angeles 49, Calif. ENGINEERING PHYSICS; MANAGEMENT OF RESEARCH AND DEVELOPMENT. b. Sept. 1, 1906, Milwaukee, Wis. s. Geo. W. Mueller and Hannah Breta (Jefferis) M. Edn.: B.S. in E.E., Univ. of Wis., 1928; M.A. (Physics), Cornell Univ., 1930; Ph.D., (Experimental Physics), ibid., 1933. m. Mary Miller Arnold, Sept. 11, 1931. c.: Susan L. and Gretchen E. Exp.: T.M.E.R.&L. Co.,

Summers, 1927, '28, '29, '30; Allen Bradley Co., Summer, 1931; Tchng. Asst. in Phys., Cornell Univ., 1929-31; Instr., ibid., 1931-33; Rsch. Fellow, ibid., 1933-35; Rsch. Physicist, Pocatiny Arsenal, Ord. Dept., Dept. of Army, Dover, N. J., 1935-41; Supvng. Physicist, Chf. Phys. Rsch. Lab., ibid., 1941-50; Supvng. Physicist, A.F.M.T.C., Patrick AFB, Cocoa, Fla., 1950-52; Tech. Dir., Contract NOas 52-998-c, Inst. Div., Allen B. Du Mont Laboratories, Inc., 1952-53; Engrng. and Physicist Consultant, 1953—. Mem.: A.I.E.E.; I.R.E.; P.S.A.; A.A.A.S.; A.O.A.; A.C.L. Author: Introduction to Electronics, 1947. Contrb. to: Phys. Rev. Special Int.: Organization and Management of Rsch. and Development Groups; Planning of Tech. Facilities; Instrumentation Design and Development; Electron Physics; Power and Communication System Design and Construction.

MUELLER, Hans, Prof. of Physics, Mass. Inst. of Tech., Cambridge, Mass. PHYSICS.

MUELLER, John Howard, Harvard Med. Schl., 25 Shattuck St., Boston 15, Mass.

MUELLER, Manfred Ernst, Instr., Chem. Dept., City Coll. of San Francisco, San Francisco, Calif. PHYSICAL CHEMISTRY. b. Orange, Calif., Mar. 4, 1911. s. E. A. J. and Louise (Menk) M. Edn.: A.B., Univ. of Calif., 1933; M.A., ibid., 1935; Ph.D., ibid., 1937. m. Mary Evelyn Parks on July 11, 1936. c.: Peter; David; John. Exp.: Instr., Chem. Dept., City Coll. of San Francisco, 1935-42; Rsch. Chem., Manhattan Project, Radiation Lab., Univ. of Calif., 1942-45; Instr., Chem. Dept., City Coll. of San Francisco, 1945—. Hon. Pos.: Chmn., Chem. Dept., City Coll. of San Francisco, 1947-49. Author: Practical Survey of Chem., Revised, 1950. Special Int.: Physical Chem., Inorganic Chem., Vapor Pressures of Solids, Sublimation.

MUENCH, Hugo, Jr., Prof. of Biostatistics, Harvard Schl. of Public Health, 55 Shattuck St., Boston, Mass. BIOSTATISTICS.

MUENCH, Oscar Bruer, 826 Fifth St., Los Vegas, N. Mex. CHEMISTRY, PHYSICS.

MUENSCHER, Walter Conrad, Prof. of Botany, Cornell Univ., Ithaca, N. Y. BOTANY.

MUENZEN, Joseph Bernard, Hd., Dept. of Chem., Fordham Univ., N. Y., N. Y. CHEMISTRY.

MUENZINGER, Karl F., Prof. of Psychol., Univ. of Colo., Boulder, Colo. PSYCHOLOGY.

MUESEBECK, Carl F. W., Prin. Entomologist in Chg. Div. Insect Identification, Bureau Entomol. and Plant Quarantine, Washington, D. C. ENTOMOLOGY.

MULENBURG, Garrett A, Geol., Mo. Geol. Survey, Buehler Bldg., Rolla, Mo. **GEOLOGY**. b. Sept. 17, 1889, Orange City, Iowa. s. Antonie and Gertrude (Rempe) M. Edn.: B.A., Iowa, 1912; M.S., *ibid.*, 1913; E.M., Mo. Schl. of Mines, 1925; Ph.D., Columbia Univ., 1925. m. Florence B. Meadows, Aug. 26, 1914. c.: Ruth Ione (Mrs. D. W. Dutton); and Dorothy May (Mrs. R. O. Kasten). Exp.: Instr. Geol., Colo. Schl. of Mines, Golden, Colo., 1914-16; Instr. Geol., Mo. Schl. of Mines, Rolla, Mo., 1916; Asst. Prof., *ibid.*, 1917; Assoc. Prof., *ibid.*, 1920-30; Prof., *ibid.*, 1930-48; Hd. of Dept., *ibid.*, 1934-45; Geol., Mo. Geol. Survey, Rolla, Mo., 1948—; Colo. Geological Survey; Natl. Exploration Co.; Kansas Exploration Co.; Monsanto Chemical Co.; Republic Steel Corp.; Union Electric Light and Power Co.; Pittsburgh Plate Glass Co.; Amer. Zinc, Lead and Smelting Co.; Mexico Refractories Co. Mem.: Geol. Soc. of Amer.; Amer. Assn. of Petroleum Geol.; Amer. Arbitration Assn. Author: *Manganese Resources of Colo.*, 1918; *Field Methods in Petroleum Geol.*, 1921; *Geol. of the Tarryall Dist., Colo.*, 1925; *Notes on Uranium*, 1949. Contrb. to: Amer. Mineral.; Jour. of Geol.; Amer. Jour. of Sci.; Earth Sci. Digest. Special Int.: Ore deposits; Barite; Lead; Zinc; Iron. Geologic structure influencing selection of dam and reservoir sites. Flood control and ground water.

MUKAI, Cromwell Daisaku, Rsch. Chem., Boyle-Midway, Inc. Div., Amer. Home Products Corp., Cranford, N. J. Home: 170-24 118th Ave., Jamaica 5, N. Y. **ORGANIC CHEMISTRY**.



b. Bostonia, Calif., Apr. 13, 1917. s. Tasaburo and Fusae (Tsujino) M. Edn.: B.S., Univ. of Calif., 1943; M.S., N. Y. Univ., 1949. m. Kyoko Hoshiga on Oct. 26, 1944. c.: Robert Lawrence; Thomas Victor; David Daisaku. Exp.: Development Chemist, Gelatin Products Corp., Detroit, Mich., 1944-46; Rsch. Chem., Boyle-Midway, Inc. Div., Amer. Home Products Corp., Cranford, N. J., 1946—, (Leave of Absence, 1950-51); Tehng. Fellow, N. Y. Univ., 1950-51. Mem.: Amer. Chem. Soc.; A.A.A.S.; Lambda Delta Lambda; Phi Lambda Upsilon. Special Int.: Synthetic Amino Acids; Petroleum Additives; Plastics; Emulsion Technology of Waxes; Mechanism of Grignard Reactions.

ford, N. J., 1946—, (Leave of Absence, 1950-51); Tehng. Fellow, N. Y. Univ., 1950-51. Mem.: Amer. Chem. Soc.; A.A.A.S.; Lambda Delta Lambda; Phi Lambda Upsilon. Special Int.: Synthetic Amino Acids; Petroleum Additives; Plastics; Emulsion Technology of Waxes; Mechanism of Grignard Reactions.

MULAİK, Stanley B., Instr., Biol., Univ. of Utah, Salt Lake City, Utah. **NON-INSECT ARTHROPODS: NATURAL HISTORY**. b. Sept. 30, 1902, Pittsburgh, Pa. s. George and Minnie (Miller) M. Edn.: B.S., Tehr. Coll., Pa., 1928; M.A., Cornell, 1931. m. Dorothea Demuth, of Cleveland, Ohio, 1931. d. Fred E. Demuth. c.: Allen. Exp.: Univ. of Utah, 1939; Supvr. Nature Study, Texas Schl., 1932-39; Nature Study, Shippery Rock, Pa., 1927; Dir. Program, Boy Camps; Nature Director Training Camp, 1934-35. Mem.: Texas Acad. Sci.; A.S.I.H.; A.N.S.S.; Herp. Leag.; Sigma Xi; Phi Sigma; Utah Acad. Sci.; A.A.A.S.; Biol. Soc. Wash.; Ent. Soc. Wash.; Soc. Syst. Zool.; Amer. Natl. Assn.; Biol. Tehrs.; A.A.U.P. Author: Over 30 articles. Contrb. to: *Copeia*; *Schl. Sci. Math.* and others. Travel: Can.; Mex. Hobbies: Ornithol.; Nature. Listed in: A.M.S.; Who Knows— and What. Special Int.: Terrestrial Isopods; Mites (Caeculidae).

MULINOS, Michael G., Assoc. Prof. of Pharmacol., N. Y. Med. Coll., N. Y., N. Y. **PHARMACOLOGY**.

MULL, Helen Katherine, Assoc. Prof. of Philos., Psychol. and Edn., Sweet Briar Coll., Sweet Briar, Va. **PSYCHOLOGY**.

MULL, James William, 2020 State St., Quincy, Ill. **BIOCHEMISTRY**.

MULLEN, Frances Andrews, Asst. Supt. of Schls., Dept. of Special Edn., Chicago Pub. Schls., 228 N. LaSalle St., Chicago 1, Ill. **PSYCHOLOGY**. b.

Nov. 26, 1902, Chicago, Ill. d. Edmund Lathrop and Ethel (Baker) Andrews. Edn.: Ph.B., Univ. of Chicago, 1923; M.A., *ibid.*, 1927; Ph.D., *ibid.*, 1939. m. Urban J. Mullen, Oct. 12, 1929. c.: Urban Edmund. Exp.: Tehr., Chicago Public Schls., Ill., 1923-39; Psychol., *ibid.*, 1939-47; Prin., *ibid.*, 1947-49; Dir., Bur. of Mentally Handicapped Children, 1949-53; Lectr., Northwestern Univ. 1951—. Mem.: Fellow, Amer. Psychol. Assn.; Diplomate, Amer. Bd. Exam. Prof. Psychol.; Pres., Div. of Schl. Psychol., 1952-53; Amer. Assn. for Mental Deficiency; Amer. Ednl. Rsch. Assn. Contrb. to: *Jour. of Psychol.*; *Jour. of Clin. Psychol.*; *Amer. Jour. of Mental Deficiency*; *Occupations*. Special Int.: Mental Deficiency; Clinical Psychol.; Factor Analysis.

MULLEN, James Aquinas, Asst. Prof. of Biol., Fordham Univ., N. Y., N. Y. **ENTOMOLOGY**.

MULLENDORE, Naomi, Prof. of Biol., Franklin Coll., Franklin, Ind. **BOTANY**.

MULLER, Gulli Lindh, Pathologist and Dir. of Lab., New England Hosp., Boston, Mass. **ANATOMIC AND CLINICAL PATHOLOGY**. b. Sweden, Apr. 17, 1888. d. Carl Oscar and Augusta Charlotta (Johnson) Lindh. Edn.: A.B., Barnard Coll., 1917; M.D., Coll. of Physicians and Surgeons, Columbia Univ., 1921. m. James Arthur Muller on Dec. 23, 1919. Exp.: Internship, Presby. Hosp., N. Y. City, 1921-23; Rsch. Physician, Thorndike Memorial Lab., Boston City Hosp., 1923-33; Pathologist and Chf. of Lab., Rutland State Sanatorium, 1933-38; Pathologist and Dir. of Lab., New England Hosp., Boston, 1940—. Mem.: A.M.A.; Mass. Med. Soc.; Amer. Soc. Clin. Pathol.; Amer. Bd. of Path. and Amer. Bd. of Clin. Path. Author: *The Clinical Significance of Blood in Tuberculosis*, 1943; *Introduction to Medical Sci.*, with Dorothy E. Dawes, 1943; 2nd Ed., 1948, 3rd Ed., 1953. Special Int.: Hematology.

MULLER, Hermann Joseph, Prof., Dept. of Zool., Ind. Univ., Bloomington, Ind. **GENETICS**. b. N. Y., Dec. 21, 1890. s.



Hermann Joseph and Frances Louise (Lyons) M. Edn.: A.B., Columbia Univ., 1910; M.A., *ibid.*, 1911; Ph.D., *ibid.*, 1916; D.Sc., Univ. of Edinburgh, 1940. Hon. Deg.: D.Sc., Columbia Univ., 1949. m. Dorothea J. Kantorowicz, May 20, 1939. c.: David Eugene (former marriage); Helen Juliette. Exp.: Asst. in Zool., Columbia Univ., 1912-15; Instr. in Biol., Rice Inst., 1915-18; Instr. in Zool., Columbia Univ., 1918-20; Assoc. Prof. of Zool., Univ. of Tex.,

1920-25; Prof., *ibid.*, 1925-36 (on leave 1932-36); Guggenheim Fellow, Berlin, Germany, 1932-33; Sr. Geneticist, Inst. of Genetics of Acad. of Sci. of U.S.S.R., 1933-37; Guest Investigator, Inst. of Animal Genetics, Univ. of Edinburgh, 1937-38; Fellow and Lectr., *ibid.*, 1938-40; Rsch. Assoc., Dept. of Biol., Amherst Coll., 1940-42; Visiting Prof., *ibid.*, 1942-45; Prof., Dept. of Zool., Ind. Univ., Bloomington, Ind., 1945—. Hon. Pos.: Pres., Amer. Soc. Naturalists, 1942-43; Pres., Genetics Soc. Amer., 1946-47; Pres., Internatl. Congress of Genetics, 1948; Pres., Amer. Soc. Human Genetics, 1948-49. Mem.: Natl. Acad. Sci.; Amer. Acad. Arts and Sci.; Amer. Philos. Soc.; A.A.A.S.; Amer. Genetic Assn.; Amer. Soc. Human Genetics; Amer. Soc. Zool.; Soc. Expt. Biol. and Med. Hon. Mem.: Genetical Soc. (British); Genetics Soc. Japan; Animal Genetics Soc. of India; Mendelian Soc. of Lund; Royal Danish Acad. Sci.; Soc. Naz. d. Lincei; Nat. Inst. Sci. India; Phi Beta Kappa; Sigma Xi. Author: *Our of the Night*, 1935, 36, 38. Contrb. to: *Genetics*; *Jour. Heredity*; *Amer. Jour. Human Genetics*; *Proc. Natl. Acad. Sci.*; *Amer. Naturalist*; *Science*; *Jour. Genetics*. War Record: Civilian Consultant, Manhattan District Project. Gen. Int.: Annual Award, A.A.A.S., 1927; Nobel Prize in Physiol. and Med., 1946. Special Int.: Mutation; Thegene; Evolution

Genetic Effects of Radiation; The Artificial Production of Chromosome Changes and of Gene Mutations.

MULLER, Louis Philip, Rsch. Chem., Pa. Salt Mfg. Co., Box 4388, Chestnut Hill P. O., Philadelphia, 18, Pa. **CHEMISTRY**. b. Apr. 14, 1918, Philadelphia, Pa. s. Eugene and Helen (Chance) M. Edn.: A.B., Williams Coll., 1942. m. Elizabeth Wallace, Sept. 6, 1947. c.: Dorothy and Robert W. Exp.: Rsch. Assoc., Natl. Lead Co., South Amboy, N. J., 1942-44; Rsch. Chem., Sharples Corp., Philadelphia, Pa., 1944-49; Rsch. Chem., Pa. Salt Mfg. Co., Philadelphia, Pa., 1949—. Mem.: Amer. Chem. Soc.: A.A.A.S. Special Int.: Recovery of aconitic acid from molasses. Application testing of new chem.

MULLER, Siemon William, Prof. of Geol., P. O. Box 656, Stanford University, Calif. **GEOLOGY**.

MULLIKEN, Robert Sanderson, Prof. of Physics, Univ. of Chicago, Chicago 37, Ill. **PHYSICS; CHEMICAL PHYSICS**. b. Newburyport, Mass., June 7, 1896. s. Samuel Parsons and Katherine Wilmarth (Mulliken) M. Edn.: B.S., Mass. Inst. of Tech., 1917; Ph.D., Univ. of Chicago, 1921. Hon. Deg.: Sc.D., Columbia Univ., 1939. m. Mary Helen Noé, Dec. 24, 1929. c.: Lucia; Valerie. Exp.: Jr. Chemical Engr., U. S. Bureau of Mines, 1917; Rsch. Asst., N. J. Zinc Co., 1919; Natl. Rsch. Fellow, Univ. of Chicago, 1921-23; Natl. Rsch. Fellow, Harvard Univ., 1923-25; Asst. Prof. of Physics, Wash. Square Coll., N. Y. Univ., 1926-28; Assoc. Prof. of Physics, Univ. of Chicago, 1928-31; Prof. of Physics, ibid., 1931—; Guggenheim Memorial Foundation Fellow, 1930-32. Hon. Pos.: Chmn., Div. of Chem. Physics, Amer. Physical Soc.; Mem. of Editorial Bds. of Phys. Rev. and Jour. Chem. Phys. Mem.: Amer. Chem. Soc.; Amer. Phys. Soc.; A.A.A.S.; Natl. Acad. Sciences; Amer. Philosophical Soc.; Gamma Alpha. Contrb. to: Jour. Chem. Physics; Jour. Amer. Chem. Soc.; Phys. Rev.; Jour. Phys. Chem.; etc. War Record: Chemical Warfare Service, 1918. Special Int.: Chemical Physics; Molecular Structure and Spectra.

MULLIN, Robert Spencer, Plant Pathol. and Hd. of Plant Pathology, Dept. Va. Truck Experiment Station, Box 2160, Norfolk, Va. **PLANT PATHOLOGY**. b. Tazewell, Va., May 19, 1912. s. Grat and Pearl (Leffel) M. Edn.: B.S., Hampden-Sydney Coll., 1934; M.S., Va. Poly. Inst., 1937; Ph.D., Univ. of Minn., 1950. m. Catherine Quillin of Christiansburg, Va., Home Economist, Dec. 26, 1938. d. J. M. and Lucy Hall Quillin. c.: McDonald; Robert. Exp.: Agent to Asst. State Leader to State Leader of Barberry Eradication, U.S.D.A., 1936-44; Plant Pathol., Va. Truck Expt. Sta., 1945-46; Assoc. Prof., Plant Pathol. and Bot., Va. Poly. Inst., 1946-48; Plant Pathol. and Hd. of Dept., Va. Truck Expt. Sta., 1948—. Mem.: Amer. Phytopathol. Soc.; A.A.A.S.; Va. Acad. of Sci.; Chi Beta Phi; Gamma Alpha; Sigma Xi; Round Table Internatl.; Potato Assn. of Amer. Ph.D. Dissertation: Stem Rust in Va. Listed in: Who Knows—and What; A.M.S.; Who's Who in the South and Southwest. Special Int.: Plant Pathol.; Vegetables and Grains.

MULSOW, Frederick W., Clinical Pathologist, 120 3rd S. E., Cedar Rapids, Iowa. **BACTERIOLOGY AND PATHOLOGY**.



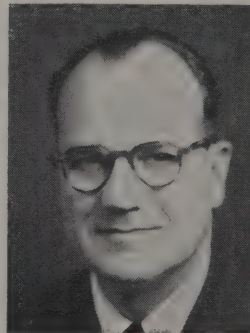
AND PATHOLOGY, CHAIRMAN LINN COUNTY TUMOR CLINIC. b. Baldwin, Kans., Oct. 6, 1882. s. Frederick W. and Mary Jane (Reel) M. Edn.: A.B., Baker, 1911; A.M., Kans. Univ., 1915; Ph.D., Chicago Univ., 1918; M.D., Rush Univ., 1920. m. Maude A. Emery, June 20, 1922. Exp.: Principal Wathena High Schl., Wathena, Kans., 1911-13; Fellow, Kans. Univ., Lawrence, Kans., 1913-14; Asst. Food Bacteriologist, Kans. Univ., ibid., 1914-15; Prof. Bact., Wash. State Coll., Pullman, Wash., 1915-16; Asst. in Bact., Chicago Univ., Chicago, Ill., 1916-17; Instr., ibid.,

1917-18; Resident Physician, Durand Hosp., 1918-20; Prof. Path. and Bact., Univ. of Iowa, Iowa City, Iowa, 1921-22; Hd. of Dept. Path. and Bact., ibid., 1922-26; Pathologists, and Chmn. Pathol., St. Luke Hosp., Cedar Rapids, 1926-48; Attending Path., Mercy Hospital, ibid., 1929-47; Consulting Path., ibid., 1930-52; Clinical Pathologist, Cedar Rapids, Iowa, 1926—. Mem.: Amer. Assn. Path. and Bact., A.A.A.S.; Amer. Public Health Assn.; A.M.A.; Amer. Soc. Clin. Path.; Iowa State Med. Soc.; Amer. Coll. Physicians; Amer. Coll. Path. High Twelve. Contrb. to: Arch. Path.; Jour. Amer. Med. Assn.; Gastroenterology; Amer. Jour. Digestive Diseases; Amer. Jour. Public Health; Iowa State Med. Jour.; Amer. Jour. Obstr. and Gyn.; Jour. Infectious Disease. Special Int.: Cancer, Diseases of the Stomach.

MULLINGS, Marcus Evans, Prof. and Hd., Dept. of Math., Abilene Christian Coll., Sta. A, Abilene, Tex. **MATHEMATICS, PHYSICS**.

MUMFORD, Albert Russell, Development Engr., Combustion Engrng. Co., Inc., N. Y., N. Y. **ENGINEERING**.

MUMFORD, William Walden, Mem. of Tech. Staff, Bell Telephone Labs., Holmdel, N. J. **COMMUNICATIONS RESEARCH**.



b. Vancouver, Wash., June 17, 1905. s. Edgar Manley and Carrie Lucetia (Royal) M. Edn.: B.A., Willamette Univ., 1930. m. Elizabeth Neal Douglass, Feb. 20, 1931. c.: William Walden, Jr.; Joan Elizabeth. Exp.: Radio Operator U. S. Coast Guard Cutter Algonquin, 1923-24; Telegraph Operator, Clerk, Mgr., Western Union Telegraph Co., Vancouver, Wash., South Bend, Wash., and Oregon City, Ore., 1924-26; Tester, Ore. State Hwy. Testing Lab.,

Salem, Ore., 1928-30; Mem. of Tech. Staff, Bell Telephone Labs., Holmdel, N. J., 1930—. Mem.: Blue Key; Monmouth Civic Choral Soc.; Fellow, Inst. of Radio Engrs. Co-Author: Radar Systems and Components, 1949. Contrb. to: Proc. of Inst. of Radio Engrs.; Bell System Tech. Jour.; Bell Labs. Record; Nature; Bull. of Amer. Meteorol. Soc.; Jour. of Applied Physics. Special Int.: Ultra-Short Wave Propagation; Microwave Theory and Tech.; Radar Components.

MUNCH, James C., Prof. of Pharmacol., Schl. of Dentistry, Med. Coll., Temple Univ., Philadelphia, Pa. **PHARMACOLOGY**.

MUNDIE, Joseph Ryland, Prof. of Biol., Quachita Baptist Coll., Arkadelphia, Ark. **BIOLOGY**.

MUNDIE, Lloyd George, Physicist, Natl. Bureau of Standards, 5065 Sierra St., Riverside, Calif. **PHYSICS (INFRARED SPECTROSCOPY)**.



b. Udney, Ont., Can., Dec. 15, 1916. s. William S. and Charlotte (Scott) M. Edn.: B.Sc., Univ. of Sask., 1932; M.Sc., ibid., 1935; Ph.D., Purdue Univ., 1943. m. Wilma Carmen on Aug. 13, 1942. c.: David Alan; Lynn Christine. Exp.: Instr., Purdue Univ., 1937-47; Physicist, Naval Ordnance Lab., 1947-51; Physicist, Natl. Bureau of Standards, 1951—. Mem.: Optical Soc. of Amer.; Philosophical Soc. of Wash.; Sigma Xi; Sigma

Pi Sigma. Contrb. to: Jour. of the Optical Soc. of Amer.; Jour. of Chem. Physics; Phys. Rev. Special Int.: Atomic Spectra; Interferometry; Radiometry; Infrared Instrumentation.

MUNDY, Belvey Washington, Asst. Prof. of Chem., Va. Military Institute, Lexington, Va. **PHYSICAL CHEMISTRY**. b. November 6, 1917, Roanoke, Va. s. Belvey Washington and Lizzie Ethel (Black) M. Edn.: B.S., V. M. I., 1940; A.M., 1941; Ph.D., Ind. Univ., 1948. Exp.: Asst. Prof. of Chem., V. M. I., 1948-52; Assoc. Prof. of Chem., ibid., 1952—. Mem.: Sigma Xi; Phi Lambda Upsilon; A.C.S.; Va. Acad. of Sci.; Alpha Chi Sigma. Author: Alkylation with Oretho Phosphate Esteor, Jour. A.C.S., 1942; A Simple Recording Polarograph, Jour. Chem. Edn., 1953; A New Type Recording Polarography, Proceedings, Va. Acad. Sci., 1952. Ph.D. Dissertation: X-Ray Diffraction Studies of Metallic Salts of 8-oh Quinoline. War Record: 1st Lt., U. S. A., 1942-46. Travel: S. Pacific; Philippines.

MUNGER, Henry Martin, Assoc. Prof., Plant Breeding and Vegetable Crops, Cornell Univ., Ithaca, N. Y. **VEGETABLE BREEDING**.

MUNGER, Thornton T., 2755 S. W. Buena Vista Dr., Portland, Ore. **FORESTRY**.

MUNN, Lottie E., Prof. of Chem., Lake Erie Coll., Painesville, Ohio. **CHEMISTRY**. b. North Eaton, Ohio, June 15, 1897. d. Edgar L. and Ella (Fauver) M. Edn.: A.B., Baldwin-Wallace Coll., 1917; M.S., Univ. of Ill., 1922; Ph.D., Univ. of Ill., 1924. Exp.: Instr. in Chem., Baldwin-Wallace Coll., 1917-20; Asst. in Chem., Univ. of Ill., 1920-23; Fellow in Chem., Univ. of Ill., 1923-24; Prof. of Chem., Lake Erie Coll., 1924—. Author: The Value of Some Tellurium Compounds as Disinfectants; Jour. of Bacteriol., Vol. X, No. 1. Mem.: Sigma Xi; Iota Sigma Pi; Amer. Chem. Soc.; Fellow, A.A.A.S.; Ohio Acad. of Sci.; A.A.U.P.; A.A.U.W.; Grange; Amer. For. Assn. Travel: Nine European Countries; Canada; Mexico; Western U. S. Hobbies: Gardening; Conservation. Listed in: A.M.S.; Who's Who in the Midwest. Special Int.: Inorganic Chem.

MUNN, Mancel Thornton, Prof. and Hd., Div. Seed Investigations, N. Y. State Agri. Expt. Sta., Cornell Univ., 83 Hillcrest Ave., Geneva, N. Y. **BOTANY**.

MUNN, William Faitoute, 75 Walker Rd., West Orange, N. J. **PHOTOMICROGRAPHY, CHEMICAL RESEARCH**.

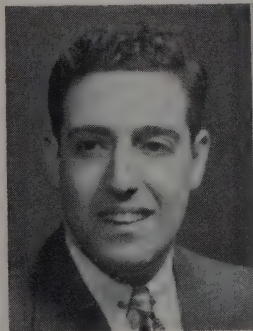
MUNNS, Edward Norfolk, Chf., Div. Forest Influences, U. S. Forest Service, Washington, D. C. **FORESTRY**.

MUNRO, George Clarkson, Rsch. Physicist, Champion Paper and Fibre Co., 63 Millville Ave., Hamilton, Ohio. **PAPER PHYSICS**.

MUNRO, George Wesley, Prof. of Thermodynamics, Purdue Univ. Agri. Expt. Sta., West Lafayette, Ind.

MUNZ, Philip Alexander, Botanist, Botanic Garden R. F. D. 3, Box 327-B, Rancho Santa Ana, 23831 Esperanza Rd., Anaheim, Calif. **BOTANY**.

MURACA, Raffaele Francesco, Asst. Prof. of Chem., Lehigh Univ., Bethlehem, Pa. **ANALYTICAL CHEMISTRY**. b. Easton, Pa., July 27, 1921. s. Antonio and Elena (Celli) M. Edn.: B.S., Lehigh Univ., 1944; M.S., ibid., 1947; Ph.D., ibid., 1950. m. Helen Dorrance Parke, June 7, 1945. c.: Ralph Frank and Marcus Crenshaw; Toni Dorrance. Exp.: Instr., Lehigh Univ., Bethlehem, Pa., 1950-51; Asst. Prof., ibid., 1951—. Mem.: Amer. Chem. Soc.; Soc. of the Sigma Xi; A.A.U.P.; A.A.A.S.; Amer. Electroplater's Soc. Contbr. to: Jour. Amer. Chem. Soc.; Rev. Sci.



Instruments; Jour. Chem. Edn. Special Int.: Mass Spectrometry; Vacuum Gas-Micro Analysis; Theory of Electrodeposition and Electroplating; Micro-Analytical Schemes for Trace Constituents in Plating Baths and Wastes; Analysis of Chelate Complexes.

MURCH, Leslie Ferguson, Prof. of Physics, Dartmouth Coll., Hanover, N. H. **PHYSICS**.

MURCHISON, Carl, Editor, Jour. Press, 2 Commercial St., Provincetown, Mass. **PSYCHOLOGY**.

MURDOCH, Katharine, Psychologist, Friends Seminary, Rutherford Pl. and East 16th St., N. Y. N. Y. **EDUCATIONAL PSYCHOLOGY**.

MURDOCK, Bennet Bronson, Sr. Methods Analyst, Prudential Ins. Co. of Amer., Maplewood, N. J. **MATHEMATICS; STATISTICS**. b. Jan. 15, 1901, Meriden, Conn. s. George Bronson and Harriet Elizabeth (Graves) M. Edn.: B.A., Yale, 1923; M.A., ibid., 1932; Ph.D., ibid., 1934. m. Ruth Elizabeth Dewsbury, Apr. 26, 1924. c.: Bennet B., Jr. Exp.: Asst. Mathematician, Prudential Ins. Co. of Amer., 1942-49; Divisional Manager, ibid., 1949-50; Sr. Admin. Asst., ibid., 1950-52; Sr. Methods Analyst, ibid., 1952—. Mem.: Soc. of Actuaries; Amer. Soc. of Quality Control; Maplewood Club. Contbr. to: Transaction of Amer. Soc. of Actuaries; Indust. Quality Control. Special Int.: Statistical Quality Control.

MURDOCK, George Peter, Prof. of Anthropology, Yale Univ., New Haven, Conn. **ANTHROPOLOGY**.

MURIE, Olaus Johan, Pres. and Dir., The Wilderness Soc., Moose, Wyo. **MAMMALOLOGY; ORNITHOLOGY; ECOLOGY**.



b. Moorhead, Minn., Mar. 1, 1889. s. Joachim D. and Marie (Frimanslund) M. Edn.: A.B., Pacific Univ., 1912; M.S., Univ. of Mich., 1927. Hon. Deg.: D.Sc., Pacific Univ., 1949. m. Margaret Thomas on Aug. 18, 1924. c.: Martin Louis; Joanne Elizabeth; Donald Olaus. Exp.: Field Naturalist for Carnegie Museum, Hudson Bay and Labrador, 1914-15, 1917; Biologist, U. S. Biological Survey, 1920-45; Dir. and Pres., The Wilderness Soc., Moose, Wyo., 1946—. Hon. Pos.: Past Pres., Wildlife Soc. Mem.: A.A.A.S.; Ecological Soc. of Amer.; Amer. Soc. of Mammalogists; Wildlife Soc.; Arctic Inst. of N. Amer.; Calif. Acad. Sci.; Izaak Walton League; Natl. Parks Assn.; etc. Author: The Elk of N. Amer., 1951. Contbr. to: Ecology; Amer. Jour. Mammalogy; Jour. Wildlife Mgt.; The Condor; The Auk; The Wilson Bull. War Record. Balloon Observer, World War I, Air Service. Gen. Int.: Life Hist. Studies of Caribou in the North; Explorations in Labrador and Hudson Bay; Life Hist. Studies of the Elk of N. Amer.; Leader of Scientific Expedition in New Zealand, 1949. Special Int.: Life Histories of Game Animals; General Ecology and Conservation of Wilderness.

MURPHEY, Bradford, Psychiatrist, 1612 Tiremont Place, Denver 2, Colo. **PSYCHIATRY**. b. Kansas City, Mo., May 23, 1891.



s. James Jay and Mary Alice (Hayes) M. Edn.: A.B., Univ. of Nebr., 1918; M.D., ibid., 1920. Hon. Deg.: D.Sc., Colo. Coll., 1939. m. Margaret Griffin, Nov. 9, 1921. c.: Bradford Griffin and Murray Griffin. Exp.: Interne, Kings Co. Hosp., Brooklyn, N. Y., 1920-21; Asst. Phys. Elgin, Ill., State Hosp., 1921-22; Asst. Phys., State Hosp., Chicago, Ill., 1922-23; Sr. Physician, N. J. State Hosp., Morris Plains, N. Y., 1923-25; Fellowship, 1925-26; Chf. Consulting Psychiatrist, New England Home for Little Wanderers, Boston, Mass., 1926-27; Dir., Bemis-

Taylor Foundation Child Guidance Clinic, Colo. Springs, Colo., 1927-38; Dir., Children's Service Center Child Guid. Clinic, Wilkes-Barre, Pa., 1938-40; Private practice of Psychiatry, Denver, Colo., 1940—, Mem.: Colo. State Med. Soc.; Colo. Prison Assn.; Colo. State Mental Hygiene Soc.; Colo. Conf. of Social Work; Amer. Acad. of Polit. and Soc. Sci.; A.A.A.S.; Amer. Psychiatric Assn.; Delta Theta Pi; Nu Sigma Nu; Alpha Omega Alpha; Delta Epsilon. Contrb. to: BL, N.E.A.; Rocky Mtn. Med. Jour.; Amer. Jour. of Orthopsychiatry; Western Hosp. Rev.

MURLIN, John Raymond, Prof. Emer., Physiol. and Dir., Dept. Vital Econ., Univ. of Rochester, 55 Oak Lane, Rochester, N. Y. **PHYSIOLOGY**.

MURNAGHAN, Francis Dominie, Instituto Tecnológico de Aeronautica, Sao Jose dos Campos, Estado de Sao Paulo, Brazil.

MURNECK, Andrew Edward, Prof. of Horticulture, Univ. of Mo., Columbia, Mo. **HORTICULTURE**.

MURPHREE, Eger V., Pres., Standard Oil Development Co., 15 W. 51st St., N. Y. 19, N. Y. **DEVELOPMENT AND RESEARCH**.



b. Bayonne, N. J., Nov. 3, 1898. Edn.: B.S., Univ. of Ky., 1920; M.S., ibid., 1921. Hon. Deg.: D.Sc., Univ. of Ky., 1939. Exp.: Staff Asst., Mass. Inst. of Tech., Cambridge, Mass., 1922-23; Rsch. Assoc., ibid., 1923-24; Chem. Engr., Solvay Process Co., Syracuse, N. Y., 1924-26; Dir., Chem. Engrng. Division, ibid., 1926-30; Dir., Jasco Inc., Standard Oil Co. of La., Baton Rouge, La., 1930-34; Mgr.-Dev. and Rsch. Dept., ibid., 1932-34; Vice-Pres. and

Dir., Hydro Engrng. and Chem. Co., Baton Rouge, La., 1934-45; Mgr. Dev. and Rsch., Standard Oil Development Co., N. Y. C., 1934-37; Vice-Pres., ibid., 1937-46; Exec. Vice-Pres., ibid., 1946-47; Pres., ibid., 1947—, Mem.: Amer. Chem. Soc.; Amer. Petroleum Inst.; Amer. Inst. of Chem. Engrs.; Amer. Phys. Soc.; Soc. of Chem. Industry; Amer. Inst. of Physics; Acad. of Polit. Sci.; Natl. Acad. of Sci.; N. Y. Acad. of Sci.; Alpha Chi Sigma. Contrb. to: Indus. and Engrng. Chem.; Jour. of Amer. Chem. Soc.; World Petroleum; Rubber Age; Oil and Gas Jour.; Amer. Inst. of Chem. Engrs.; The Register of Phi Lambda Upsilon; The Lamp; Amer. Gas Assn.; Chem. Inst. of Can.; the XI Internat. Congress of Puer and Applied Chem.; World Power Conf., The Hague; Jour. of Inst. of Petroleum; The Mines Mag.; Petroleum Processing; Mining and Metallurgical Soc. of Amer.; The Petroleum Times, British Mag.; La Rivista Dei Combustibili; Esso Air World; Chem. Indus.; The Petroleum Reviver. Gen. Int.: Several Patents; The Perkin Medal for 1950 for Applied Chem.

MURPHY, Edward Joseph, Mem., Solid State Rsch. Group, Bell Telephone Labs., Murray Hill, N. H. **CONDUCTION IN SOLIDS**.

MURPHY, James B., Mem., Chg. Cancer Rsch., Rockefeller Inst., 66th St., and York Ave., N. Y. **N. Y. MEDICAL RESEARCH**.

MURPHY, Nelson Francis, Research Prof. of Chemical Engineering, Va. Polytech. Institute, Blacksburg, Va. **ELECTROCHEMISTRY, CORROSION AND METAL FINISHING**. b. Erie, Pa., January 30, 1906. s. Louis and M. Alice Murphy. Edn.: Ch.E., Univ. of Cincinnati, 1929; Ph.D., Cornell Univ., 1934. m. Georgia Cumins of Cincinnati, Ohio, 1932. d. Virgil C. c.: Neil; David. Exp.: Grad. Asst., Cornell Univ., 1930-34; Chem., Gen. Chem. Co., 1934-39; Asst. Prof., Chem. Eng., Syracuse Univ., 1939-45; Consult. and Dir., Eng. and Development, Bristol Lab., 1944-47; Rsch. Prof. Chem. Eng., Va. Poly. Inst., 1947—. Mem.: Amer. Inst. Chem. Eng.; Sigma Xi; Phi Lambda Upsilon; Amer. Chem. Soc.; Amer. Soc.

Engineering Edn.; A.A.U.P. Author: Dimensional Analysis. Ph.D. Dissertation: Oxidation-Reduction with Hydrogen Peroxide. Gen. Int.: Active in Development of Penicillin Industry; Corrosion; Metal Finishing. Listed in: A.M.S.; Who Knows—and What.

MURPHY, Raymond Edward, Prof. Econ. Geography, Clark Univ., Worcester, Mass. **GEOGRAPHY**.

MURPHY, Robert Cushman, Chmn., Dept. of Birds, Amer. Museum Natural History, 77th St., Central Park W., N. Y., N. Y. **ORNITHOLOGY AND OCEANIC BIOLOGY**.

MURPHY, Sister Mary Thomas, SSJ, Principal, Pittsville Catholic High Schl., Pottsville, Pa. **ORGANIC CHEMISTRY**. b. Sept. 2, 1904, Hanover, Pa. d. Thomas Lawrence and Mary (Wagner) M. Edn.: A.B., 1934, Coll. of Chestnut Hill, Phila.; Ph.D., 1938, Johns Hopkins Univ. Exp.: Tehr., Holy Family Acad., Bayonne, N. J., 1925-31; Tehr., Mt. St. Joseph Acad., Phila., Pa., 1931-34; Instr. in Chem., Coll. of Chestnut Hill, 1938-43; Rsch. Asst., Cath. Univ. of Amer., 1943-44; Instr. in Chem., ibid., 1944-48; Instr. in Chem., Our Lady Queen of Peace High Schl., 1948-51; Prin., Pottsville Catholic High Schl., 1951—. Mem.: Amer. Chem. Soc.; Amer. Assn. for the Adv. of Sci.; Sigma Xi. Contrb. to: Jour. of A.C.S. Ph.D. Dissertation: Thermal Reactions of Organic Compounds. War Record: Rsch. Asst. on Proj. of the Rubber Reserve Co. Listed in: A.M.S. Special Int.: Thermochem. and General Science Textbooks.

MURPHY, Walter Joseph, Editor, Chem. and Engrng. News, 1155 16th St., N. W., Washington, D. C. **EDITORIAL**.



b. Aug. 20, 1899, Brooklyn, N. Y. s. Richard and Ann (Heath) M. Edn.: B.S., Brooklyn Poly. Inst., 1921. Hon. Deg.: D.Sc., Centre Coll., 1947. m. Gertrude B. McMahon, Feb. 22, 1927. c.: Joan Ann and Walter, Jr. Exp.: Rsch. Chem. and Chem. Engr., Air Reduction Co., Elizabethport, N. J., 1921-22; Development Engr., Amer. Cyanamid Co., N. Y., 1922-25; Market Rsch., Naugatuck Chem. Div., U. S. Rubber Co., 1925; Vice-Pres., Geo. Chem. Co., 1925-28; Sales Asst. Mtnal Co. of Amer., 1928-30; Managing Editor, Chem., Indus., 1930-39; Editor and Gen. Mgr., Chem. Indus., 1939-42; Editor, Chem. and Engrng. News, Indus. and Engrng. Chem.; Analytical Chem., Dir. Amer. Chem. Soc. News Service, Washington, D. C., 1942—. Mem.: Amer. Inst. of Chem.; Amer. Inst. of Chem. Engrs.; Amer. Acad. of Sci.; A.A.A.S. Author: The Lagoon of Decision, 1946 Contrb. to: Numerous Sci. Publications. Special Int.: Rare Gases and Poison Gases.

MURPHY, William Parry, Sr. Assoc. in Med., Peter Bent Brigham Hosp., and Assoc. Med., Harvard Med. Schl., 20 Gloucester St., Boston, Mass. **INTERNAL MEDICINE**.

MURRAY, Elsie, 105 Highland Pl., Ithaca, N. Y. **PSYCHOLOGY**.

MURRAY, Elwood, **SPEECH AND HEARING**.

MURRAY, Grover E., Prof. and Chmn. of Dept. of Geology, La. State Univ., Baton Rouge, La. **GEOLOGY**. b. Maiden, Catawaba County, N. C., October 26, 1916. s. Grover and Lucy (Lore) M. Edn.: B.S., Univ. of N. C., 1937; M.S., L. S. U., 1939; Ph.D., ibid., 1942. m. Nancy Setzer of Newton, N. C., June 21, 1941. c.: Martha; Barbara Elizabeth. Exp.: 1937-38, Teaching Fellow, L. S. U.; 1938-41, Rsch. Fellow, La. Geol. Surv.; 1941-48, Geologist, Magnolia Pet. Co.; 1948-50, Prof. of Stratigraphic Geol., L. S. U. and Dir. of Field Rsch., La. Geol. Surv., summer, 1949, Dir. of

Summer Field Camp, Univ. of Tex.; Summer, 1950, Asst. Dir., Summer Field Camp, L. S. U.; 1950, Chmn., Dept. of Geol., L. S. U.; Summer, 1950, Dir. of Summer Field Camp, Univ. of Tex. Hon. Pos.: Chmn., L. S. U., Comm. on Academic Standards, 1950-51; Amer. Assn. of Pet. Geologists *Distinguished Lecture Comm. and Geologic Names and Correlations Committee*, Geological Soc. of Amer. *Session on Sedimentary Volumes in Gulf Coastal Plain of U. S. and Mexico*; Geol. Soc. Amer., *Representative on Amer. Stratigraphy Comm.*; Editor, *Journal Paleontology*. Mem.: Amer. Assn. of Petroleum Geol.; Geological Soc. of Amer.; Soc. of Economic Paleontologists and Mineralogists; Amer. Geophys. Union; Sigma Xi; New Orleans Geol. Soc.; Shreveport Geol. Soc.; Miss. Geol. Soc.; S. La. Geol. Soc.; Geol. and Mining Soc. of Amer. Univ.; Sigma Gamma Epsilon; Sigma Xi; A.A.A.S.; Norsk Geologisk Forening. Contr. to: Amer. Assn. of Pet. Geol.; Sci.; Jour. of Paleontology. Ph.D. Dissertation: *Geology of DeSoto and Red River Parishes, La.* Listed in: A.M.S.; Who Knows—and What. Special Int.: Cenozoic Geology; Sedimentary Volumes; Stratigraphy; Gulf Coastal Plain.

MURRAY, Francis Joseph, Hd., Dept. of Microbiology, The Wm. S. Merrell Co., Cincinnati 15.



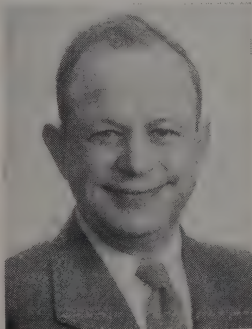
b. BACTERIOLOGY. b. Jersey City, N. J., Oct. 16, 1920. s. Joseph A. and Marion (Herrick) M. Edn.: B.S., St. Peter's Coll., 1942; Ph.D., Purdue Univ., 1948. m. Maryanne Lamb on Feb. 1, 1947. c.: F. Joseph, Jr.; Janis Ann. Exp.: Rsch. Asst., Lederle Labs., Pearl River, N. Y., 1944; Grad. Asst., Purdue Univ., 1944-46; Rsch. Fellow, *ibid.*, 1946-48; Wm. S. Merrell Co., 1948—; Hd. Dept., *ibid.*, 1951—. Mem.: Soc. Amer. Bacteriologists; Amer. Assn. Immunologists; A.A.A.S.; N. Y. Acad. Sci.; Sigma Xi. Contr. to: Jour. Bacteriology; Jour. Amer. Pharm. Assn.; Jour. Immunology; Jour. Lab. and Clinical Med.; Proc. Soc. Exptl. Biol. and Med. Special Int.: Antibiotics; Immunology Chemotherapy.

MURRAY, Henry Alexander, Lectr., Harvard Univ., Cambridge, Mass. PSYCHOLOGY.

MURRAY, Margaret Ransone, Rsch. Assoc. in Surgery, Coll. of Physicians and Surgeons, Columbia Univ., 105 Haven Ave., N. Y. TISSUE CULTURE.

MURRAY, Maurice J., Universal Oil Products Co., Riverside, Ill. CHEMISTRY.

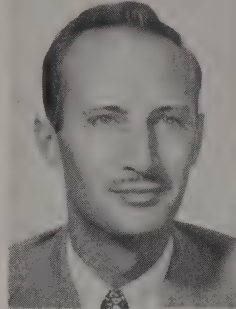
MURRAY, Merritt Joseph, Geneticist and Plant Breeder, A. M. Todd Co., Kalamazoo, Mich. GENETICIST AND PLANT BREEDER. b. Lawrenceville, Ill., Apr. 3, 1908. s. James A. and Edith (Mosier) M. Edn.: B.S., Ind. Univ., 1930; M.A., *ibid.*, 1934; Ph.D., Cornell Univ., 1938. m. Lillian Frink, 1936. c.: Susan Blanche; Nancy Edith; Roger Emerson. Exp.: Asst., Limnological Stream Survey conducted for the Ind. Dept. of Conservation and the Zool. Dept. of Ind. Univ., 1931; Asst., Carnegie Institution of Washington, Cold Spring Harbor, N. Y., 1932-35;



Asst., Experimentalist, Instr., Dept. of Plant Breeding, Cornell Univ., 1939-43; Assoc. Prof., Dept. of Plant Pathol. and Plant Breeding, Univ. of Ga., 1943-47; Geneticist and Plant Breeder, A. M. Todd Co., Kalamazoo, Mich., 1947—. Mem.: Sigma Xi;

Phi Kappa Phi; Ind. Acad. of Sci.; Genetics Soc. of Amer.; Amer. Soc. of Agron. Contr. to: Genetics; Jour. of Heredity. Gen. Int.: A Prolific Record as a Plant Hybridizer, having made over 300 Interspecific Hybrids, and more than 30 Intergeneric Combinations Principally in the Genera *Martynia*, *Amaranthus*, and *Mentha*. Special Int.: Plant Hybridization, Polyploidy, Sex Determination in Plants, Genetics of Evolution, and Plant Breeding Methods.

MURRAY, Raymond LeRoy, Prof. of Physics, N. C. State Coll., Raleigh, N. C. PHYSICS. b. Lincoln, Nebr., Feb. 14,



1920. s. Ray A. and Bertha (Mann) M. Edn.: B.Sc., Univ. of Nebr., 1940; M.A., *ibid.*, 1941; Ph.D., Univ. of Tenn., 1950. m. Ilah Mae Rengler, June 16, 1941. c.: Stephan; Maureen; Marshall. Exp.: Rsch. Physicist, Univ. of Calif. Radiation Lab., Berkeley, Calif., 1942-43; Asst. Dept. Supt., Tenn. Eastman Corp., Oak Ridge, Tenn., 1943-47; Sr. Physicist, Carbide and Carbon Chemicals Corp., Oak Ridge, Tenn., 1947-50; Prof. of Physics, N. C. State Coll., Raleigh, N. C., 1950—. Consultant, Oak Ridge Natl. Lab., Carbide and Carbon Chemicals Corp., Oak Ridge, Tenn., 1950—. Consultant, Monsanto Chemicals Corp., St. Louis, Mo., 1951-52; Consultant, Redstone Arsenal, Huntsville, Ala., 1952—. Mem.: Phi Beta Kappa; Sigma Xi; Pi Mu Epsilon; Amer. Physical Soc.; Amer. Inst. Physics; Amer. Assn. Physics Tchrs.; Southeastern Section of Amer. Physical Soc. Author: Introduction to Nuclear Engrng., 1953. Contr. to: Jour. Applied Physics; Rev. Scientific Instruments; Rev. Nuclear Physics; Special Int.: Electrical Discharges in Gases, Mass-spectrographic Isotope Separation, Particle Accelerators, Nuclear Reactor Theory and Experiment, Rocket Theory; Instruction in Nuclear Physics and Nuclear Engrng.

MURRAY, Thomas Jefferson, Prof. and Chmn., Dept. of Bacteriol., Rutgers Univ., New Brunswick, N. J. BACTERIOLOGY.

MURRAY, W. M., Jr., Dir. So. Rsch. Inst., Birmingham, Ala. CHEMISTRY, ANALYTICAL.

MURRAY, Wallace Jennings, Chemist and Chem. Engr., Arthur D. Little, Inc., Cambridge, Mass. CHEMISTRY. b. Boston, Mass., Aug. 24, 1890. s. Theodore R. and Juliet Wallace (Jennings) M. Edn.: B.S., Mass. Inst. of Tech., 1912; D. es Sc. Phys., Universite de Geneve, Switzerland, 1916. m. Ina Estelle Shordon on June 15, 1920. c.: Wallace Shordon; Jean Estelle. Exp.: Asst. in Organic Chem., Mass. Inst. of Tech., 1912-13; Instr., Analytical Chem., *ibid.*, 1913-14; Instr., Analytical Chem., Northwestern Univ., 1916-17; Rsch. Organic Chemist, Natl. Aniline and Chem. Co., 1917-18; Organic Chemist and Chem. Engr., Conn. Metal and Chem. Co., 1919; Rsch. Chemist and Chem. Engr., Arthur D. Little, Inc., 1920—. Mem.: Amer. Chem. Soc.; Amer. Assn. Textile Chem. and Colorists; A.A.A.S.; Amer. Inst. Chem. Engrng.; Amer. Petroleum Inst.; Mason. Contr. to: Jour. Chem. Soc. (London); Trans. Amer. Inst. Chem. Engrng.; Jour. Indus. and Engrng. Chem.; etc. War Record: 1st Lt., Chem. Warfare Service, World War I. Special Int.: Organic Chem. including Petroleum.

MUSCHENHEIM, Carl, Assoc. Prof. of Clin. Med., Cornell Univ., Med. Coll., New York, N. Y. CLINICAL RESEARCH. b. Feb. 4, 1905. N. Y. N. Y. s. Frederick A. and Elsa (Unger) M. Edn.: A.B., Columbia Coll., 1928; M.D., Columbia Univ., 1931. m. Ronda Keane, Apr. 5, 1951. c.: Linda Perrone; Fred Exp.: Instr. in Med., Cornell Univ., Med. Coll., 1938-42; Asst. Prof. of Med., *ibid.*, 1942-44; Asst. Prof. of Prev. Med. and Public Health, *ibid.*, 1942-44; Asst. Prof. of Clin. Med., *ibid.*, 1944-46; Assoc. Prof., *ibid.*, 1946—. Mem.: N. Y. Acad. of Sci.; N. Y. Acad. of Med.; Harvey Soc.; Amer. Coll. of Physicians. Contr. to: Amer. Jour. of Clin. Investigation; Amer. Rev. of Tuberculosis; Annals of

Internal Med.; Jour. of Infectious Diseases. Special Int.: Diseases of the chest; Tuberculosis.

MUSICK, Albert Hammond, Assoc. Prof. of Pharmacognosy, Schl. of Pharmacy, Univ. of Tenn., Memphis, Tenn. PHARMACY.

MUSIL, Albina Frances, Asst. Botanist, U. S. D. A. Plant Indus. Sta., Beltsville, Md. BOTANY.

MUSKAT, Irving E., Marco Chem. Inc., 1711 Elizabeth Ave., Linden, N. J. SYNTHETIC RESINS AND PLASTICS. b. Latvia,



Dec. 25, 1905. s. S. and Celia (Glass) M. Edn.: A.B., Marietta Coll., 1924; M.S., Univ. of Chicago, 1925; Ph.D. ibid., 1927. m. Dorothy Gaston, 1929. c.: Leslie Eloise and Lindsay Ann. Exp.: Faculty, Univ. of Chicago, Chicago, Ill., 1928-33; Dir. of Chem., Century of Progress Exposition, Chicago, Ill., 1930-33; Chem. Dir., Gulf Oil, 1934-35; Dir. of Rsch., Chem. Div., Pittsburgh Plate Glass Co., Pa., 1935-42; Dir. of Rsch., Vulcan Defining Co., 1942-51; Pres.

Marco Chem., Inc., Linden N. J., 1942—. Mem.: Amer. Chem. Soc.; A.A.A.S.; Amer. Inst. of Chem.; Biol. Chem. Contr. to: Jour. of Amer. Chem. Soc.; Jour. of Biol. Chem. Special Int.: Synthetic Resins and Plastics; Metallurgy and Recovery of Tin, Titanium; Alkalies and Chlorine.

MUSKAT, Morris, Tech. Asst. to Vice-Pres. of Prod. Dept., Gulf Oil Corp., Box 1166, Pittsburgh 30, Pa. APPLIED PHYSICS; MECHANICS OF OIL RECOVERY AND PRODUCTION. b. Latvia, Apr. 21, 1906.



s. Samuel and Celia (Glass) M. Edn.: B.A., Ohio State Univ., 1926; M.A., ibid., 1926; Ph.D., Calif. Inst. of Tech., 1929. m. Fern B. Metzger, July 3, 1936. c.: Phyllis A.; David A.; Robert E.; Rosalyn J. Exp.: Physicist, Gulf Rsch. and Dev. Co., Pittsburgh, Pa., 1929-35; Dir., Physics Div., ibid., 1935-50; Tech. Asst. to Vice-Pres., Gulf Oil Corp., ibid.

1950—. Mem.: Amer. Phys. Soc.; Amer. Geophys. Union; Amer. Pet. Inst.; Lucas Medalist, A.I.M.E., 1953; A.A.A.S.; A.A.C.M.; Phi Beta Kappa; Sigma Xi; Pi Mu Epsilon. Author: The Flow of Homogeneous Fluids Through Porous Media, 1937; Phys. Prin. of Oil Prod., 1949. Contrb. to: Phys. Rev.; Jour. of Applied Physics; Jour. of Pet. Tech. Special Int.: Oil Prod.

MUSSEN, Aubrey Thomas, retired, Assoc. in Neurol. Rsch., Johns Hopkins Univ., 1916-34. Rsch. Assoc., Carnegie Inst.



D. C., 1930-31, Rt. 1 A, Winchester, Va. BRAIN RESEARCH. b. Montreal, Can., Dec. 31, 1873. s. William W. and Georgiana Victoria (Hurlburt) M. Edn.: M. D. C. M., McGill Univ., 1900. m. Nora Ferris Dawes, Montreal, 1905 (dec. 1909). 2nd m. Tilly Brodfuhrer, Munich, 1911, (div. 1923). c.: Guy A. 3rd m. Virginia Rieman Hack, Baltimore, Md., Sept. 11, 1924. Exp.: Ship's Surgeon, W. Africa, S. Amer., Egypt, India, Burma, 1900-02; Post Grad.

Studies, London, Munich, Berlin, Vienna, Basle, 1907-14. War Record: Neuropathologist, Med. Rsch. Com., London, 1914-16; Major, Can. Army Med. Corp Neurol. Wards, Montreal Military Hosp., 1917-20; U. S. Army Air Force First Fighter Command Aircraft Warning Service, Strasburg, Va., 1942-43. Mem.: Amer. Neurol. Assn.; Assn. for Rsch. Nervous and Mental Diseases. Special Int.: Ice Hockey, Alpinist, Hunting. Author: Jr. Psychologie u Neurologie, Leipzig, 1923; Cytoarchitectural Atlas Brain Stem Macacus Rhesus; Archiv. Neurol. and Psychiatry, 1930; Cerebellum, A New Classification of Lobes based on their Reaction to Stimulation, illustrating the localization of the postural reflex activities and synergetic movements, (idem) 1934, Red Nucleus, A New Method of Physiol. Investigation.

MUSSEHL, Frank Edward, Prof. of Poultry Husbandry, Univ. of Nebr., Lincoln, Nebr. POULTRY HUSBANDRY.

MUSSER, Albert Myers, Prof. Horticulture, Clemson Agri. Coll., Clemson, S. C. HORTICULTURE.

MYERS, Charles Everett, Supvr. of Rsch., State Bd. of Edn., Richmond, Va. EDUCATION.

MYERS, Chester N., 34 Cedar Pl., Yonkers, N. Y. CHEMISTRY.

MYERS, David Moffat, Partner, Myers, Filler and Addington, Cons. Engrs., 21 E. 40th St., N. Y., N. Y. INDUSTRIAL POWER ENGINEERING.

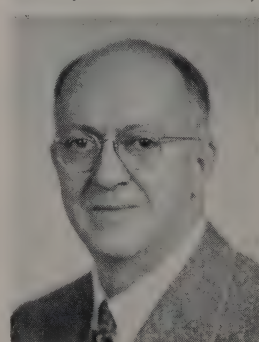
MYERS, Frank Evans, Prof. of Physics, Lehigh Univ., Bethlehem, Pa. PHYSICS.

MYERS, Garry Cleveland, Editor, Highlights for Children, Boyds Mills, Pa. APPLIED PSYCHOLOGY.

MYERS, George Sprague, Prof. of Biol. and Curator Zool. Collections, Natural History Museum, Stanford Univ., Calif. ICHTHYOLOGY HERPETOLOGY.

MYERS, Harold E., Assoc. Dean of Coll. of Agril., Kans. State Coll., Manhattan, Kans. AGRONOMY.

MYERS, Jay Arthur, Prof. of Med. and Public Health, Univ. of Minn., Private Practice, 91 S.



7th Street, Minneapolis. MINN. TUBERCULOSIS AND DISEASES OF THE CHEST. b. Croton, Ohio, Nov. 25, 1888. s. Charlie M. Edn.: B.S., Ohio Univ., 1912; M.S., ibid., 1913; Ph.D., Cornell Univ., 1914; M.D., Univ. of Minn., 1920. m. Fathie Lavonne McCracken on June 23, 1909. c.: Wathena Fay; Marguerite LaVonne; Carlton Jay; Jack Arthur. Exp.: Asst. in Biology, Ohio Univ., 1911-12; Instr. in Anatomy, Univ. of Mo., 1913-14; Instr. in Anatomy, Univ. of Minn.,

1914-19; Instr. in Med., ibid., 1920-22; Asst. Prof., ibid., 1922-31; Prof. of Med., ibid., 1931—; Asst. Prof. Preventive Med. and Public Health, ibid., 1923-26; Assoc. Prof., ibid., 1926-31; Prof., ibid., 1931—; Rsch. Fellow in Tuberculosis, Hennepin Co. Tuberculosis Assn., 1921-22; Dir. of Tuberculosis Activities, Minneapolis Div. of Public Health, 1921-44; Chf. of Tuberculosis Service, Minneapolis General Hosp., 1924—; Chf. of Chest Clinic, Univ. of Minn., 1925—; Consultant in Tuberculosis, Veterans Admin., Minneapolis, Minn., 1946—. Mem.: Natl. Tuberculosis Assn.; A.M.A.; A.A.A.S.; Amer. Coll. of Chest Physicians; Amer. Schl. Health Assn.; Amer. Assn. for Thoracic Surgery; Fellow, Amer. Coll. of Physicians. Author: The Care of Tuberculosis, 1924; Vital Capacity of the Lungs, 1925; The Normal Chest in Adults and Children, 1927; Fighters of Fate, 1927; Tuberculosis Among Children and Young Adults, 1930; Diseases of the Chest, 1935; The Chest and the Heart, 1947; Invited and

Conquered, 1949; etc. Contbr. to: Jour. of the A.M.A.; Diseases of the Chest; Jour.-Lancet; Geriatrics; Pediatrics; Amer. Jour. of Nursing; Jour. of Schl. Health. Special Int.: Tuberculosis and Diseases of the Chest.

MYERS, John Tennyson, Dir., Bendiner and Schlesman Lab., Third Ave. and 10th St., N. Y., N. Y. BACTERIOLOGY.

MYERS, Joseph W., Vice-Pres. in Chg. Rsch., Proctor Electric Co., 506 W. Mt. Airy Ave., Philadelphia, Pa. ENGINEERING.

MYERS, Mabel Adelaide, Asst. Prof., Biol. Dept., San Diego State Coll., San Diego, Calif. HISTOLOGY.

MYERS, Phillip Samuel, Assoc. Prof. of Mech. Engrng., Univ. of Wis., Madison, Wis. MECHANICAL ENGINEERING. b. Webber, Kans., May 8, 1916. s. Earl Rufus and Sarah Catherine (Breon) M. Edn.: B.S., McPherson Coll., 1940; B.S., Kans. State Coll., 1942; Ph.D., Univ. of Wis., 1947. m. Jean Frances Alford on May 26, 1943. c.: Katharine Ann; Elizabeth Ann. Exp.: Instr. in Mech. Engrng., Ind. Technical Coll., summer 1942; Instr. in M. E., Univ. of Wis., 1942-47; Asst. Prof., Assoc. Prof., ibid., 1947—. Hon. Pos.: Student Chmn., Student Branch, S.A.E.; Conf. Dir. of Adult Edn., W. Wis. Conf., Methodist Church. Mem.: Soc. of Automotive Engrs.; Amer. Soc. of Mech. Engrs.; Sigma Xi; Pi Tau Sigma; Sigma Tau; Phi Kappa Phi; Blue Key; Amer. Soc. for Engrng. Edn.; A.A.U.P. Contbr. to: A.S.M.E. Trans.; S.A.E. Trans.; Proc. of Tenth Annual Mid-West Power Conf. Gen. Int.: Awarded Pi Tau Sigma Gold Medal Award for 1949 for "outstanding achievement in mech. engrng. within ten years after graduation." Special Int.: Combustion in Internal Combustion Engines.

MYERS, Raymond J., Asst. Prof. of Zool., Colgate Univ., Hamilton, N. Y. HIRUDINA.

MYERSON, Albert Leon, Sr. Rsch. Chem., Franklin Inst., Philadelphia 3, Pa. PHYSICAL CHEMISTRY.

b. N. Y., N. Y., Nov. 14, 1919. s. Myer and Deborah (Weiner) M. Edn.: B.S., Pa. State Coll., 1941; Ph.D., Univ. of Wis., 1948. Exp.: Rsch. Asst., N.D.R.C., Columbia Univ., 1941-42; Rsch. Asst., S.A.M. Labs., Manhattan Project, Columbia Univ., 1942-45; Rsch. Chem., Franklin Inst. Laboratories, 1948—. Mem.: Sigma Xi; Phi Lambda Upsilon; Phi Kappa Phi; A.C.S. Contbr. to: Jour. of Franklin Inst.; Jour. Amer. Chem. Soc.; Jour. Phys. Chem. Special Int.: Chem. of Nitro-

amines; Synthesis of Fluorocarbons; Radioactive Tracers; High Polymers; Chem. Kinetics and Combustion.

MYERS, Robert Page, Chf. Bacteriologist, Natl. Dairy Products Corp., Rsch. Labs., Baltimore, Md. BACTERIOLOGY.

MYERSON, Abraham, Private Practice and Dir. of Rsch., Boston State Hosp., 171 Bay State Rd., Boston, Mass. PSYCHIATRY, NEUROLOGY.

MYERSON, Simon, Pres., Myerson Tooth Corp., 90 Mamilton St., Cambridge 39, Mass. PROSTHETIC DENTISTRY. b. Russia, Feb., 1883. s. Maurice J. and Sophie (Segal) M. Edn.: D.M.D., Harvard Dental Schl., 1908. m. Lucy Frishman in 1909. c.: Martin; Alvan; Richard. Exp.: Practice of Dentistry, 1918; Instr., Harvard Dental Schl., Prosthetic Dept., 1919; Pres. Myerson Tooth Corp., Cambridge, Mass., 1920—. Mem.: Amer. Dental Assn.; Mass. Dental Soc.; Metropolitan Dist. Dental Soc. Contbr. to: British Dental Record; Dental Items of Interest; Amer. Jour. of Prosthetic Dentistry. Special Int.: Dental Ceramics; Dental Plastics.

MYLES, Marion Antoinette Richards, Prof. of Botany, Hd. of Sci., Fort Valley St. Coll., Ft. Valley, Ga. PLANT

PHYSIOLOGY, BOTANY, BIOLOGY, ZOOLOGY. b. Philadelphia, Pa., June 22, 1917. d. Alonzo and Helen (Sloane) Richards. Edn.: B.S., Univ. of Pa., 1933; M.S., Atlanta, Univ., 1939; Ph.D., Iowa St. Coll., 1945. m. Frank J. Myles Dec. 24, 1947. Exp.: Hd. of Biol., Philander Smith Coll., Little Rock, Ark., 1941-43; Res. Fellow, Iowa State Coll., Ames, Iowa, 1943-45; Assoc. Prof. of Biol., Tenn. A. and I. State Coll., Nashville, Tenn., 1945-48; Assoc.

Prof. of Agronomy, ibid., 1948-51; Hd. of Sci., Ft. Valley St. Coll., Ft. Valley, Ga., 1952—. Mem.: Sigma Delta Epsilon; Phi Kappa Phi; Beta Kappa Chi; Amer. Soc. of Plant Physiologists; Alpha Kappa Alpha; N.E.A.; A.T.A. Special Int.: Now Recipient of a Carnegie Rsch. Grant for the Study of the Relationship between Chemical Structure and Biological Activity of Certain Organic Compounds.

MYSELS, Karol Joseph, Assoc. Prof. of Chem., Dept. of Chem., Univ. of Southern Calif., Los Angeles 7, Calif. PHYSICAL CHEMISTRY OF COLLOIDS. b. Krakow, Poland, Apr. 14, 1914. s. Adolf and Janina (Rosenberg) M. Edn.: Ph.D., Harvard Univ., 1941. Exp.: Patent and Engrng. Depts., Shell Development Co., San Francisco, Calif., 1940-42; Rsch. Asst., Stanford Univ., Stanford, Calif., 1941-42; Rsch. Assoc., ibid., 1943-45; Instr., N. Y. Univ., N. Y., N. Y., 1945-47; Asst. Prof., Univ. of Southern Calif., Los Angeles, Calif., 1947-50; Assoc. Prof., ibid., 1950—. Mem.: Amer. Chem. Soc.; A.A.A.S. Co-author: Introduction to the Sci. of Chem. Contbr. to: Jour. Amer. Chem. Soc.; Jour. Phys. Chem.; Jour. Chem. Phys.; Trans. Faraday Soc.; Jour. Chem. Edn.; Jour. of Colloid Sci.; Analytical Chem. War Record: Private, 1942-43. Special Int.: Colloids; Diffusion; Electrophoresis; Aluminum Soaps; Aqueous Soap Solutions.

NABOURS, Robert Kirkland, Prof. of Zool., Kans. State Coll., 401 Denison Ave., Manhattan, Kans. **GENETICS**.

NACE, Raymond L(ee), Dist. Geologist, U. S. Geol. Survey, 209 Fidelity Bldg., Boise, Idaho. **GROUND-WATER GEOLOGY**. b. Oct. 13, 1907, Los Angeles, Calif. s. P. F. and Alice A. (Carson) N. Edn.: B.S., Univ. of Wyo., 1935; M.A., *ibid.*, 1936. m. Edna H. Lane, July 31, 1935. c.: Samuel L.; and Robert L. Exp.: Instr. in Geol., Univ. of Wyo., 1939-40; Asst. Instr. in Geol., Yale, 1940-41; Apptd. Geol., U. S. Geol. Survey, Boise, Idaho, 1941—. Mem.: Sigma Xi; Amer. Geophys. Union; Soc. Econ. Geol.; Geol. Soc. of Amer.; Elks. Contrb. to: Amer. Jour. of Sci.; W. Va., Engr. Special Int.: Ground-water in volcanic terranes. Late Cretaceans and early Tertiary stratigraphy of Rock Mtn. area.

NACHMANSOHN, David, Assoc. Prof. of Neurology, Coll. of Physicians and Surgeons, Columbia Univ., N. Y., N. Y. **CHEMICAL MECHANISM OF NERVE FUNCTION**. b. Jekaterinoslaw, Russia. s. Moses and Regina (Klinkowstein) N. Edn.: Koenigliches Humanistisches Gymnasium, Danzig, Germany, 1918; Schl. of Med. at the Universities of Berlin, Frankfurt and Koenigsberg, Germany, 1918-23; Medical State Bd., 1924; M.D., Univ. of Berlin, Germany, 1926. m. Edith Berger on July 29, 1929. c.: Ruth Deborah. Exp.: Physicochem. and Enzyme Chem., Dept. of Chem., Pathologisches Institut, Univ. of Berlin, 1925-26; Prof. Otto Meyerhof, Rsch. on Biochem. and Physiol. of Muscular Contraction, Kaiser-Wilhelm Institut of Biology, Berlin, 1926-29; Assoc. in Med., Clinical Rsch. in Intermediate Metabolism and Endocrinology, Univ. of Frankfurt and Rudolf Virchow Hosp., Berlin, 1930-32; Rsch. in Biophys. and Biochem. of Nerve and Muscle, Lab. of General Physiol., Sorbonne, Paris, 1933-39; Instr. of Physiol., Rsch. in Biophys. and Biochem. of Nerve, Yale Univ. Schl. of Med., New Haven, Conn., 1939-42; Rsch. Assoc., Dept. of Neurology, Coll. of Physicians and Surgeons, Columbia Univ., 1942-47; Asst. Prof., *ibid.*, 1947-51; Assoc. Prof., *ibid.*, 1951—. Mem.: N. Y. Acad. of Med.; N. Y. Acad. of Sci.; A.A.A.S.; N. Y. Zool. Soc.; Amer. Soc. of Biological Chemists; Amer. Physiol. Soc.; The Biochem. Soc., London, England; Harvey Soc.; Sigma Xi; etc. Contrb. to: Jour. of Biological Chem.; Jour. of Neurophysiology; Advances of Enzymology; etc. War Record: Scientific Rsch. on Chem. Warfare Agents. Gen. Int.: Integration of Electrical and Chem. Signs of Nerve Activity; Established Sequence of Energy Transformations in Conduction; Integrated Acetylcholine into the Metabolic Cycle of the Nerve Cell; Demonstrated First Acetylation in Solution. Special Int.: Biophys. and Biochem. of Cellular Function; Enzyme Chem.

NADAI, A. L., Consulting Mech. Engr., Westinghouse Rsch. Laboratories, E. Pittsburgh, Pa. **APPLIED AND THEORETICAL MECHANICS; THEORIES OF ELASTICITY AND OF PLASTICITY**. b. Apr. 3, 1883, Budapest, Hungary. Edn.: Eidgenossische Technische Hochschule, Zurich, 1906; Technische Hochschule, Berlin, 1912. m. Elisabeth Witte, Sept. 20, 1913. Exp.: Prof., Univ. of Göttingen, Germany, 1919-29; Consulting Mech. Engr., Westinghouse Rsch. Laboratories, E. Pittsburgh, Pa., 1929—. Mem.: A.S.M.E.; A.A.A.S.; Amer. Phys. Inst. Author: Die Elastischen Platten, Berlin, 1925; Theory of Flow and Fracture of Solids, 1950. Contrb. to: Applied Mechanics; Jour. of Applied Physics; Mechanics Abstracts; Trans. Amer. Geophys. Union. Special Int.: Theory of elastic plates, theory of plasticity, strength and creep of metals at high temperatures.

NADL, Eli M., Sr. Surgeon, (PHS) Lab. of Pathol., Natl. Cancer Inst., Bethesda, Md. **EXPERIMENTAL PATHOLOGY**. b. N. Y., N. Y., Oct. 9, 1918. s. Joseph P. and Rae (Gross) N. Edn.: B.S., City Coll. of N. Y., 1937; M.S., *ibid.*, 1939; M.D., Long Island Coll. of Med. 1945. m. Ruthe G. Galler, June 3, 1943. c.: Robert Eric; James Oliver. Exp.: Intern, Mt. Sinai Hosp., N. Y., 1945; Pathologist, Pathol. Lab., Natl. Inst. of Health, 1946-47; Path. Section, Natl. Cancer Inst., 1947-52; Lab. of Pathol., Endocrine Pathol. Unit, Cancer Induction and Pathogenesis Section, *ibid.*, 1952—; Fellow, Dept. of Pathol., Wash. Univ. Schl. of Med., St. Louis, Mo., 1948-50; Fellow, Dept. of Biochem., Jefferson Med.

Coll., Philadelphia, Pa., 1950-51; Asst. Pathologist, Barnes Hosp., St. Louis, Mo., 1948-50. Mem.: Endocrine Soc.; Amer. Soc. Exptl. Pathol.; Coll. Amer. Pathologists; Diplomate, Amer. Bd. of Pathol., (CP) and (PA); Diplomate, Natl. Bd. Med. Examiners; N. Y. Acad. Sci.; Sigma Xi. Contrb. to: Endocrinol.; Jour. Natl. Cancer Inst.; Jour. Infectious Diseases; Jour. Clinical Endocrinol. War Record: 1st Lt., MC, AUS, 1945-46; Transferred to PHS in 1946-52. Special Int.: Pathophysiol. of Corticoid Excretion and Connective Tissue Growth; Mutual Aspects of the Pathophysiol. of Leukemia and Malaria; Role of Vitamin C in Metabolism.

NADIG, Francis Henry, Asst. Prof. of Physics, Temple Univ., Philadelphia, Pa. **PHYSICS**.

NADLER, Walter H., Assoc. Prof. of Med., Northwestern Univ., Chicago, Ill. **INTERNAL MEDICINE**.

NAEF, Paul August, Production and Plant Mgr., Sandoz Chemical Works, Inc., N. Y., N. Y. **CHEMISTRY, PHARMACEUTICAL**.

NAKAMURA, Frank L., Biochemist, Raritan Labs., Inc., New Brunswick, N. J. **NUTRITION**.

NALBANDOV, Andrew Vladimir, Asst. Prof. of Animal Physiol., Univ. of Ill., Urbana, Ill. **ENDOCRINOLOGY**.

NASH, Harold S., Ceramics Dept., Univ. of Cincinnati, Cincinnati 21, Ohio. **CERAMICS**.

NASH, Murray L., Tech. Asst., U. S. Atomic Energy Commn., 1901 Constitution Ave., N. W., Washing-



ton, D. C. **CHEMISTRY**. b. Brooklyn, N. Y., Dec. 28, 1917. s. Julius and Bessie (Lachow) N. Edn.: B.S., Brooklyn Coll., 1938. m. Laura Ruth Kopeikin, Aug. 19, 1940. c.: Heather Alice; Barbara Frances. Exp.: Phys. Sci. Aide, Bureau of Standards, Washington, D. C., 1941-42; Jr. Chem., U. S. Bureau of Mines, Coll. Park, Md., 1942-44; Rsch. Assoc., Substitute Alloy Materials Lab., Columbia Univ., N. Y. C., 1944; Chem. and Major Prod. Supvr., Carbide and Carbon Chem. Corp., Oak Ridge, Tenn., 1944-46; Scientific Analyst, U. S. Atomic Energy Commn., Oak Ridge, Tenn., 1946-49; Tech. Asst., U. S. Atomic Energy Commn., Wash., D. C., 1949—. Mem.: Amer. Chem. Soc. Special Int.: Phys. Chem. of Uranium; Separation of Isotopes; Mass and Emission Spectroscopy; Spectrographic and other Physico-Chem. Methods of Analysis; Prod. of Uranium 235.

NASON, John William, Rt. 1, Box 241-B, Las Cruces, N. Mex. **EDUCATION**.

NASSAU, Jason John, Prof. of Astron. and Dir., Warner and Swasey Observatory, Case Schl. of Applied Sci., Cleveland, Ohio. **ASTRONOMY**.

NASSET, E. S., Univ. of Rochester, Rochester, N. Y. **PHYSIOLOGY**.

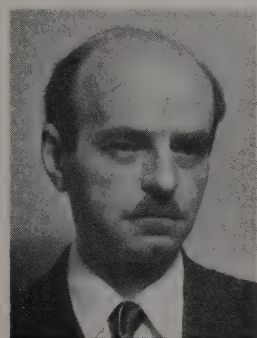
NATHANSON, Ira T., Mass. Gen. Hosp., Boston, Mass. **ENDOCRINOLOGY—CLINICAL RESEARCH**.

NATHANSON, Yale Samuel, Asst. Prof., Temple Univ., Philadelphia, Pa. **PSYCHOLOGY**.

NAUDAIN, Glenn Garnet, Consulting Chemist, 919 Charlotte Ave., Rock Hill, S. C. **CHEMISTRY**. b. Algona, Iowa, Oct. 31, 1894. s. W. E. and Ella (Foster) N. Edn.: B.S., Iowa State Coll., 1917; M.S., *ibid.*, 1922; Ph.D., *ibid.*, 1923; B.S., Kans. State Tehrs. Coll., 1927; M.A., N. Y. Univ. Hon. Deg.: D.Sc., Arto Rio de Janeiro, 1937. m. Lillian Gamrath, Sept. 15, 1921. c.: Marguerite Gamrath. Exp.: Instr., Iowa State Coll., Ames, Iowa, 1919-23;

Chem. Rsch., Mellon Inst., Pittsburgh, Pa., 1923-25; Chem., Kans. State Tehrs. Coll., Pittsburgh, Kans., 1925-26; Prof. and Hd. Chem. Dept., Winthrop Coll., Rock Hill, S. C., 1926-50; Consulting Chemist, Rock Hill, S. C., 1950—. Mem.: Sigma Xi; Phi Kappa Phi; Phi Lambda Upsilon; Gamma Sigma Delta; Lambda Sigma Kappa; Alpha Gamma Tau; Rotary; Mason. Author: Food and Physiol. Chem., 1928; A Survey on Tehngs. of Chem. in Second. Schls. of S. C. Contbr. to Amer. Chem. Soc. Jour.; Food Jour. Special Int.: Food Chem.; Poison War Gases.

NAUMANN, Hans Norbert, Chf. Lab. Service, V. A. Center, Jackson, Miss. **PATHOLOGY; PATHOLOGICAL CHEMISTRY.** b.



Berlin, Germany, Feb. 4, 1901. s. Alfred and Anna (Silbermann) N. Edn.: M.D., Univ. of Berlin Med. Schl., 1926; Dipl., Natl. Bd. Med. Exam., 1939; Dipl. Amer. Bd. Pathol., 1942, 1947. m. Larissa Frenkel, July 24, 1940. c.: Ann Helen; Steven Alfred; Vivian Charlot. Exp.: Rsch. Fellow, Berlin Univ., 1928-33; Rsch. Fellow, Seamen's Hosp., London, 1934-36; Rsch. Fellow, Long Island Coll. of Med., 1937-39; Clin. Pathologist, Jewish Hosp., Louisville, Ky.,

1940; Asst. Pathologist, Cumberland Hosp., Brooklyn, N. Y., 1943-45; Dir. of Labs., Taunton State Hosp., Taunton, Mass., 1945-48; Chf., Lab. Service, V. A. Center, Jackson, Miss., 1948—. Hon. Pos.: Pres., Miss. Assn. Pathol.; Mem., Med. Advisory Com., Red Cross Blood Center. Mem.: Fellow, A.M.A.; N. Y., Mass., Miss., Med. Soc.; Amer. Assn. Pathologists and Bacteriologists; Amer. Soc. Clinical Pathologists; Fellow, Coll. Amer. Path.; Soc. Exptl. Biol. and Med.; Amer. Chem. Soc.; Miss. Assn. Pathol. Contrb. to Amer. Jour. Clinical Pathol.; Jour. Lab. and Clinical Med.; Proc. Soc. Exptl. Biol. and Med.; etc. Special Int.: Postmortem Chem.; Ultra-violet Fluorescence of Tissues; Tests for Bile Pigments; Vacuum Evaporators; Micro-Polariscope.

NAUMBURG, Robert Elkan, Mechanical Engr., Jonas and Naumburg, 516 W. 35th St., N. Y., N. Y. **ENGINEERING.**

NAVEZ, Albert Edouard, Chf. Tutorial System Sciences, Milton Acad., Milton, Mass. **PHYSIOLOGY.**

NAVIAS, Louis, Ceramic Chemist, Rsch. Lab., General Electric Co., Schenectady, N. Y. **CERAMIC CHEMISTRY.**

NAZUM, John W., Attending Surgeon, Augustana Hosp., 411 Dickens Ave., Chicago, Ill. **GENERAL SURGERY.**

NEAL, Elma A., 510 E. Dewey Pl., San Antonio, Tex. **EDUCATION, PSYCHOLOGY.**

NEAL, Nathan Alva, 49 E. 33rd St., N. Y., N. Y. **SCIENCE TEACHING.**

NEAL, Norman Percy, Prof. of Agron. and Genetics, Univ. of Wis., Madison, Wis. **CORN BREEDING.**

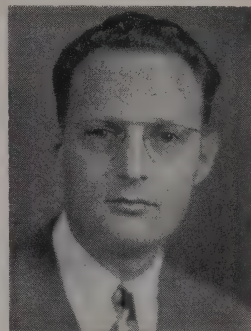
NEALE, P. E., Prof., N. M. A. and M. Coll., State College, N. M. **WOOL SCIENCE.**

NEARY, Malcolm Elijah, Acting Provincial Entomologist, Dept. of Agri., Nova Scotia Agril. Coll., Truro, N. S., Can. **ENTOMOLOGY.**

NEATBY, K. M., Dir. Sci. Service, Sci. Service Bldg., Ottawa, Ont., Canada. **AGRICULTURAL RESEARCH.**

NEADOW, Warren Wesley, Hd., Dept. of Biol. and Prof., Ark. State Coll., Jonesboro, Ark. **PLANT ECOLOGY.**

NEEDHAM, Gerald M., Med. Bacteriologist, Mayo Clinic, Rochester, Minn. **BACTERIOLOGY.** b.



Caldwell, Idaho, Aug. 4, 1917. s. Oliver Morton and Susie B. (Crowther) N. Edn.: B.S., Coll. of Idaho, 1940; Ph.D., Univ. of Minn., 1947. m. Billie Buettner, June 26, 1942. c.: Bobbie; Patty. Exp.: Bacteriologist, Minn. Dept. of Health, 1940-41; Instr. in Bacteriol., Univ. of Minn., Schl. of Med., Minneapolis, Minn., 1941-46; Consulting Bacteriologist, Econ. Lab., St. Paul, Minn., 1941-46; Civilian with Office of Scientific Rsch. and Development, 1942; Medical Bacteriologist,

Mayo Clinic, 1946—. Mem.: A.A.A.S.; Soc. of Amer. Bacteriologists; Sigma Xi; Gamma Alpha. Contrb. to: Sci.; Jour. of Parenteral Therapy; Amer. Jour. of Clinical Pathol.; Proc. Staff Meetings of the Mayo Clinic; Annals de L'Institut Pasteur; Amer. Jour. Med. Sci. Special Int.: Med. Bacteriol.; Antibiotics; Tuberculosis.

NEEDHAM, James George, Prof. Emer. Entomol., Cornell Univ., 6 Needham Pl., Ithaca, N. Y. **ENTOMOLOGY.**

NEELY, James Winston, Plant Breeder, Stoneville Pedigreed Seed Co., Stoneville, Miss. **BOTANY, PLANT BREEDING.**

NEET, Claude Cassell, Prof. of Psychol., Mass. State Coll., Amherst, Mass. **PSYCHOLOGY.**

NEFF, Andrew McNally, 55 S. Orange Grove Ave., Pasadena, Calif. **CHEMISTRY.**

NEFF, William Duwayne, Assoc. Prof. of Psychol., Univ. of Chicago, Chicago 37, Ill. **PHYSIOLOGY; PSYCHOLOGY.** b. Lomax, Ill., Oct. 27, 1912. s. Lyman M. and Emma M. (Jacobson) N. Edn.: A.B., Univ. of Ill., 1936; Ph.D., Univ. of Rochester, 1940. m. Ernestine A. Anderson, Aug. 14, 1937. c.: Carol J.; Peter L. Exp.: Rsch. Assoc., Swarthmore Coll., 1940-42; Rsch. Assoc., Univ. of Calif. Div. of War Rsch., 1942-44; Supvr. of Trng., Underwater Sound Lab., New London, Conn., Columbia Univ., Div. of War Rsch., 1944-45; Dir. of Trng., Submarine Trng. Section, Columbia Univ. Div. of War Rsch., 1945-46; Asst. Prof. of Psychol., Univ. of Chicago, 1946-48; Assoc. Prof., ibid., 1948—. Mem.: Amer. Psychol. Assn.; A.A.A.S.; Amer. Physiol. Soc.; Midwestern Psychol. Assn.; Soc. of Exptl. Psychologists; Sigma Xi. Contrb. to: Jour. Comparative and Physiol. Psychol.; Amer. Jour. Physiol. Special Int.: Neurophysiol. of Hearing, Vision, and Learning.

NEGUS, Sidney Stevens, Prof. of Chem., and Hd. Dept., Med. Coll. of Va., Richmond, Va. **CHEMISTRY.**

NEISWANDER, Claud Revere, Assoc. Chmn., Dept. Entomol., Ohio State Univ., Ohio Agri. Exp. Sta., Wooster, Ohio. **ECO-**



NOMIC ENTOMOLOGY. b. Mar. 6, 1893, Williamstown, Ohio. s. Joshua and Susan (Blosser) N. Edn.: A.B., Ohio State Univ., 1922; M.Sc., ibid., 1923; Ph.D., ibid., 1926. m. Hazel Wickerham, Sept. 10, 1919. d. Enoch and Mary Wickerham, Williamstown, Ohio. c.: Margery Mae and Arlyn Claud. Exp.: Prin., Arlington, Ohio, H. S., 1913-17; Univ. Scholar, Ohio State, 1922-23; Asst. Entomol., Ohio Agri. Sta., 1923-27; Assoc. Entomol. Chmn., ibid., 1948—.

ibid., 1927-48; Assoc.

Assoc. Prof., Zool. and Entomol., Ohio State Univ., 1946-50; Prof., *ibid.*, 1950—. Mem.: Phi Beta Kappa; Sigma Xi; A.A.A.S.; Amer. Entomol. Soc.; Amer. Assn. Econ. Ent.; Ohio Acad. Sci.; Lions Club. Contrb. to: Jour. of Econ. Entomol. Ph.D. Dissertation: The Sources of Amer. Corn Insects. Travel: U. S.; Canada; Europe. Hobbies: Hunting; Fishing. Listed in: A.M.S. Special Int.: European corn borer, and other corn insects, Field crop insects, Ornamental plant insects.

NEHER, Oscar Warner, Prof. of Biol., Manchester Coll., North Manchester, Ind. MYCOLOGY.

NEIFERT, Ira Edward, Chmn. and Prof., Dept. of Chem., Knox Coll., Galesburg, Ill. ANALYTICAL CHEMISTRY.

NEILL, Alma Jessie, Prof. of Zool. Sciences, Faculty Exchange, Univ. of Okla., Norman, Okla. PHYSIOLOGY, HYGIENE.

NELLER, Joseph Robert, Soil Chemist, Agri. Expt. Sta., Univ. of Fla., Gainesville, Fla. AGRICULTURAL CHEMISTRY.

NELSON, Alfred Clarence, Dean, Grad. Coll., Dir. Summer Quarter and Prof. of Chem. and Chem. Engrng., Univ. of Denver, Denver, Colo.

NELSON, Alfred Lewis, Prof. and Chmn., Dept. of Math., Wayne Univ., Detroit, Mich. MATHEMATICS.

NELSON, Alvin F., Prof. of Edn. and Psychol., Berry Coll., Mt. Berry, Ga. PSYCHOLOGY



b. Oakland, Nebr., June 27, 1917. s. John N. and Bena (Anderson) N. Edn.: A.B., with distinction, Univ. of Nebr., 1938; M.A., *ibid.*, 1939; Ph.D., Ohio State Univ., 1942. Exp.: Grad. Asst. Ohio State Univ., Columbus, Ohio, 1939-42; Asst. Prof. of Philos., Wesleyan Coll., Macon, Ga., 1949-51; Prof. of Edn. and Psychol., Newberry Coll., Newberry, S. C., 1951-53; Prof. of Edn. and Psychol., Berry Coll., Mt. Berry, Ga., 1953—. Mem.: Amer. Philos. Assn.; A.A.U.P.; Amer. Soc. for Aesth.; Mind Assn.; A.A.A.S.; Southern Soc. Philos. and Psychol.; S.C. Acad. Sci.; Phi Beta Kappa. Author: The Nature and Significance of Moral Feelings, 1943. Special Int.: Scientific Method; Social Psychol.

NELSON, Aven, Univ. of Wyo., Laramie, Wyo. BOTANICAL SCIENCES.

NELSON, Benjamin Norman, Intermediate Scientist, P. O. Box 1468, Westinghouse Elec. Corp., Pittsburgh 30, Pa. DEVELOPMENT AND EVALUATION OF ANALYTICAL METHODS—INORGANIC FIELD—SUPERVISION. b. Bayonne, N. J., Oct. 31, 1921. s. Herman and Gertrude (Klitzman) N. Edn.: B.S., Poly. Inst. of Brooklyn, 1943. m. Miriam Kahn, July 4, 1948. Exp.: SAM Lab., Manhattan Project, Columbia Univ., N. Y. C., 1943-44; Atomic Bomb Development Group, U. S. Army, 1944-45; Aluminum Rsch. Lab., New Kensington, Pa., 1946-51; Intermediate Scientist, Westinghouse Elec. Corp., Pittsburgh, Pa., 1951—. Mem.: Amer. Chem. Soc.; Natl. and Pittsburgh Div.; Analytical Soc. of Pittsburgh; Chem. Lit. Div. of Amer. Chem. Soc. Contrb. to:



Jour. of Chem. Edn. War Record: U. S. Army, 1944-45. Special Int.: Development and Evaluation of Analytical Methods, Mostly Inorganic in Fields of Metal and Ore Analysis in Aluminum Industry, Uranium and Allied Analysis in Atomic Rsch. Instrumental Methods of Analysis, Statistics in Analysis, and Bibliographic Searches.

NELSON, Bernard Andrew, Assoc. Prof. of Chem., Wheaton Coll., Wheaton, Ill. CHEMISTRY. b. Chicago, Ill., Jan. 10, 1910. s. Jacob A. and Anny (Swahn) N. Edn.: B.S., Wheaton Coll., 1931; M.S., Northwestern Univ., 1938; Ph.D., *ibid.*, 1942. m. Ellen Lytle, Sept. 12, 1936. Exp.: Industrial Chemist, Austenal Laboratories, Container Corporation of Amer., Chicago, Ill., 1931-35; Sci. Tchr., Riverside Training Schl., Lost Creek, Ky., 1935-36; Instr., Maine Twp. Jr. Coll., Des Plaines, Ill., 1939-42; Asst. Prof., Baylor Univ., Waco, Tex., 1942-43; Asst. Prof., Wheaton Coll., Wheaton, Ill., 1943-48; Assoc. Prof., in Chem., *ibid.*, 1948—. Mem.: Amer. Chem. Soc.; A.A.A.S.; A.A.U.P.; Sigma Xi. Special Int.: Derivatives of Cyclic Ethers: Dioxane and Tetrahydropyran. Ultra-Violet Absorption Spectra.

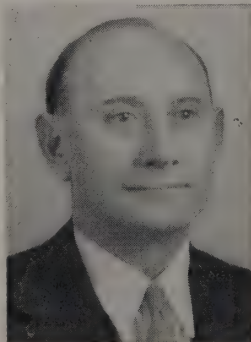
NELSON, Carl Willard, Assoc. Prof. of Engrng. Design, Univ. of Calif., Berkeley 4, Calif. APPLIED MECHANICS AND MACHINE DESIGN. b. Iron Mt., Mich., Feb. 2, 1912. s. Nels and Ellen M. (Johnson) N. Edn.: B.S., Univ. of Mich., 1934; M.S., *ibid.*, 1934; Ph.D., *ibid.*, 1939. m. Kathryn G. Stevens, June 20, 1936. c.: Stephen M.; William C.; Thomas J.; Carl W., Jr.; Susan K. Exp.: Testing and Rsch., Railway Rsch. Dept., Timken Roller Bearing Co., Canton, Ohio, 1936-41; Asst. Prof. of Math., Tex. Christian Univ., Ft. Worth, Tex., 1946; Asst. Prof., Assoc. Prof. of Engrng. Design, Univ. of Calif., Berkeley, Calif., 1946—. Mem.: Amer. Soc. for Engrng. Edn.; Amer. Soc. of Mech. Engrs.; Phi Kappa Phi; Sigma Xi. Contrb. to: A.S.M.E. Jour. of Applied Mechanics, War Record: U. S. Army Signal Corps, 1941-46. Special Int.: Rsch. in Elasticity, Dynamics, with Emphasis on Applied Math.

NELSON, Cyril Arthur, Prof. of Math., N. J. Coll. for Women, Rutgers Univ., New Brunswick, N. J. MATHEMATICS.

NELSON, Daniel Hans, Chf. Chemist and Dir. Product Control, Oscar Mayer and Co., Madison, Wis. BACTERIOLOGY.

NELSON, E. E., U. S. Food and Drug Admin., Washington, D. C. PHARMACOLOGY.

NELSON, Edward Houston, Hd. of Psychol. Dept., East Central State Coll., Ada, Okla. PSYCHOLOGY. b. Ark., Nov. 28, 1888. s. John and Ella (Page) N. Edn.: A.B., Ark., 1915; M.S., *ibid.*, 1924; D.Ed., Okla., 1943. m. Harriet Williams of Ark., 1911. d. Ambrose and Flora Williams. c.: Gilmer; Harold; Leland; Doris. Exp.: Supt. of Schls., Spiro, Okla., 1915-19; Supt. of Schls., Poteau, Okla., 1919-20; Prof. of Psychol., East Central State Coll., 1920-49; Hd. of Psychol. Dept., Ada, Okla., 1949—. Mem.: Phi Delta Kappa; Psi Chi; N.E.A.; Pi Gamma Mu; A.A.A.S.; Ph.D.



Dissertation: The Relation of Knowledge About Reproduction to the Amount Reproduced. Hobbies: Reading; Watching People. Listed in: Prominent Personalities in Amer. Methodism; A.M.S.; A.A.-A.S.

NELSON, Dotson McGinnis, Pres., Miss. Coll., Clinton, Miss. PHYSICS. b. Dec. 18, 1880, Charleston, Miss. s. Jonathan Taylor and Sarah Isabella (Cornick) N. Edn.: B.S., Miss. Coll., 1907; A.M., Ind. Univ., 1919; Ph.D., *ibid.*, 1925; Hon. LL.D., Miss. Coll., 1932. m. Mary White of Brandon, Miss., June 18, 1914. d. Mr. and Mrs. G. W. White. c.: Dotson

McGinnis, Jr.; Mary White. Exp.: Tchr. and Prin. Pub. Schls. in Miss., 6 Yrs.; Asst. Prof. Chem., Miss. Coll., 1911-14; Prof., Phys., 1914-21; Pres., Miss. Coll., 1932—; Exec. Sec., Bapt. Edn. Comm., 1921-25. Hon. Pos.: Pres., Sunday Schl. and B.Y.P.U. Convention of Miss., 1923-24; Pres., Miss. Bapt. Convention, 1934, 1935; Vice-Pres., Sou. Assn. of Coll. and Second. Schls., 1926-27. Mem.: A.A.A.S.; Optical Soc. of Amer. Assn. of Phys. Tchrs.; A.A. U.P.; Odd Fellow; Mason; W.O.W. Ph.D. Dissertation: Photographic Spectra of Tribo-Luminescence. War Record: Pvt., World War I, Training at Plattsburg, N. Y. Hobby: Golf. Listed in: Who's Who in Amer.

NELSON, Elmer Martin, Chf., Vitamin Div., Food and Drug Admin., Washington, D. C. NUTRITION.

NELSON, F. E., Iowa State Coll., Ames, Iowa. DAIRY CHEMISTRY AND TECHNOLOGY.

NELSON, John Brockway, Assoc. Mem., Rockefeller Inst., Princeton, N. J. ANIMAL PATHOLOGY.

NELSON, Nels Christian, Emer. Curator, Amer. Museum Natural History, 150 W. 79th St., N. Y. N. Y. PREHISTORIC ARCHAEOLOGY.

NELSON, Ray, Mich. State Coll., E. Lansing, Mich. PHYTOPATHOLOGY.

NELSON, Ronald Harvey, Prof. and Hd., Dept. of Animal Husbandry, Mich. State Coll., East Lansing, Mich. ANIMAL BREEDING AND GENETICS.



b. Union Grove, Wis., Aug. 10, 1918. s. Harvey A. and Myra Frances (Sheen) N. Edn.: B.S., Univ. of Wisc., 1939; M.S., Okla. A. and M. Coll., 1941; Ph.D., Iowa State Coll., 1943. m. Elizabeth Lappley, Apr. 13, 1940. c.: David Peter; Marjorie Jean; Linda Louise. Exp.: Grad. Asst., Okla. A. and M. Coll., 1940-41; Grad. Fellow, Iowa State Coll., 1941-43; Farming, 1943-45; Asst. Prof. of Animal Husbandry, Mich. State Coll., 1946-47; Assoc. Prof., ibid., 1947-49; Prof. of Animal Husbandry, ibid., 1949; Hd., Dept. of Animal Husbandry, ibid., 1950—. Mem.: Amer. Soc. of Animal Production; Amer. Genetic Assn.; Genetics Soc. Amer.; Alpha Gamma Rho; Alpha Zeta; Phi Kappa Phi; Sigma Xi. Contr. to: Jour. Animal Sci.; Jour. Dairy Sci. Special Int.: Animal Breeding.

NELSON, Rudolph Stokes, Attorney, Union Carbide and Carbon Rsch. Labs., Inc., 30 E. 42nd St., N. Y., N. Y. CHEMISTRY.

NELSON, Russell Theodore, Agronomist, The Great Western Sugar Co., Longmont, Colo. AGRONOMY AND PLANT PHYSIOLOGY. b. St. Paul, Minn., Aug. 18, 1916. s. Bengt Fredrick and Amanda (Engquist) N. Edn.: B.Sc., Univ. of Minn., 1939; Ph.D., ibid., 1942. m. Della Tronnes, Sept. 2, 1944. c.: Barbara; Janet. Exp.: Rsch. Asst., Univ. of Minn., 1939-42; U.S. Army, 1942-46; Agronomist, The Great Western Sugar Co., Longmont, Colo., 1946—. Mem.: Fellow, A.A.A.S.; Amer. Soc. Agron.; Soil Sci. Soc. of Amer.; Amer. Soc. of Sugar Beet Technologists; Gamma Alpha; Kiwanis. Contr. to: Jour. Agril. Rsch.; Proc. Amer. Soc. Sugar Beet Technologists. Special Int.: Soil Fertility and Management; Crop Production; Herbicides; Plant Hormones; Soil Microbiol.; Plant Nutrition and Metabolism.

NELSON, Severina E., SPEECH AND HEARING.

NELSON, T. C., Dept. of Zool., Rutgers Univ., New Brunswick, N. J. MOLLUSCAN SHELLFISH BIOLOGY.

NELSON, Theodora, Asst. Prof. of Zool., Hunter Coll., 695 Park Ave., N. Y., N. Y. ORNITHOLOGY.

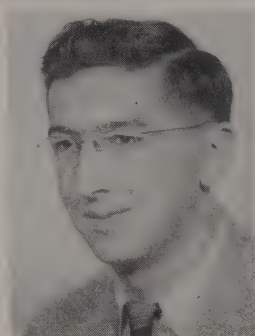
NELSON, Warren Otto, Prof. of Anatomy, Univ. of Iowa, Iowa City, Iowa. ANATOMY.

NELSON, Wilbur Armistead, Hd., Corcoran and Rogers Schl. of Geol., Univ. of Va., Charlottesville, Va. ECONOMIC AND STRUCTURAL GEOLOGY.

NELSON, William Lionel, Sr. Fellow, Mellon Inst. Indus. Rsch., Rt. 7, Box 190, Pittsburgh, Pa. CHEMISTRY.

NEMOY, Elizabeth M., SPEECH AND HEARING.

NERTNEY, Robert J., Physicist, Atomic Energy Div., Phillips Petroleum Co., 135 N. Placer Ave., Idaho Falls, Idaho.



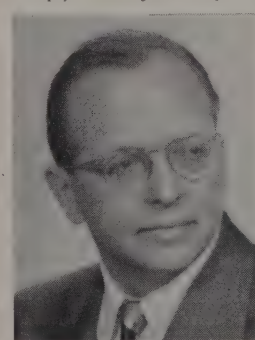
ACOUSTICS, IONOSPHERIC PHYSICS, NUCLEAR PHYSICS. b. Forsyth, Mont., Sept. 8, 1923. s. Chester J. and Ina (Hethcot) N. Edn.: B.S., Mont. State Coll., 1947; Ph.D., Pa. State Coll., 1951. m. Ann O. Godtland, Sept. 4, 1949. c.: Marilyn Ann. Exp.: Rsch. Asst., Acoustics Lab., Pa. St. Coll., 1948; Rsch. Asst., Instr., Asst. Prof. Engrng. Research, Assoc. Prof., Ionosphere Rsch. Lab., Pa. State Coll., 1949-52; Physicist, Atomic Energy Div., Phillips Petrol. Co., Ida. Falls, Ida., 1952—. Mem.: Sigma Xi; Pi Mu Epsilon. Contr. to: Jour. Acoustical Soc.; Jour. Geophys. Rsch.; Jour. Atmos. and Terrestrial Physics; etc. Special Int.: Biological and Psychological Effects of Higl Intensity Sound; Ionospheric Physics; Wave Propagation; Electronics; Nuclear Engrng.

NESBIT, Reed Miller, Prof. of Surgery, Univ. of Mich., Ann Arbor, Mich. UROLOGY.

NESBITT, Paul H., Logan Museum, Beloit, Wis. ANTHROPOLOGY.

NESTER, Henry George, 2832 N. Capitol Ave., Indianapolis, Ind. PHYSIOLOGY.

NETER, Erwin, Dir., Dept. of Bacteriol., Children's Hosp., 219 Bryant St., Buffalo, N. Y. MICROBIOLOGY.



b. Mannheim, Germany, May 26, 1909. s. Julius and Marie (Oppenheimer) N. Edn.: M.D., Univ. of Heidelberg, 1934. m. Dena Louise Wilson, May 26, 1945. c.: Stephen J. Exp.: Consultant Bacteriologist, Roswell Park Memorial Inst., since 1947; Lectr., N. Y. State Inst. of Applied Arts and Sci., since 1949; Assoc. Prof. of Microbiol., Univ. of Buffalo, Schl. of Nursing, 1950; Asst. Prof. of Bacteriol., Univ. of Buffalo, Schl. of Med., 1950; Dir., Dept. of Bacteriol., Children's Hosp., Buffalo, N. Y., 1936—. Hon. Pos.: Pres., Univ. of Buffalo Chapter of Sigma Xi; Chmn. of Section of Pathol., Buffalo Acad. of Med. Mem.: A.M.A.; Soc. Exptl. Biol. and Med.; Soc. Amer. Bacteriologists; Amer. Public Health Assn.; A.A.A.S.; Amer. Assn. Immunologists; N. Y. State Med. Soc.; Sigma Xi; Author: Med. Microbiol. for Nurses, 1948. Contr. to: Jour. A.M.A.; Pediatrics; Jour. Pediatrics; Jour. Exptl. Med.; Proc. Soc. Exptl. Biol. and Med.; Jour. Urology; Jour. Bacteriol.; etc. Special Int.: Enteric Infections and Chemotherapy including Antibiotics.

NETTING, Morris Graham, Curator Herpetology, Carnegie Museum, Pittsburgh, Pa. HERPETOLOGY AND GEOGRAPHY.

NETTLESHIP, Anderson, Dept. of Pathol., Univ. of Ark. Med. Schl., Little Rock, Ark. **PATHOLOGY**.

NETTLETON, Lewis Lomax, Partner, Gravity Meter Exploration Co., 340 Esperson Bldg., Houston 2, Tex. **GEOPHYSICS, ESPECIALLY GRAVITY METHODS; GEOLOGY, ESPECIALLY MECHANICS OF SALT DOME FORMATION.** b. Nampa, Idaho, June 24, 1896. s. Edwin G. and Eliza (Lomax) N. Edn.: B.S., Univ. of Idaho, 1918; M.S., Univ. of Wis., 1921; Ph.D., *ibid.*, 1923. m. Marion Moore, June 24, 1924. c.: David Lomax; Edwin Bewick. Exp.: Physicist, Rsch. Dept., Union Switch and Signal Co., Swissvale, Pa., 1923-28; Geophysicist, Gulf Rsch. and Development Co., Pittsburgh, Pa., 1928-46; Partner, Gravity Meter Exploration Co., Houston, Tex., 1946—. Hon. Pos.: Pres., Pittsburgh Physical Soc., 1934; Editor, Vice-Pres., Pres., Soc. of Exploration Geophysicists; Civilian Consultant, Com. on Geophysics, Rsch. and Development Bd., Dept. of Defense. Mem.: Fellow, Amer. Physical Soc.; A.A.A.S.; Amer. Assn. of Petroleum Geologists; Fellow, Geol. Soc. of Amer.; Amer. Geophysical Union; Soc. of Exploration Geophysicists; Houston Geol. Soc.; Houston Section Soc. of Exploration Geophysicists. Author: Geophysical Prospecting for Oil, 1940; etc. Contrb. to: Geophysics; Bull. Amer. Assn. Petroleum Geologists; Bull. Geol. Soc. Amer.; Trans. Amer. Geophysical Union. War Record: Signal Corps, 1918-19. Special Int.: Railway Signal Equipment, especially Automatic Train Control; Geophysical Exploration, especially Torsion Balance and Gravity Meter Instruments and Methods, Interpretation of Gravity and Magnetic Surveys, Correlation of Geophysics and Geol.; Geol. of Salt Domes, especially Mechanics of Formation, Fluid Flow of Salt; Dynamic Models of Geol. Processes.

NETZ, Charles Vail, Prof. and Hd., Dept. of Pharmacy, Univ. of Minn., Minneapolis, Minn. **PHARMACY**.

NEUFELD, Jacob, Dir. of Rsch., Engrng., Labs., Inc., 624 E. Fourth St., Tulsa, Okla. **GEOPHYSICS**.

NEUGEBAUER, Otto, Brown Univ., Providence, R. I. **HISTORY OF MATHEMATICS**.

NEUMAN, Frank, Chf., Section Seismology, U. S. Coast and Geodetic Survey, Washington, D. C. **SEISMOLOGY**.

NEUMANN, George Karl, Asst. Prof. of Anthropology, Ind. Univ., Bloomington, Ind. **ANTHROPOLOGY**.

NEUMUELLER, Julius Frederick, Prof. of Optometry, 320 Rhoads Ave., Haddonfield, N. J. **OPTOMETRY**.

NEUNER, Elsie Flint, Dir. of Instrn., Public Schl. New Rochelle, N. Y.; 2 Atlas Pl., Mount Vernon, N. Y. **EDUCATION**.

NEURATH, Hans, Assoc. Prof. of Biochem., Duke Univ., Durham, N. C. **BIOCHEMISTRY**.

NEUROTH, Milton Louis, Prof. of Pharmacy, Medical Coll. of Va., Richmond, Va. **PHARMACEUTICAL PREPARATIONS AND PRESCRIPTION COMPOUNDING.** b. Fort Wayne, Ind., Nov. 12, 1908. s. Charles E. and Emily Jane (Hinkley) N. Edn.: B.S., Purdue Univ., 1935; M.S., *ibid.*, 1940; Ph.D., *ibid.*, 1945. m. H. Louise Jones, July 7, 1948. c.: Rhea; Grover Jones (stepson); Bobby Jones (stepson). Exp.: Control Chemist, Gen. Cable Corp., Fort Wayne, Ind., 1929-33; Registered Pharmacist, Meyer Bros. Drug Co., Fort Wayne, Ind., 1935-36; Instr. and Asst. Prof. of Pharmacy, Ohio Northern Univ., Ada, Ohio, 1936-43; Fellow in Pharmacy, Purdue Univ., West Lafayette, Ind., 1943-45; Asst. to Assoc. to Prof. of Pharmacy, Medical Coll. of Va., 1946—; Chmn. Dept. of Phar., *ibid.*, 1949—. Mem.: Beta Sigma Psi; Kappa Psi; Rho Chi; International Assoc. of Torch Club; Sigma Xi; Phi Lambda Upsilon; James River Sertoma Club (Civic); Mason; Amer. Pharmaceutical Assn.; Va. Pharmaceutical Assn. Contrb. to: Jour. of the Amer. Pharmaceutical Assn.; Scientific and Practical Edn.; Amer. Jour. of Pharmaceutical Edn.; Jour. Natl. Assn. of Retail Druggists; Sci. Special Inst.: Pharmaceutical Preparations; Internal and

External, Dosage Forms, and Prescription Incompatibilities.

NEUWIRTH, Isaac, Assoc. Prof. of Pharmacol. and Therapeutics, N. Y. Univ. Coll. of Dentistry, 209 E. 23rd St., N. Y., N. Y. **PHARMACOLOGY**.

NEUWORTH, Martin, Pittsburgh Consolidation Coal Co., Library, Pa. **COAL TECHNOLOGY**.

NEVENS, William Barbour, Prof. of Dairy Cattle Feeding, Univ. of Ill., Urbana, Ill. **AGRICULTURE**.

NEVILLE, Harvey Alexander, Hd., Dept. of Chem. and Chem. Engrng., Lehigh Univ., Bethlehem, Pa. **PHYSICAL CHEMISTRY**.

NEVIN, C. M., 203 E. Upland Rd., Ithaca, N. Y. **GEOLOGY AND GEOGRAPHY**.

NEVIN, Floyd Reese, Prof. of Biol., State Tchrs. Coll., Plattsburg, N. Y. **MEDICINE ENTOMOLOGY AND PARASITOLOGY**.

NEVINS, Beatrice Irene, Prof. of Biol., Valdosta State Coll., Valdosta, Ga. **BOTANY.** b. May 4, 1900, Oshkosh, Wis. d. Charles Veranus and Ethel Adelaide (Copeland) N. Edn.: Diploma, S. T. C., Oshkosh, Wis., 1920; Ph.B., 1925, Ph.M., 1926, Ph.D., 1930, Univ. of Wis. Exp.: Tchrr., Primary Grades, Wrightstown, Wis., 1920-21; Tchrr., First Grade, Kenosha, Wis., 1921-23; Rsch. Asst. in Bot., Univ. of Wis., 1925-27; Asst. Instr. in Bot., *ibid.*, 1927-30; Assoc. Prof. of Biol., Ga. State Coll. for Women, Milledgeville, Ga., 1930-36; Prof. of Biol., Valdosta State Coll., 1936—. Mem.: A.A.A.S., Fellow; Bot. Soc. of Amer.; Ga. Acad. of Sci.; Assn. of Southeastern Biol.; Wis. Acad. of Sci., Arts and Letters; Tenn. Acad. of Sci.; Sigma Xi; Sigma Delta Epsilon; A.A.U.P.; Ga. Edn. Assn. Contrb. to: Amer. Jour. of Bot.; La Cellule. Ph.D. Dissertation: Cytological Studies on the Antheridia of *Sphaerocarpos Donnellii*. Listed in: A.M.S. Special Int.: Plant Cytology and plant Morphology.

NEWBURGH, Louis Harry, Prof. of Clinical Investigation, Univ. of Mich., Ann Arbor, Mich. **INTERNAL MEDICINE**.

NEWCOMB, Rexford, Prof. of Hist. Architecture, Dean, Coll. of Fine Arts, Univ. of Ill., Urbana, Ill. **HISTORY OF ARCHITECTURE**.

NEWCOMBE, Curtis Lakeman, Zoologist, Cranbrook Inst. Sci.; Boomfield Hills, Mich. **HYDROBIOLOGY**.

NEWELL, Norman D., Amer. Museum of Natural Hist., N. Y. C. **EVOLUTION**.

NEWELL, Robert Reid, Prof. of Radiology, Stanford Univ. Schl. of Med., San Francisco, Calif. **RADIOLOGY**.

NEWELL, Walter Stephen, Prof. Emer. Psychol., Coe Coll., 327 15th St., N. E., Cedar Rapids, Iowa. **PSYCHOLOGY**.

NEWHALL, Allan Goodrich, Prof. of Plant Pathol., N. Y. State Coll. of Agri., Ithaca, N. Y. **PLANT PATHOLOGY**.

NEWINS, Harold Stephenson, Dir. and Major Prof. of Forestry, Schl. of Forestry, Univ. of Fla., Gainesville, Fla. **FORESTRY**.

NEWKIRK, Burt Leroy, Prof. of Vibration Theory and Practice, Rensselaer Poly. Inst., Troy, N. Y. **VIBRATIONS**.

NEWLON, Homer Thomas, Hd., Chem. Dept., Langley H. S., 700 N. Sheridan Ave., Pittsburgh, Pa. **CHEMISTRY**.

NEWLUN, Chester Otto, Pres., State Tchrs. Coll., Platteville, Wis. **EDUCATION**.

NEWMAN, Albert Broadus, Prof. of Chem. Engrng., City Coll., N. Y., N. Y. **CHEMICAL ENGINEERING**.

NEWMAN, George Burgess, Assoc. Prof. of Zool., Pa. State Coll., State College, Pa. **HISTOLOGY AND EMBRYOLOGY**.

NEWMAN, Horatio Hackett, Prof. Emer. Zool., Univ. of Chicago, Chicago, Ill.; 173 Devon Dr., Clearwater, Fla. ZOOLOGY.

NEWMAN, Louis B., Chf. of Phys. Med. and Rehabilitation Service, Vet. Admin. Hosp., Hines, Ill. PHYSICAL MEDICINE AND REHABILITATION.

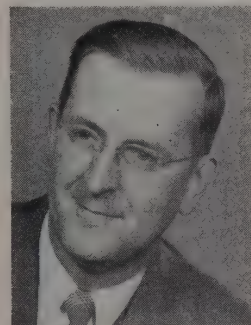


b. N. Y. C., Apr. 5, 1900. s. Morris and Mollie (Benzuly) N. Edn.: M.D., Rush Med. Coll., Univ. of Chicago, 1931. m. Rose Newman, Jan. 21, 1951. Exp.: Mech. Engr., Ill. Inst. of Tech., Chicago, 1921; Assoc. Prof., Dept. of Physical Med., Northwestern Univ. Med. Schl., Chicago; Comdr., Medical Corps, USNR, 1942-46; Hd., Dept. of Physical Medicine, U. S. Naval Hospitals, Oakland, Calif. and Seattle, Wash., 1942-46; Chf.,

Phys. Med. and Rehabilitation Service, Vet. Admin. Hosp., Hines, Ill., 1946—. Mem.: Amer. Bd. of Phys. Med. and Rehabilitation; Amer. Congress of Phys. Med.; Amer. Soc. of Phys. Med. and Rehabilitation; Amer. Soc. of Mech. Engrs.; Amer. Soc. of Milit. Engrs.; Assn. of Milit. Surgeons; World Med. Assn.; A.M.A.; Ill. Med. Soc.; Chicago Med. Soc.; Sigma Alpha Mu; Phi Delta Epsilon. Contrb. to: Arch. of Phys. Med.; Jour. of A.M.A.; Arch. of Internal Med.; Jour. of Amer. Occupational Therapy Assn.; Phys. Therapy Rev.; Jour. of Assn. of Phys. and Mental Rehabilitation; Ill. Med. Jour. Special Int.: Phys. Med. and Rehabilitation.

NEWMAN, Leonard Harold, Dominion Cerealist, Exptl. Farm, Ottawa, Ont., Can. PLANT BREEDING.

NEWSCHWANDER, Wilfrid Williams, Assoc. Prof. of Chem., Central Wash. Coll. of Edn., Ellensburg, Wash. PHYSICAL CHEMISTRY.



b. Tacoma, Wash., May 8, 1911. s. Wilfrid and Cora Ellen (Lomas) N. Edn.: B.A., Whitman, 1933; Ph.D., Univ. of Wash., 1939. m. Margaret Wheatley, Spokane, Wash., Aug. 5, 1936. d. Mr. and Mrs. P. V. Wheatley. c.: Carolyn Ann; Frederick Paul. Exp.: Instr., Central Wash. Coll., 1939-41; Asst. Prof., 1941-44; Assoc. Prof., 1944—; Coordinator of Civilian Pilot Trng., 1941-43; Coordinator, War Trng. Serv., 1943, Central

Wash. Coll. Mem.: Amer. Chem. Soc.; A.A.U.P.; Phi Beta Kappa; Sigma Xi; Phi Delta Theta; Phi Lambda Upsilon; Zeta Mu Tau. Contrb. to: Jour. Amer. Chem. Soc. Ph.D. Dissertation: The System Zinc Sulfate-Sulfuric Acid-Water at 25°. Hobbies: Fishing; Hunting; Pub. Speaking. Listed in: A.M.S.; Who's Who in Amer. (Pacific Coast). Special Int.: Corrosion Chem.

NEWTON, Catherine L., Prof. of Nutrition, Univ. of Ga., Athens, Ga. NUTRITION.

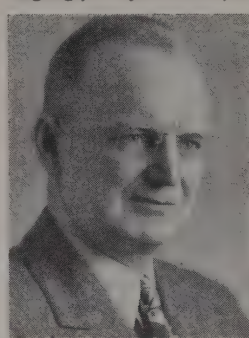
NEWTON, George Alexander, Prof. of Math., Trinity Univ., San Antonio, Tex. MATHEMATICS.

NEWTON, Howard Chamberlain, Dean, Mass. Coll. of Pharmacy, 179 Longwood Ave., Boston, Mass. PHARMACEUTICAL EDUCATION.

NEWTON, John Harry, Assoc. Entomologist, Colo. Expt. Sta., Colo. A. and M. Coll., Fort Collins, Colo. ENTOMOLOGY.

NEWTON, Robert, Pres., Univ. of Alberta, Edmonton, Alta., Can. PLANT BIOCHEMISTRY.

NEWTON, Dudley, Prof. and Hd., Dept. of Civil Engrng., Wayne Univ., 4841 Cass Ave., Detroit 1, Mich. CIVIL ENGINEERING.



b. Detroit Mich., July 27, 1897. s. Durbin and Eva (Manning) N. Edn.: B.S., Univ. of Mich., 1923; M.S., ibid., 1936. Registered Prof. Engr., Mich., 1928. m. Mary Griffin, June 26, 1926. c.: John Dudley; Michael. Exp.: Practicing Civil Engr., Detroit, Kalamazoo, Grand Rapids, Port Huron, Mich., 1922-31; Instr., Civil Engrng., Wayne Univ., Detroit, Mich., 1931-34; Hd., Dept. of Civil Engrng., ibid., 1934—, Hon. Pos.: Amer. Soc.

of Civil Engrs., Mich. Sect., Pres., 1953; Second Vice-Pres., Mich. Soc. of Prof. Engrs., 1952-53. Mem.: Amer. Soc. of Civil Engrs.; Highway Resch. Bd.; Internatl. Assn. of Bridge and Structural Engrs.; Amer. Concrete Inst.; Amer. Soc. for Engrng. Edn.: Natl. Soc. of Prof. Engrs.; Engrng. Soc. of Detroit; Mich. Engrng. Soc.; Soc. of Amer. Milit. Engrs.; Tau Beta Pi; Pi Kappa Alpha. Special Int.: Highway Transportation.

NEWTON, Roy Frederick, Prof. of Physical Chem., Purdue Univ., Lafayette, Ind. PHYSICAL CHEMISTRY.

NEY, Edward, 2700 Morgan Ave., N., Minneapolis, Minn. PHYSICS, MATHEMATICS.

NEYMAN, Jerzy, Prof. and Dir., Statistical Lab., Univ. of Calif., Berkeley, Calif. MATHEMATICAL STATISTICS.

NICE, Leonard Blaine, Prof. of Physiol. and Pharmacol., Chicago Med. Schl., Chicago, Ill. PHYSIOLOGY.

NICHOLAS, John Spangler, Osborn Zool. Lab., Yale Univ., New Haven 11, Conn.

NICHOLS, Claude Andrew, Dir., Schl. of Edn., Southern Methodist Univ., Dallas, Tex. EDUCATION.

NICHOLS, Edward Tattnall, Photographer, Ethnological Films, Rt. 6, Box 685, Tucson, Ariz. ANTHROPOLOGY.

NICHOLS, Herbert Bishop, Information Officer, U. S. Geol. Survey, Washington, D. C. BIOLOGY.

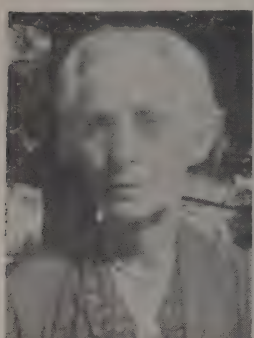


b. S. Norwalk, Conn., Oct. 21, 1907. s. Chester Encell and Ethel (Bishop) N. Edn.: B.S., Harvard Univ., 1932. m. 1st Ruth Christie (div.) August 20, 1932. c.: Chester Encell, II; Nancy Evelyn. m. 2nd Jessie Wharton, Oct. 12, 1950. Exp.: Sci. Editor, The Christian Sci. Monitor, 1932-49; Information Officer, U. S. Geological Survey, Washington, D. C., 1949—. Mem.: Acad. of Sci. of Philadelphia; Geol. Soc. of Wash.; Fellow, Amer. Assn. for Adv. of Sci.; Fellow, Amer. Geol.

Soc.; Mason; Botanical Soc. of Vt., Me., and Wash.; Reserve Officers Assn.; Past Pres. Natl. Assn. of Sci. Writers. Contrb. to: Christian Sci. Monitor; Sci.; Sci. Monthly; Sci. Digest. Special Int.: Popularization of Sci., Making Tech. Discoveries Intelligible to Non-scientists or Scientists in Other Fields. Milit. Exp.: Arty. Comdr.

NICHOLS, John Tradwell, Curator of Fishes, Amer. Museum Natural History, N. Y., N. Y. VERTEBRATE ZOOLOGY.

NICHOLS, Mary Louise, Retired, Hd., Dept. of Sci., S. Philadelphia H. S., 214 Airdale Rd., Rosemont, Pa. **BIOLOGY**. b. Brookville, Pa., Feb. 19, 1873. d. Aurin B. and Mary (Thompson) N. Edn.: Ph.D., Univ. of Pa., 1901. Exp.: Tchrr., Philadelphia Nor. Schl., 1893-1916; Hd., Dept. of Sci., South Philadelphia H. S. for Girls, Philadelphia, Pa., 1916-35; Retired, 1935—. Mem.: A.A.A.S.; Amer. Eugenics Soc.; Amer. Genetics Assn.; Phi Beta Kappa; League of Women Voters. Author: Sci. for Boys and Girls, 1924, 1934. Contrb. to: Sci. Jour. Heredity.



NICHOLSON, Frederic Max, Physician and Surgeon, General Practice, Norwegian-Amer. Hosp. Foundation, 1044 N. Francisco Ave., Chicago, Ill. **MEDICINE, SURGERY**.

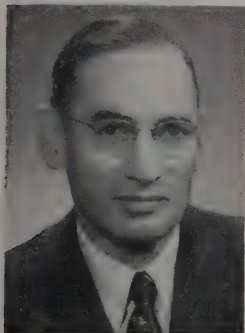
NICHOLSON, Hayden Coler, Professional Assoc., Com. on Growth, Natl. Rsch. Council, 2101 Constitution Ave., Washington, D. C. **PHYSIOLOGY**.

NICHOLSON, Jesse Thompson, Chmn. of Dept. of Orthopaedic Surgery and Prof. Orthopaedic Surgery, Grad. Schl. of Med., Univ. of Pa., 330 S. 9th St., Philadelphia 7, Pa. **ORTHOPAEDIC SURGERY**. b. Camden, N. J., Apr. 28, 1893. s. Joseph Lippincott and Elizabeth (Thompson) N. Edn.: B.A., Univ. of Pa., 1925; M.D., ibid., 1928. m. Edith Rose, Apr. 8, 1942. c.: Elizabeth; Edith; Joseph; Virginia. Exp.: Consultant Orthopaedic Surgeon, Philadelphia Gen. Hosp., Philadelphia, Pa., 1934; Orthopaedic Surgeon, Philadelphia Children's Hosp., ibid., 1935—; Orthopaedic Surgeon, Children's Seashore House, Atlantic City, N. J., 1936—; Orthopaedic Surgeon, Grad. Hosp., Univ. of Pa., Philadelphia, Pa., 1938—; Orthopaedist, Lankenau Hosp., Philadelphia, Pa., 1938—; Consultant Orthopaedist, U. S. Naval Hosp., Philadelphia, 1950—. Contrb. to: Annals of Surgery; Amer. Jour. of Med. Sci.; Amer. Med. Assn. Jour.; Arch. of Phys. Therapy; Surgical Clinics of N. Amer.; Cyclopaedia of Med.; Pa. Med. Jour.; Naval Med. Bull.; Jour. of Bone and Joint Surgery; Pa. Dental Jour. War Record: Capt. Med. Corps, U. S. Naval Reserve, 1942-46.

NICHOLSON, Rev. Patrick Joseph, Pres., St. Francis Xavier Univ., Antigonish, N. S., Can. **PHYSICS**.

NICHOLSON, Seth Barnes, Mount Wilson Observatory, Pasadena, Calif.

NICKEL, Allen Arthur Clarence, Partner, Caylor-Nickel Clinic, 303 S. Main St., Bluffton, Ind. **INTERNAL MEDICINE**.



b. Jefferson, Wis., Dec. 12, 1894. s. Rev. John and Minnie (Korte) N. Edn.: B.S., N. Central Coll., 1915; B.D., Evangelical Theol. Sem., 1917; M.D., Rush Med. Coll., 1924. m. Elmyra Luetke, 1924. c.: Mildred L. (Mrs. Milton Hoffman); Fred A. Exp.: Staff, Mayo Clinic, Rochester, Minn., 1924-31; Partner, Caylor-Nickel Clinic, Bluffton, Ind., 1931—. Mem.: Amer. Soc. of Clin. Pathol.; Soc. of Amer. Bacteriol.; Diplomate of Amer. Bd. of Internal Med.; Fellow: Amer. Coll. of Physicians; Amer. Coll. of Chest Physicians; Sigma Xi. Contrb. to: Jour. A.M.A.; Jour. Minneapolis Dist. Dental Soc.; Arch. of Ophthalmol.; Amer. Jour. Diseases of Children; Med. Jour. and Record; Arch. of Internal Med.; Dental Outlook; Jour. of Lab. and Clin. Med.; Arch.

Surgery; Jour. of Pharmacol. and Exptl. Therapy; Surgery, Gynecol. and Obstetrics; Annals of Internal Med.; Med. Clinics of N. Amer.; Amer. Jour. of Ophthalmol.; Annals of Surgery; Jour. of Ind. State Med. Assn.; Med. Record; Amer. Jour. of Digestive Diseases; Amer. Jour. of Roentgenol. and Radium Therapy; Gen. Practice. Special Int.: Internal Med.

NICKERSON, Dorothy, Color Technologist, U. S. D. A., Washington, D. C. **COLORIMETRY**.

NICOLET, Ben H., 205 Monroe Ave., Riverdale, Md. **CHEMISTRY**.

NIDA, Eugene Albert, Secy. Versions, Amer. Bible Soc., 450 Park Ave., N. Y., N. Y. **LINGUISTICS**.

NIEDERHAUSER, John Strong, Rockefeller Foundation, Calle Vienna 26, Mex., D. F., Mex. **PLANT PATHOLOGY**.

NIELSEN, Chester S., Assoc. Prof. of Botany, Fla. State Coll. for Women, Tallahassee, Fla. **CYTOL-OGY AND PHOTOPERIOD**.

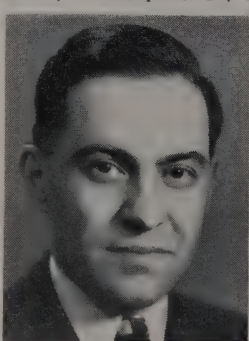
NIELSEN, Harald Herborg, Prof. and Chmn., Dept. of Physics, Ohio State Univ., Columbus, Ohio. **PHYSICS**.

NIELSEN, J. M., **SPEECH AND HEARING**.

NIELSEN, Jens Rud, Rsch. Prof. of Physics, Univ. of Okla., Norman, Okla. **CHEMICAL PHYSICS**.

NIEMANN, Carl G., Prof. of Organic Chem., Calif. Inst. of Tech., Pasadena 4, Calif. **ORGANIC CHEMISTRY**. b. St. Louis, Mo., July 6, 1908. s. Julius H. and Ella L. (Danner) N. Edn.: B.S., Univ. of Wis., 1931; Ph.D., ibid., 1934. m. Mary Parkhurst, Aug. 15, 1934. c.: Dorothy Louise; Linda Grant. Exp.: Rsch. Assoc., Univ. of Wis., 1934-35; Gen. Edn. Bd. Fellow, 1935-36; Asst., Rockefeller Inst. for Med. Rsch., 1936-37; Rockefeller Foundation Fellow, 1937-38; Staff, Calif. Inst. of Tech., Pasadena, Calif., 1938—; Prof. of Organic Chem., ibid., 1945—. Mem.: Natl. Acad. Sci.; Amer. Chem. Soc.; Amer. Soc. Biol. Chemists; Chem. Soc. (London); A.A.A.S.; Sigma Xi; Alpha Chi Sigma; Gamma Alpha. Contrb. to: Jour. Amer. Chem. Soc.; Jour. Biol. Chem. War Record: Presidential Certificate of Merit for Work with the O. S. R. D. Special Int.: Gen. Field of Organic and Biol. Cehm.

NIER, Alfred O. C., Prof. of Physics, Univ. of Minn., Minneapolis 14, Minn. **PHYSICS**. b. St.



Paul, Minn., May 28, 1911. s. August C. and Anna J. (Stoll) N. Edn.: B.S., Univ. of Minn., 1931; M.S., ibid., 1933; Ph.D., ibid., 1936. m. Ruth E. Andersen, June 19, 1937. c. Jean; Janet; Keith. Exp.: Natl. Rsch. Fellow, Harvard Univ., Cambridge, Mass., 1936-38; Asst. Prof., Univ. of Minn., Minneapolis, Minn., 1938-40; Assoc. Prof., ibid., 1940-43; Physicist, Kellogg Corp., N. Y. C., 1943-45; Prof., Univ. of Minn., Minneapolis, Minn., 1945—. Hon. Pos.: Acting Chmn., Dept. of Physics, Univ. of Minn., 1950-51. Mem.: Sigma Xi; Minn. Acad. of Sci.; Natl. Acad. of Sci.; Amer. Phys. Soc.; Amer. Assn. of Physics Tchrs.; A.A.A.S. Contrb. to: Phys. Rev.; Rev. of Sci. Instruments; Jour. of Chem. Physics; Jour. Amer. Chem. Soc.; Jour. Applied Physics. Special Int.: Development of Mass Spectrometers for Rsch. in Physics, Chem., Geol. and Med.; Separation of Isotopes and Determination of Exact Abundances and Masses of Isotopes.

NIGHTINGALE, Thomas William, Vice-Pres. and Gen. Mgr. of Production, Transmission and Exploration, Mountain Fuel Supply Co., P. O. Box 1129, Rock Springs, Wyo. **PETROLEUM GEOLOGY**.

NIGHTINGALE, William Thomas, Pres., Mountain Fuel Supply Co., P. O. Box 989, Salt Lake City 10, Utah. **GEOLOGY.** b.



Carbonado, Wash., July 6, 1897. s. Charles S. and Sarah A. (Roberts) N. Edn.: B.Sc., Univ. of Wash., 1919; M.Sc., *ibid.*, 1924. m. Iola Stacher, Aug. 31, 1929. c.: William Thomas, Jr. Exp.: Geologist, Wash. Geological Survey, 1919; Geologist, Whitehall Petroleum Corp., Ltd., London, England, 1920-24; Consulting Geologist, Western Wash. and Ore., 1924; Geologist, N. Y. Oil Co., Wash., Ore., and Calif., 1924-26; Geologist, Ohio Oil Co., Mont., Wyo., Colo.,

Nebr., Utah, N. Mex., Wash., and Ore., 1926-29; Chf. Geologist, Mountain Fuel Supply Co., Rock Springs, Wyo., 1929-45; Vice-Pres., *ibid.*, 1941-51; Vice-Pres. and Dir. in Chg. of Exploration, Production and Transmission, *ibid.*, 1945-51; Pres., *ibid.*, 1951—. Hon. Pos.: Trustee, Memorial Hosp. of Sweetwater Co., Rock Springs, Wyo.; Mem., Bd. of Governors, C. of C. of Salt Lake City, Utah; Vice-Pres., *ibid.*; Chmn., Community Chest of Salt Lake Co.; Dir., *ibid.*; Dir., Advisory Com., First Security Corp. of Utah; Dir., *ibid.*; Dir., The Alta Club, Salt Lake City, Utah. Mem.: Fellow, A.A.A.S.; Life Mem., Amer. Assn. Petroleum Geologists; Amer. Gas Assn.; Fellow, Amer. Geographical Soc.; Fellow, Amer. Geophysical Union; Life Fellow, Geol. Soc. Amer.; Amer. Inst. Mining and Metallurgical Engrs.; Amer. Petroleum Inst.; Dir., Independent Petroleum Assn. of Amer.; Phi Kappa Psi; 32° Mason; Scottish Rite; Shrine; Amer. Legion; Elks; Rotary Internatl. Contrb. to: Bull. Amer. Assn. Petroleum Geologists; Amer. Inst. Mining and Metallurgical Engrs. War Record; Lieut., U. S. Army, 1919. Special Int.: Rocky Mountain Area.

NIGRELLI, Ross F., N. Y. Zoological Soc., N. Y. City. **PROTOZOOLOGY.**

NIKIFOROFF, Constantin C., Soil Scientist, U. S. D. A., Washington, D. C. **SOIL SCIENCE.**

NILES, Doris K., P. O. Box 166, Loleta, Calif. **BOTANY.**

NILSON, Hugo Waldemar, Chemist, U. S. Fish and Wildlife Service, College Park, Md. **CHEMISTRY.**

NIMS, Leslie Frederick, Chmn., Biol. Dept., Brookhaven Natl. Lab., Upton, L. I., N. Y. **PHYSICAL CHEMISTRY.**

NININGER, Harvey Harlow, Dir., Amer. Meteorite Lab., P. O. Box 1171, Winslow, Ariz. **METEORITICS.**

NITZ, Otto William, Assoc. Prof. Sci. and Math., The Stout Inst., Menomonie, Wis. **ORGANIC CHEMISTRY.** b. June 25, 1905, Sigourney, Ia. s. Julius and Emma (Bruns) N. Edn.: B.S., Elmhurst Coll., 1929; M.S., Univ. Ia., 1933; Ph.D., *ibid.*, 1936. m. Olive Gass, April 13, 1936. d. Emmett and Lena Gass, Polo, Mo. Exp.: Instr. Chem. and Math., Elmhurst Coll., 1929-32; Prof. Chem., Parson Coll., 1936-40; Prof. Chem., Northern Mont. Coll., 1940-51; Chf. Chemist, Ky. Synthetic Rubber Corp., Louisville, Ky., 1951-52; Assoc. Prof. Sci. and Math., The Stout Inst.,



Menomonie, Wis., 1952—. Mem.: A.C.S.; A.A.A.S.; A.A.U.P.; N.E.A.; Wis. Edn. Assn.; Sigma Xi; Phi

Lambda Upsilon; Phi Kappa Phi; Mason. Ph.D. Dissertation: Effect of Substituents on Vanillic Acid Derivatives. Travel; U. S.; Can. Hobbies: Photography; Woodworking; Hunting; Fishing. Listed in: A.M.S.

NISSEN, Henry W., Asst. Dir., Yerkes Labs. Primate Biol., Orange Park, Fla. **COMPARATIVE PSYCHOLOGY.**

NITARDY, Ferdinand William, retired, 176 Columbia Hgts., Brooklyn, N. Y. **PHARMACEUTICAL, CHEMICAL MANUFACTURING.**

NOBLE, Charles Albert, Prof. Emer. Math., Univ. of Calif., 2224 Piedmont Ave., Berkeley, Calif. **MATHEMATICS.**

NOBLE, Clarence Vernon, Agri. Economist and Hd., Dept. of Agri. Econ., Univ. of Fla., Gainesville, Fla. **AGRICULTURAL ECONOMICS.**

NOBLE, Elmer R., Prof. of Zool., and Dean, Div. of Lib. Arts, Univ. of Calif., Santa Barbara Coll., Santa Barbara, Calif. **ZOOLOGY.** b. Pyeng Yang, Korea, Jan. 16, 1909. s. Wm. Arthur and Mattie (Wilcox) N. Edn.: A.B., Univ. of Calif., 1931; M.A., *ibid.*, 1933; Ph.D., *ibid.*, 1936. m. Nancy Burnell of Santa Barbara, Calif., 1932. d. Mary Edna and Lewis M. Burnell. c.: Carolyn Burnell; Mary Elaine; Ellen Elisabeth; David Ray. Exp.: 1936-38, Instr. in Bio., Santa Barbara State Coll.; 1938-43, Asst. Prof., *ibid.*; 1943-48, Assoc. Prof., Univ. of Calif., Santa Barbara Coll.; 1948; Chmn., Dept. of Biol. Sci., *ibid.*, 1947-51; Dean, Division of Liberal Arts, *ibid.*, 1951—; Prof. of Zool., *ibid.*, Hon. Pos.: Dean, Div. of Liberal Arts, Univ. of Calif. Mem.: Amer. Soc. of Zoologists; Amer. Soc. Parasitol.; A.A.U.P.; Sigma Xi. Author: Many Articles in the Field of Parasitology. Contrb. to: Jour. Parasitol.; Quart. Rev. Biol.; and others. Ph.D. Dissertation: The Life Cycle of *Zygossoma Globosum* Sp. Nov. A Gregarine Parasite of *Urechis Caupo*. Travel: Japan; Korea; Orient; Near East; Europe; England. Hobbies: Music; Fishing. Listed in: A.M.S.; Who Knows—and What. Special Int.: Life Cycles of Protozoan Parasites.

NOBLE, Glenn A., Calif. Poly. Inst., San Luis Obispo, Calif. **ZOOLOGY.**

NOBLE, Isabel Tilton, Prof. of Home Econ., Univ. of Minn., St. Paul, Minn. **HOME ECONOMICS.**

NOBLE, James Alexander, Div. Geol. Sci., Calif. Inst. of Tech., Pasadena, Calif. **MINING GEOLOGY.**

NOBLE, Levi F., Sr., Geologist, U. S. Geol. Survey, Washington, D. C. **GEOLOGY.**

NOBLE, William Bernard, Entomologist in Chg. Field Sta., U. S. Bureau Entomol. and Plant Quarantine, P. O. Box 1857, Sacramento, Calif. **ENTOMOLOGY.**

NOGGLE, Glenn Ray, Asst. Prof. of Plant Physiol., Univ. of Va., Charlottesville, Va. **BOTANY.**

NOLAN, Thomas Brennan, Geol. Survey, U. S. Dept. of the Interior, Washington 25, D. C. **GEOLOGY.**

NOLAND, Lowell Evan, Prof. of Zool., Biol. Bldg., Univ. of Wis., Madison, Wis. **INVERTEBRATE ZOOLOGY.**

NOLANEL, L. E., Dept. of Zool., Univ. of Wis., Madison, Wis. **PROTOZOOLOGY.**

NOLD, Harry Ellsworth, Prof. of Mine Engrng., Ohio State Univ., Columbus, Ohio. **MINING ENGINEERING.**

NOLL, Charles Joseph, Asst. Prof. of Horticulture, Pa. State Coll., State Coll., Pa. **CHEMICAL WEED CONTROL IN VEGETABLES: VEGETABLE VARIETY TRIALS.** b. State Coll., Pa., Nov. 22, 1913. s. Charles F. and Nora N. (Crilly) N. Edn.: B.S., Pa. State Coll., 1935; M.S., *ibid.*, 1941. m. Ernestine Nixon, Aug. 3, 1946. c.: Joseph Nixon. Exp.: Salesman, Chem. Co., 1935-40; Grad. Work, Penn.

State, State Coll., Pa., 1940-42; Asst. Prof., *ibid.*, 1946—. Mem.: Amer. Soc. of Hort. Sci.; Sigma Xi; Gamma Sigma Delta; Chi Phi. Contbr. to: Proc., Northeastern Weed Control Conf.; Proc. Amer. Soc. for Hort. Sci. War Record: U.S.A.F., 1942-46. Special Int.: Vegetable Weed Control; Vegetable Varieties.

NOLLER, Carl Robert, Prof. of Chem., Stanford Univ., Stanford, Calif. **ORGANIC CHEMISTRY.**

NORD, Friedrich Franz, Dept. of Organic Chem., Fordham Univ., N. Y., N. Y. **ORGANIC AND BIOCHEMISTRY.**

NORDBY, Julius Edward, Dir., Western Sheep Breeding Lab. and U. S. Sheep Expt. Sta., Dubois, Idaho. **ANIMAL GENETICS.**

NORDHEIM, Lothar Wolfgang, Prof. of Physics, Duke Univ., Durham, N. C. **THEORETICAL PHYSICS.** b. Munich, Germany, Nov. 7, 1899. s. Moritz and Anna (Tandler) N. Edn.: Ph.D., Univ. of Goettingen, Germany, 1923. Hon. Deg.: D.Sc., Karlsruhe Inst. of Tech., 1951. m. Gertrud Poeschl (dec.), Feb. 12, 1935. c.: Erik Vincent. Exp.: Asst. to David Hilbert, Univ. of Goettingen, Germany, 1922-27; Internatl. Edn. Bd. Fellow, Cambridge, England, Copenhagen, Denmark, 1927-28; Lectr., Univ. of Goettingen, 1928-33; Visiting Prof., Ohio State Univ., 1930; Visiting Prof., Univ. of Moscow, Russia, 1932; Rsch. Assoc., Institut H. Poincaré, 1933-34; H. A. Lorentz Fellow, Haarlem, Holland, 1934; Visiting Prof., Purdue Univ., 1935-37; Prof. of Physics, Duke Univ., Durham, N. C., 1937—; Principal Physicist and Dir. of Physics Dir., Clinton Laboratories (now the Oak Ridge Natl. Lab.), Oak Ridge, Tenn., 1943-47; Consultant for Los Alamos Scientific Lab., Los Alamos, N. Mex., 1950-52 (on leave from Duke Univ.). Mem.: Fellow, Amer. Physical Soc.; A.A.A.S.; Sigma Xi. Contbr. to: Physical Rev.; Rev. Modern Phys.; etc. Special Int.: Atomic Energy Problems; Structure of Matter, Nuclear and High Energy Physics.

NOREM, Bert H., Prof., Engrng. Campus, Syracuse Univ., E. Syracuse 4, N. Y. **ENGINEERING.** b. Feb. 12, 1913, Roland, Iowa. s. Iver and Elva (M) N. Edn.: B.S., State Univ. of Iowa, 1936; M.S., *ibid.*, 1939. m. Helen Byerly of Waterloo, Iowa, June 12, 1937. d. Mr. and Mrs. C. M. Byerly. Exp.: Prof. of Industrial Engrng., 1952—; Chmn. of Dept. of Industrial Engrng., 1952; Fulbright Lectr. on Industrial Engrng. and Scientific Management at the Technical Univ. of Denmark, 1953; Assoc. Prof., Syracuse Univ., 1948-52; Asst. Prof., *ibid.*, 1946-48; Asst. Prof., *ibid.*, 1943-44. Mem.: Amer. Mgt. Assn.; Amer. Soc. of Mech. Engrs.; Amer. Inst. of Indust. Engrs., etc.; Alpha Pi Mu; Sigma Xi; Pi Tau Sigma. Special Int.: Motion and Time Study, Methods Engineering, and Plant Layout.

NORGORDEN, Oscar, 166 Chesapeake St., N. W., Washington, D. C. **PHYSICS.**

NORLIE, Olaf Morgan, Archivist and Classifier, St. Olaf Coll., Northfield, Minn., 1941—. Home: 818



Forest Ave. **PSYCHOLOGY: STATISTICS.** s. Ole Halvorson and Martha Karoline (Juel) N. b. Sioux City, Ia., Jan. 11, 1876. Edn.: Grad., Augustana Coll., S. D., 1893; B.S., and M.Accts., Dixon Coll., Ill., 1897; A.B., St. Olaf Coll., 1898; Grad. Milwaukee Nor., 1899; M. A., Univ. of Wis., 1901; C. T., United Ch. Sem., Minn., 1907; Ph.D., Univ. of Minn., 1908; Pd.D., Dixon Coll., Ill., 1910; C.S.T., 1915; and S.T.D., 1917, Augustana Sem., Ill.; Litt.D. (Hon.) Wittenberg Coll., Ohio,

1917; Mus. D. (Hon.) Chicago Coll. of Mus., 1932. m. Anna Louise Bonhus of Aspelund, Minn., Aug. 27, 1902. c.: Erma Louise Lee (adopted), Joseph Sigurd, Kenneth Luther, Otelia Gabriella, Agnes

Marie, Hildegard Camilla Dagney. Exp.: Laborer, 1889-95; Tchr. and Supt. in H. S.'s and Acads. of S. D., Ia., Wis., and Minn., 1895-1907; Pastor, Norwegian Lutheran Ch., Atwater, Minn., 1907-15; Book Editor, Augsburg Pub. House, Minneapolis, Minn., 1915-19; Prof. of Psychol. and Biol., Luther Coll., Decorah, Ia., 1919-28; Dean, Hartwick Coll. and Prof. of Relig. and Philos., 1928-32; Dir. of Grad. Schl., Hartwick Seminary, Brooklyn, 1932-33; Prof. of Psychol., Luther Coll., 1933-41. Hon. Pos.: Pres., Amer. Lutheran Statistical Assn., 1917-32; Hon. Pres. for Life, *ibid.*, 1932—; Editor, Lutheran World Almanac and Annual Encyclopedia, 1920-40; Secretary, Sloopers Soc. of Amer., 1926-43. Mem.: Amer. Library Assn.; Fellow, A.A.A.S.; Fellow, Amer. Geog. Soc.; Fellow, Inst. of Biographical Rsch.; Fellow Iowa Acad. of Sci.; Amer. Math. Soc.; Amer. Philol. Assn.; Amer. Psychological Assn.; Midwestern Psychol. Assn.; Minn. Psychol. Assn.; Amer. Statistical Assn.; A.A.U.P.; Psychol. Assn.; Minn. Psychol. Assn.; Amer. Statistical Assn.; Amer. Assn. of Univ. Profs.; Nordmannsforbundet; Namdalslaget; Amer. Religious Stat. Congress; Gamma Mu; Rotary. Author: Elem. Christian Psychol., 1924; The Open Bible, 1918; The Outlined Bible, 1928; The Translated Bible, 1934; Luther Translates the Bible, 1934; The Bible in 1000 Tongues, 1935; St. John in Modern English, 1943; The New Testament in Modern English, 1951. Contbr. to: History of the Norwegian People in Amer.; Christian Cynosure; Classical Weekly; Congressional Record; Jour. of Natl. Assn. of Biblical Instr. Gen. Int.: Has Invented a Scientific Alphabet and a Lib. Classification; Published 60,000 Pages in Book Form; Written a Book Review a Week for 50 Years. All Published; Has Compiled Who's Who of Pastors, Tchr., Congregations in Norwegian Lutheran Synods, Special Int.: Has Taught Exptl. Psychol. from a Dualistic View-Point; Psychol., Statistics; Collected Norwegian-Amer. Pamphlets and Books, some 50,000, Dealing with Norwegian-Amer., by and about them; Main Collection is at St. Olaf Coll.; Has Collected Scriptures in over 600 Languages, at St. Olaf Coll. Library; Has worked for the National Lutheran Council 25 years, and edited their World Almanacs; Has Made about 1000 Surveys, Mainly dealing with Edn. and Religion.

NORRIS, George William, Dimock, Pa. **INTERNAL MEDICINE.**

NORRIS, Leo Chandler, Prof. of Nutrition, Cornell Univ., Ithaca, N. Y. **NUTRITION, BIOCHEMISTRY.**

NORRIS, Will Victor, Prof. of Physics and Supvng. Engr., Univ. of Ore., Eugene, Ore. **PHYSICS.**

NORRIS, William Elmore, Prof. and Chmn. Dept. of Biol., Southwest Tex. State Tchrs. Coll., San Marcos, Tex. **PHYSIOLOGY, BIOPHYSICS, BIOCHEMISTRY.** b. Nixon, Tex., Feb. 23, 1921. s. William Elmore, and Persia A. (Kiser) N. Edn.: B.S., Southwest Tex. St. Tchrs. Coll., 1940; Ph.D., Univ. of Tex., 1948. m. Theresa M. Margerum, Oct. 7, 1944. c.: Thomas Elmore; Susan Elizabeth. Exp.: Instr., Univ. of Tex., Austin, Tex., 1946-47; Inst. Bryn Mawr Coll., Bryn Mawr, Pa., 1947-48; Asst. Prof., *ibid.*, 1948-49; Assoc. Prof., *ibid.*, 1949-52; Prof. and Chmn. of Dept., *ibid.*, 1952—; Southwest Tex. St. Tchrs. Coll., San Marcos, Tex., 1949—. Mem.: Sigma Xi; A.A.A.S.; Amer. Soc. of Plant Physiologists; Tex. Acad. of Sci.; Amer. Inst. of Biological Sci.; Alpha Chi; A.A.U.P. Contbr. to: Biochimica et Biophysica Acta; Plant Physiol.; Jour. Cell. Comp. Physiol.; Tex. Jour. Sci. Special Int.: Plant Root Respiration; Gen. Physiol.; Continuous Bioelectric Currents; Biochemistry.

NORTH, Horace, retired, 127 Pelton Ave., Staten Island 10, N. Y. **ESSENTIAL OILS.** b. Hartford, Conn., July 8, 1884. s. Dwight and Sadie (Daniels) N. m. Faith Bolles, Aug. 31, 1910. c.: Barbara, Helen, Ada, Elizabeth. Exp.: Formerly Chf. Control Chem., Dodge and Olcott, Inc., Bayonne, N. J. Mem.: Amer. Chem. Soc.; Fellow, A.A.A.S.; Fellow, Amer. Geographical Soc.

NORTEN, Henry T., Assoc. Prof. of Botany, Univ. of Wyo., Laramie, Wyo. **PLANT PHYSIOLOGY.**

NORTHROP, Filmer Stuart Cuckow, Prof. of Philos. and Master Silliman Coll., Yale Univ., New Haven, Conn. **PHILOSOPHY OF SCIENCE.**

NORTHROP, John DeWolf, Asst. Chf., Conservation Branch, Dept. of Interior, U. S. Geol. Survey, Washington, D. C. **ECONOMIC GEOLOGY.**

NORTHROP, John Howard, Univ. of Calif., Berkeley 4, Calif.

NORTON, Arthur Orlo, Prof. Emer., Wellesley Coll., 85 Crest Rd., Wellesley, Mass. **EDUCATION.**

NORTON, Frederick H., Dept. of Metallurgy, Div. of Ceramics, Mass. Inst. of Tech., Cambridge 39, Mass. **CERAMICS.**

NORTON, Horace W., Atomic Energy Commission, **BIOMETRY.**

NORTON, John Bitting Smith, Prof. Emer. Botany, Univ. of Md., College Park, Md.: 4922 40th Pl., Hyattsville, Md. **PLANT BREEDING AND TAXONOMY.**

NORTON, John Foote, Hd., Dept. Bacteriol. Rsch., The Upjohn Co., Kalamazoo, Mich. **BACTERIOLOGY.**

NORTON, Kenneth Alva, Chf. Frequency Utilization Rsch. Section, Central Radio Propagation Lab., Natl. Bureau of Standards, 4623 Kenmore Dr., N. W., Washington, D. C. **RADIO PROPAGATION.**

NORTON, Leland B., Dept. of Entomol., Cornell Univ., Ithaca, N. Y. **INSECT TOXICOLOGY.**

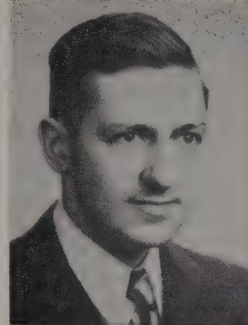
NOTESTEIN, Frank W., Consultant, Chf. Population Div., United Nations, Prof. of Demography and Dir., Office Population Rsch., Princeton Univ., Kingston Rd., Princeton, N. J. **DEMOGRAPHY.**

NOTMAN, Arthur, Consulting Engr., 40 Wall St., N. Y., N. Y. **GEOLOGY.**

NOVAK, Arthur Francis, Hd. of Biol. Rsch., Nutrilite Products, Inc., 8171 E. Fourth St., Buena Park, Calif. **MICROBIOLOGY; NUTRITION.** b. Baltimore, Md., Oct. 25, 1917. s. Frank and Anna N. Edn.: B.S., Univ. of Md., 1937; M.S., Univ. of Ala., 1940; Ph.D., Purdue Univ., 1947. m. Mary Francis Miller of W. Lafayette, Ind., 1946. d. Dr. and Mrs. Lloyd Miller. Exp.: Suprv. of Fermentation, Calvert Distilling Co., Baltimore, Md., 1940-42; Rsch. and Development Dept., Jos. E. Seagram and Sons, Inc., Louisville, Ky., 1942-44; Seagram Rsch. Fellow, Purdue Univ., 1944-47; Asst. Prof., Univ. of Fla., 1947-49; Assoc. Prof., ibid., 1950-51; Hd. of Biol. Rsch., Nutrilite Products, Inc., Buena Park, Calif., 1951—. Hon. Pos.: Pres., Bd. of Dirs., Fla. Alpha, Sigma Phi Epsilon; Faculty Advisor, Univ. of Fla. White Friars; Chmn., Nomination Comm., S. E. Sect. of Soc. of Amer. Bact. Mem.: Soc. of Amer. Bacteriol.; A.C.S.; A.A.A.S.; Amer. Pharm. Assn.; Ky. Acad. of Sci.; A.A.U.P.; Sigma Phi Epsilon; Sigma Xi; Rho Chi; Phi Sigma; Inst. of Food Tech.; Gamma Sigma Epsilon; Newman Club; C. of C.; Knights of Columbus. Author: The Production of Food Concentrates from Distillery Residues. Contrb. to: Poultry Sci.; Jour. Bacteriol.; Jour. Biochem. Ph.D. Dissertation: A study of the Chemical and Biological Properties of an Unidentified Growth Factor in Fermentation Solubles. Travel: U. S.; Canada; Mexico; Europe; S. Amer. Hobbies: Coaching Amateur Baseball and Basketball Teams; Music; Cartooning. Listed in: A.M.S. Special Int.: Vitamins; Amino Acids; Pharmaceuticals; Chemurgy.



NOVAK, Benjamin Joseph, Related Sci. Instr., Murrell Dobbins Voc. Tech. Schl., and Lectr. in Seed. Edn., Temple Univ., Phila., Pa. **BIOLOGY.** b. July 2, 1915, Phila., Pa. s. Benjamin and Mary Nedbal (Urbank) N. Edn.: B.S., Edn., Temple Univ., 1936; M. Ed., ibid., 1937; Ed.D., ibid., 1942. Exp.: Coun., Instr., Related Sci., Related Math., Murrell Dobbins Voc. Tech. Schl., Phila., Pa., 1938; Stoddard Jr. H. S., Phila., Pa., Instr. in Gen. Sci., 1939; Murrell Dobbins Voc. Schl., Phila., Pa., Rsch. Instr. in Related Sci., 1940—; Chmn. Sci. Dept., 1952—; Lectr. in Seed. Edn., Temple Univ., 1949—; Murrell Dobbins Voc. Tech. Schl., Track Coach, 1945-47; 1947-48 summers; Suprv. of Grad. Rsch. in Voc. Edn., Colo. A. and M. Coll.; Lectr. in Occupations, Univ. of Pa., 1948; W. Va. Univ., Lectr. in Guid., Summer, 1949, Syracuse Univ., summer, 1951, Ore. State System of Higher Edn., Portland Extension Center, summer, 1952; Duke Univ., Summer, 1950; Curr. Bull. Com. in Indus. Edn. for Pa., 1950; Inspector of On-the-Job Training Facilities for Veterans in Pa., 1946-47. Mem.: Phi Delta Kappa; Iota Lambda Sigma; Amer. Vocational Assn.; Natl. Voc. Guid. Assn.; N.E.A.; Amer. Ednl. Rsch. Assn.; Natl. Assn. Indus. Tehr. Trainers; Natl. Sci. Tchrs. Assn.; First Vice-Pres., Voc. Guid. Assn. of Phila. and Vicinity, 1950-52. Assoc. author of Text: Veterinary Dermatology, Publ. 1953, J. B. Lippincott. Contrb. to: Schl. Rev.; Edn.; Schl. Sci. and Math.; Amer. Schl. Bd. Jour.; Indus. Arts and Voc. Edn.; Jour. of Edn.; Amer. Teacher, Educational Record; Nation's Schls.; Ednl. Admin. and Supvn.; Jour. of Health and Physical Edn.; Agri Edn. Mag.; The Voc. Aspect of Seed. and Further Edn. (British Periodical); Phi Delta Kappan; Amer. Voc. Jour. Ed.D. Dissertation: An Analysis of Sci. Content of N. Y. Times and Selected Gen. Sci. Textbooks. Hobbies: Music; Handicrafts; Photography; Botany.



NOVAK, Emil, 26 E. Preston St., Baltimore, Md. **GYNECOLOGY.**

NOVAK, Milan, Prof. and Hd., Dept. of Bacteriol. and Public Health, Univ. of Ill. Coll. of Med., Chicago, Ill. **BACTERIOLOGY, PUBLIC HEALTH.**

NOVITSKI, Edward, Assoc. Prof. of Zoology, Univ. of Mo., Columbia, Mo. **GENETICS.** b. Wilkes-Barre, Pa., July 24, 1918. s. Edward and Mary (Kalita) N. Edn.: B.S., Purdue Univ., 1938; Ph.D., Calif. Inst. of Tech., 1942. m. Esther Rudkin. April 20, 1943. c.: Charles Edward; Barbara Jo; Paul David. Exp.: Fellow, Guggenheim Memorial Foundation, 1946-47; Rsch. Assoc., Atomic Energy Project, Univ. of Rochester, Rochester, N. Y., 1947; Rsch. Assoc., Univ. of Mo., Columbia, Mo., 1947-48; Sr. Rsch. Fellow, Calif. Inst. of Tech., Pasadena, Calif., 1948-51; Assoc. Prof. of Zoology, Univ. of Mo., Columbia, Mo., 1951—. Mem.: Genetics Soc. of Amer.; Soc. for Experimental Biology and Med.; Sigma Xi. Contrb. to: Genetics; Proceedings of the National Acad. of Sci.; Amer. Naturalists; Sci.; Biological Bull.; Jour. of Experimental Biol. Special Int.: Genetics of Drosophila, Analysis of Meiotic Phenomena, Chromosome Structure.

NOYES, Bradford, Consulting Work, 4087 N. Illinois St., Indianapolis, Ind. **PHYSICS.**

NOYES, Frederick Bogue, Dean Emer., Coll. of Dentistry, Univ. of Ill.; 621 Park Pl., Park Ridge, Ill. **ORTHODONTICS.**

NOYES, Harold Judd, Dean and Prof. of Dentistry, Univ. of Ore. Dental Schl., Portland, Ore. **DENTISTRY.**

NOYES, Helen Miller, Carthage, Ill. **CHEMISTRY, MEDICAL SCIENCES.**

NOYES, William Albert, Prof. of Chem., Chmn., Dept. of Chem., Dean of Grad. Schl., Univ. of Rochester, Rochester 3, N. Y. ELECTRO AND PHOTOCHEMISTRY, REACTION KINETICS.



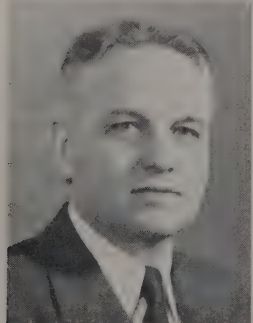
b. Terre Haute, Ind., Apr. 18, 1898. s. William Albert and Flora Elizabeth (Collier) N. Edn.: A.B., Grinnell Coll., 1919; D.Sc., Univ. of Paris, 1920. Hon. Deg.: D.Sc., Grinnell Coll., 1946; Kings Medal for Service in Cause of Freedom; Medal for Merit, m. Sabine Onillon, June 10, 1921. c.: Claude Charles. Exp.: Instr., Univ. of Calif., Berkeley, Calif., 1921; Instr., Univ. of Chicago, Chicago, Ill., 1922; Asst. Prof., ibid., 1923-29; Assoc. Prof., Brown Univ., Providence, R. I., 1929-35; Prof., ibid., 1935-38; Prof., Univ. of Rochester, Rochester, N. Y., 1938—; Chmn., Dept. of Chem., ibid., 1939—; Dean of Grad. Schl., ibid., 1952—. Hon. Pos.: Chmn., Div. of Chem. and Chem. Tech., Natl. Rsch. Council, 1947-53; Pres., Amer. Chem. Soc., 1947. Mem.: Natl. Acad. of Sci.; A.A.A.S.; Amer. Phil. Soc.; Amer. Chem. Soc.; Amer. Phys. Soc.; Alpha Chi Sigma; Sigma Xi; Sigma Alpha Epsilon; Phi Beta Kappa. Author: Modern Alchemy, with W. A. Noyes, Sr., 1932; Photochem. of Gases, with P. A. Leighton, 1941; Traite de Chimie Physique, with H. Weiss, 1925; Spectroscopie et les Reactions Initiees par la Lumiere, 1938. Contrb. to: Over 100 Scientific Articles, Five Books. War Record: 2nd Lt., Signal Corps, U. S. Army, W. W. I.; Div. Chmn. O.S.R.D., 1942-46; Staff, Chief Chem. Warfare Service, 1942-46. Special Inst.: Photochem. and Reaction Kinetics.

NUCKOLS, Samuel Benton, Agronomist, Sugar Plant Investigations, U. S. D. A., Omaha, Nebr. AGRICULTURE.

NUESSE, C. J., Dean of Social Sci., Catholic Univ. of Amer., Washington, D. C. SOCIOLOGY OF THE PARISH.

NUGENT, Robert Logan, Prof. of Chem. and Dean Coll. of Liberal Arts, Univ. of Ariz., Tucson, Ariz. COLLOID CHEMISTRY.

NUNGESTER, Walter J., Prof. and Chmn. Dept. of Bacteriol., Univ. of Mich., Ann Arbor, Mich. MEDICAL MICROBIOLOGY.



b. Lima, Ohio, Feb. 22, 1901. s. William and Margery (Woodworth) N. Edn.: B.S., Mich., 1923; M.S., ibid., 1924; Sc.D., ibid., 1928; M.D., Northwestern, 1934. m. Lucille Roush of Lima, Ohio, Sept., 1924. c.: Margery Patricia; Nancy Ann. Exp.: Instr., Northwestern Univ. Med. Schl., 1926-33; Asst. Prof., ibid., 1933-35; Assoc. Prof., Univ. of Mich. Med. Schl., 1935-47; Prof., ibid., 1947—; Chmn. of Dept., 1952—. Hon. Pos.: Pres., Soc. of Amer. Bacteriol., 1951; Chmn., Panel on Microbiol., O.N.R., U.S.N., 1948-

53; Program Chmn., Soc. Amer. Bacteriologists. Mem.: A.A.A.S.; Assn. Pathologists and Bacteriologists; Sigma Xi; Phi Lambda Upsilon. Contrb. to: Jour. Infectious Diseases; Proc. Soc. Exper. Biol. and Med.; Bacteriol. Reviews. Ph.D. Dissertation: Dissociation of B. Anthracis. Hobby: Gardening. Listed in: A.M.S.; Who's Who in Amer.; Who's Who in Med.; Who's Who in Central States. Special Int.: Infection and Resistance; Immunology.

NURNBERGER, Carl E., Consulting Radiation Physicist and Biophysicist, St. Mary's Hosp., and Wayne Univ. Coll. of Med., Detroit, Mich. MEDICAL PHYSICS.

NUSBAUM, Jesse Logan, Sr. Archaeologist, Natl. Park Service and Consulting Archaeologist, Dept. of Interior, Region 3, P. O. Box 1728, Santa Fe, N. Mex. ARCHAEOLOGY.

NUSIM, Melach Joseph, Consulting Engr., Roost-Connersville Blower Corp., Connersville, Ind. MECHANICAL ENGINEERING.

NUTTING, Perley Gilman, U. S. Geol. Survey, retired, 3216 Oliver St., N. W., Washington, D. C. GEOPHYSICS.

NUTTYCOMBE, John William, Prof. of Zool., Univ. of Ga., Athens, Ga. INVERTEBRATE ZOOLOGY.

NYBOER, Jan, Meriden, N. H. CARDIOLOGY.

NYE, Arthur Wickes, Prof. of Physics, Univ. of Southern Calif., Los Angeles, Calif. PHYSICS.

NYQUIST, H., 29 Marion Ave., Millburn, N. J. PHYSICS.

NYSTROM, Paul H., Prof. of Marketing, Emer. Grad. Schl. of Bus., Columbia Univ., Pres. Limited Price Variety Stores Assn., N. Y., Box 88, Spring Valley, N. Y. MARKETING. b. Maiden Rock, Wis., Jan 25, 1878. m. Mildred C. Chicker, Bay City, Wis., Aug. 27, 1903. c.: Marden R., Birna G., Lucile, Edn.: Ph.B., Univ. of Wis., 1909; Ph. M., ibid., 1910; Ph.D., ibid., 1914. Hon. Deg.: LL.D., Ohio State Univ., 1950. Exp.: Tehr. in Country Schls., Prin. in Grades and H. S. in Wis., 1897-1908; 1st Rep., Univ. Ext., Univ. of Wis., 1909-12; Asst. Prof. of Polit. Econ., 1912-14; Assoc. Prof. of Econ., Univ. of Minn., 1914-15; Dir., Trade Rsch., U. S. Rubber Co., N. Y. City, 1915-17; Sales Mgr., Internatl. Mag. Co., N. Y. City, 1917-21; Dir. of Retail Rsch. Assn., and Assn. Merchan. Corp., 1921-27; Prof. of Mktg., Columbia, 1926-50; Pres., Ltd. Price Variety Stores Assn., 1933—; Vice-Chmn. and Chmn., Natl. Retail Code Authority, 1933-35; Chmn., Central Coun. of Natl. Retail Assn., 1942—. Mem.: Fed. Adv. Bd. for Voc. Edn., 1936-46 (Chmn., 1937-39, 1944-46); Pres., N. Y. Sales Exec. Club, 1937-38, 1939-45, and Chmn., Bd. of Dir., 1945-46; Vice-Pres., Amer. Voc. Assn., Inc., 1939-45; Amer. Econ. Assn.; Amer. Sociol. Soc.; Amer. Mktg. Soc. (Pres., 1933-34); Amer. Management Assn.; Soc. for the Adv. of Management; Eta Mu Pi; Beta Gamma Sigma. Ph.D. Dissertation: Econs. of Retailing. Author: Econs. of Retailing (3rd Ed.), 1932; Econs. of Fashion, 1928; Economics of Consumption, 1929; Fashion Merchan., 1932; Elements of Retail Selling, 1936; Retail Store Operation, 1937, Rsch. Studies for Private Companies. Editor of Mktg. Handbook, 1947. Special Int.: Marketing at Consumer Levels.

NYSTROM, Wendell C., Dean, Wittenberg Coll., Springfield, Ohio. EDUCATION.

NYSWARDER, Dorothy B., Schl. of Public Health, Univ. of Calif., Berkeley 5, Calif. PUBLIC HEALTH EDUCATION.

OAKLEY, W. W., Box 85, Corning, N. Y. CERAM-
ICS.

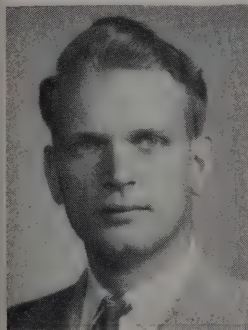
O'BANNON, Loran Shellive, Consultant, Div. of Ceramic Rsch., Battelle Mem. Inst., 505 King Ave., Columbus 1, Ohio. CERAMICS (PORCELAIN ENAMELS). b. Dec. 7, 1910, Elizabeth, Ind. s. Maurice Neville and Gertrude (Russell) O. Edn.: A.B., Ind. Univ., 1932; M.S., Univ. of Louisville, 1934. m. Marie Huff, June 15, 1933. c.: Judith Neville. Exp.: Process Cont. Engr., Porcelain-Enameling Div., Servel, Inc., Evansville, Ind., 1934-35; Chf. Ceramic Engr., and Hd. Process Cont. Div., Tenn. Enamel Mfg. Co., Nashville, Tenn., 1935-46; Rsch. Engr., Ferro Enamel Corp., Cleveland 5, Ohio, 1936-39; Plant Mgr., Liquid Plastics Div., ibid., 1940-41; Hd. of Lab., Ferro Drier and Chem. Div., ibid., 1941-42; Consultant and Asst. Supvr., Ceramic Rsch., Battelle Mem. Inst., 1942—. Mem.: Amer. Ceramic Soc.; Sigma Xi; Sci. Rsch. Soc. of Amer.; A.A.A.S.; Ohio Acad. of Sci.; Amer. Soc. for Testing Materials; 32° Mason; Sigma Pi; Soc. of Ind. Pioneers. Contrb. to: Jour. of Amer. Ceramic Soc.; Bull. of Amer. Ceramic Soc.; Ceramic Abstracts; Finish; Ceramic Indust.; The Enamelist; Better Enameling. Special Int.: Porcelain enamels and ceramic coatings for iron, steel, and other metals and alloys; raw materials and equipment, glass-to-metal seals, glass, whitewares and pottery, structural clay products, refractories, welding-rod coatings, abrasives and gen. ceramics.

OBEE, Donald J., Hd., Dept. of Biological Sci., Boise Jr. Coll., Boise, Idaho. BOTANY. b. Clio,



Mich., Jan. 23, 1912. s. Charles Walter and Lillian (Jennings) O. Edn.: A.A., Kansas City Univ., 1930; B.A., Univ. of Kans., 1932; M.A., ibid., 1934; Ph.D., ibid., 1942. m. Doli Shaw on Aug. 31, 1939. c.: Kent David; Enid Allison. Exp.: Ranger, Naturalist, Rocky Mtn. Natl. Park, Summers, 1935-46; Instr. of Biology, Cheyenne Mt. Schl., Colo. Springs, 1939-46; Prof. of Botany and Biology, Boise Jr. Coll., Boise, Idaho, 1946—. Mem.: Sigma Xi; Botanical Soc. of Amer.; Y.M.C.A. Author: Mammals of Rocky Mt. Natl. Park, 1945. Contrb. to: Trans. of the Kans. Acad. of Sci. Gen. Int.: Was Awarded the Silver Beaver Award by the Pikes Peak Council, B.S.A., 1945. Special Int.: Plant Pathology.

OBRECHT, Malvern Frank, Asst. Prof. of Chem. Engrng., Mich. State Coll., E. Lansing, Mich.



CHEMICAL ENGINEERING: WATER TREATMENT, POWER FIELD, HIGH PRESSURE EQUIPMENT AND CORROSION CONTROL. b. St. Louis, Mo., May 13, 1925. s. Arthur and Ida (Naumann) O. Edn.: B.S., Wash., Univ., 1945; M.S., Univ. of Detroit, 1947; Ph.D., Mich. State Coll. m. Elizabeth Ryman of Detroit, Mich., Mar. 5, 1949. d. Mr. and Mrs. G. O. Ryman. Exp.: Asst. Chem., St. Mary's Coll., 1942-43; Lab. Instr., Wash. Univ., 1943-45; Chem.

Rsch. and Development Engr., Orchard Paper Co., 1945-46; Technol. Fellowship, Univ. of Detroit, 1946; Instr., Chem. Engrng., and Chem., ibid., 1946-47; Lectr., ibid., Summer, 1947; Asst. Prof. of Chem. and Metall. Engrng., Mich. State Coll., 1947—; Adult Ext. Lectr. in Power Field, 1949—; Consultant in Power Field, Corrosion Control, Paper and Pulp Industry, Feedwater Treatment, Unit

Operations, rust preventives, cleaners, 1946—. Hon. Pos.: Sigma Xi; Past M.A. of Alpha Chi Sigma, Wash. Univ. Edn. Adviser to Mich. State Assn. of Power Engrs. Mem.: Amer. Inst. of Chem. Engrng.; A.C.S.; Amer. Inst. of Milit. Engrs.; Alpha Chi Sigma; Amer. Soc. Engrng. Edn.; Natl. Assn. of Power Engrs.; Engrng. Soc. of Detroit. Author: Engrng. Chem. of Power Plants and Ind. Water Treatment, 1949. Contrb. to: Natl. Assn. of Power Engrs. Ph.D. Dissertation: Flootation of Zinc Silicate. Travel: U. S.; Canada; Mexico. Hobbies: Hunting Fishing; Sports; Music Listed in: A.M.S.; Engrng. Soc. of Detroit. Special Int.: High Pressure Boilers, Cleaners and Rust Preventives.

OBENCHAIN, Jeanette B., 6040 Dorchester Ave. Jackson Pk., Chicago, Ill. MEDICAL SCIENCES ANTHROPOLOGY.

OBER, Frank Roberts, Prof. Emer., Harvard Med. Schl., 234 Marlborough St., Boston, Mass. ORTHOPEDICS.

OBERHOLSER, Harry Church, Mem., Bd. of Mgrs. and Curator of Ornithology, Cleveland Museum Natural History, 2933 Berkshire Rd., Cleveland Hgts., Cleveland, Ohio. ORNITHOLOGY.

OBERLE, George David, Va. Agri. Expt. Sta., Blacksburg, Va. POMOLOGY, PLANT BREEDING.

OBRESHKOVE, Vasil, Prof. of Biol., Bard Coll., Annandale-on-Hudson, N. Y. PHYSIOLOGY.

O'BRIEN, Albert, Librarian, St. Bonaventure Coll., St. Bonaventure, N. Y. PHILOSOPHY.

O'BRIEN, Brian, Rsch. Prof. of Physics and Optics, Univ. of Rochester, Rochester, N. Y. PHYSICS. OPTICS.

O'BRIEN, Sister Catharine Marie, Dean, Coll. of Mt. St. Vincent, N. Y., N. Y.

O'BRIEN, Gordon C., 1005 Confederation Bldg., Ottawa, Ont., Can. AGRICULTURE.

O'BRIEN, Morrrough P., Air Reduction Co., 60 E. 42nd St., N. Y., N. Y. ENGINEERING, PHYSICS.

O'BRYAN, Deric, Asst. Dir., Gila Pueblo Archaeological Foundation, Globe, Ariz. ARCHAEOLOGY.

OCFEMIA, G. O., Prof. of Plant Pathol. and Hd. Dept., Coll. of Agri., Univ. of Philippines, Los



Baños, Philippines. VIRUS DISEASES OF ABACA, OR MANILA HEMP, AND SUGAR CANE. b. Guinobatan, Albay, Philippines, Apr. 23, 1891. s. Rufo and Junana (Offimaria) O. Edn.: B.Agr., Univ. of Philippines, 1915; M.S., ibid., 1920; Ph.D., Univ. of Wis., 1923. m. Epifania San Valentin, Oct. 1, 1923. c.: Rufo Honorio; Norma; Wenefrida; Fe; Epifania. Exp.: Asst. in Agron., Coll. of Agri., Los Baños, Philippines, 1915-17; Asst. in Plant Physiol., ibid., 1917-18;

Asst. in Plant Pathol., ibid., 1918-20; Instr. in Plant Pathol., ibid., 1920; Asst. Prof. of Plant Pathol., ibid., 1924-32; Assoc. Prof. of Plant Pathol., ibid., 1932-45; Prof. of Plant Pathol., ibid., 1945—; Acting Hd. of Dept., ibid., 1928-33; Hd. of Dept., ibid., 1933—. Hon. Pos.: Fellow, Univ. of Philippines at Univ. of Wis., 1920-23; Mem., Comm. of Cane Diseases, 6th Internatl. Soc. of Sugar Cane Tech., Baton Rouge, La., 1938; Delegate, 6th Pacific Sci. Congress, San Francisco, Berkeley and Stanford Univ., 1939; Mem., Standing Comm. on Nomenclature of Cane Diseases of the World, Internatl. Soc. of Sugar Cane Tech., 1951—. Mem.: Fellow, A.A.A.S.; Amer. Phytopathol. Soc.; Botanical Soc. of Amer.; Sigma Xi; Phi Kappa Phi;

Charter Mem., Soc. on Adv. of Rsch.; Charter Mem., Natl. Rsch. Coun. of Philippines; Chmn., Sect. of Plant Pathol. and Mycol. of N.R.C.P.; Los Baños Biol. Club. Contbr. to: Phytopathol.; Amer. Jour. of Botany; The Philippine Agriculturist, Mng. Editor, 1938-41; 1947—. Special Int.: Basic Rsch. Work on Abaca Mosaic Furnished the Philippine Govt. with Guide for Adopting Methods of Control in Mindanao.

OCHOA, Severo, Dept. of Pharmacol., N. Y. Univ. Coll. of Med., N. Y., N. Y. **BIOCHEMISTRY.**

OCHSNER, Alton, William Henderson Prof. of Surgery and Chmn. of Dept. of Surgery, Tulane Univ., Dir. of the Section on Gen. Surgery, Ochsner Clinic, 3503 Prytania St., New Orleans 15, La. **GENERAL SURGERY.**



b. Kimball, S. Dak., May 4, 1896. s. Edward Philip and Clara (Shontz) O. Edn.: B.A., Univ. of S. Dak., 1918; M.D., Wash. Univ. Med. Schl., 1920. Hon. Deg.: D.Sc., Univ. of S. Dak., 1918; Doctor Honoris Causa, La Universidad, Libre de Nicaragua, 1946. m. Isabel Kathryn Lockwood, Sept. 13, 1923. c.: Alton, Jr.; John; Mims; Isabel. Exp.: Med. Intern.

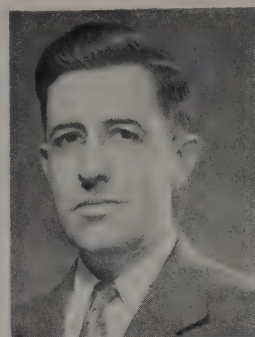
tern and Asst. Resident under Dr. Geo. Dock, Barnes Hosp., St. Louis, Mo., 1920-21; Surgical Intern under Dr. A. J. Ochsner, Augustana Hosp., Chicago, Ill., 1921-22; Exchange Surgical Asst. to Prof. Clairmont, Kantonsspital, Univ. of Zurich, Zurich, Switzerland, 1922-23; Exchange Surgical Asst. to Prof. Schmieden, Staetisches Krankenhaus, Univ. of Frankfurt, Frankfurt-am-Main, Germany, 1923-24; Surgical Practice in Chicago, Ill., Associated with Dr. D. A. Orth, also Instr. in Surgery and Surgical Pathol., Northwestern Univ., Chicago, Ill., 1925-26; Asst. Prof. of Surgery, Univ. of Wis. Med. Schl., Asst. Visiting Surgeon, State of Wis. Gen. Hosp., Madison, Wis., 1926-27; Prof. of Surgery and Chmn. of the Dept. of Surgery, Schl. of Med., Tulane Univ. of La., New Orleans, La., 1927-38; William Henderson Prof. of Surgery and Chmn. of the Dept. of Surgery, *ibid.*, 1938—. Hon. Pos.: Dir. of the Section on Gen. Surgery, Ochsner Clinic and Foundation Hosp., New Orleans, La.; Sr. Visiting Surgeon, Charity Hosp., and Surgeon-in-Chf. of the Tulane Surgical Service, Charity Hosp., New Orleans; Consulting Surgeon, Southern Pacific Railroad; Consultant in Thoracic Surgery, Eye, Ear, Nose and Throat Hosp., New Orleans; Attending Specialist in Chest Surgery, Marine Hosp., New Orleans; Consultant in Thoracic Surgery, V. A. Hosp., New Orleans; Consulting Surgeon, Walton Co. Hosp., DeFuniak Springs, Fla. Mem.: Internat. Soc. of Surgery; Amer. Coll. of Surgeons; Amer. Surgical Assn.; Soc. of Clinical Surgery; Southern Surgical Assn.; Amer. Assn. for Thoracic Surgery; A.M.A.; Amer. Coll. of Chest Physicians; La. State Med. Soc.; Internat. Soc. of Angiology; Alpha Omega Alpha; Sigma Xi; Omicron Delta Kappa; Amer. Cancer Soc.; Internat. Soc. for Welfare of Cripples; Nu Sigma Nu; Soc. for Crippled Children and Adults. Author: Varicose Veins, 1936. Contbr. to: Sections in Various Med. Books. War Record: Special Consultant in Surgery to the Army Air Force; Mem. of the Surgical Comm. of the Natl. Rsch. Council as Advisor to the Surgeons Gen. of the Army, Navy, and Public Health, World War II. Special Int.: Thoracic Surgery; Vascular Surgery.

OCHSNER, Edward H., 2256 Lincoln Pk. W., Chicago, Ill. **MEDICAL SCIENCES.**

O'CONNOR, Sister Mary Crescentia, Prof. and Hd. Dept. of Chem., Coll. Misericordia, Dallas, Pa. **CHEMISTRY, MEDICINE.**

O'CONNOR, John S., Chmn., Physics Dept., St. Joseph's Coll., 54th St. and City Line Ave., Philadelphia, Pa. **PHYSICS.**

O'CONNOR, John Joseph, Sr. Rsch. Physicist, Remington Arms Co., Inc., 507 Church Hill Rd., Trumbull 19, Conn. **PHYSICS.**

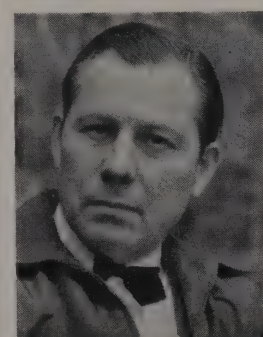


b. Bowling Green, Ky., May 7, 1916. s. John S. and Mary Margaret (Schneider) O'C. Edn.: B.S., Western Ky. Coll., 1939; M.A., Vanderbilt Univ., 1940. m. Mary Agnes McCarty, Aug. 5, 1946. c.: Margaret Mary; John Patrick; James Lawrence. Exp.: Physicist, Remington Arms Co., Inc., Bridgeport, Conn., 1942-44; Physicist, Atomic Energy Rsch., E. I. du Pont de Nemours and Co., Inc., Oak Ridge, Tenn., 1944; *ibid.*, Richland, Wash., 1944-46; Mem. Arms Co., Bridgeport, Conn., 1946—; Sr. Rsch. Physicist, *ibid.*, 1950—. Mem.: Amer. Physical Soc.; Gamma Alpha; Pi Mu Epsilon; Sigma Pi Sigma. Contbr. to: Phys. Rev. Special Int.: Exterior Ballistics; Pile Tech.; Nuclear Phys.

ODUM, Howard. **ECOLOGIST.**

ODUM, Howard Washington, Kenan Prof. and Hd. Dept. of Sociol., Univ. of N. C., Chapel Hill, N. C. **SOCIOLOGY.**

OEHSER, Paul Henry, Chf., Editorial Div., Smithsonian Institution, Washington 25, D. C. **SCIENCE EDITING AND PUBLICATION: HISTORY OF SCIENCE.**



b. Cherry Creek, N. Y., Mar. 27, 1904. s. Henry Christian and Agnes (Abbey) O. Edn.: A.B., Greenville Coll., 1925. m. Grace Edgbert on Oct. 4, 1927. Exp.: Asst. Editor, Bureau Biological Survey, U. S. Dept. of Agri., 1925-31; Editor, U. S. Natl. Museum, Smithsonian Institution, 1931-50; Asst. Chf., Editorial Div., *ibid.*, 1946-50; Chf., *ibid.*, 1950—. Exec. Editor, Jour. of the Washington Acad. of Sci., 1939—; Editor, Proc. of the Eighth Amer. Scientific Congress, 1940-43; Secy., Cosmos Club of Washington, 1950—. Mem.: Biological Soc. of Washington; Amer. Ornithologists' Union; Washington Acad. of Sci.; Washington Biologists' Field Club; Wilderness Soc.; Thoreau Soc.; Cosmos Club. Author: Sons of Sci.; The Story of the Smithsonian Institution and Its Leaders, 1949. Contbr. to: Scientific Monthly; U. S. Quarterly Book Rev.; Saturday Rev. of Lit.; The Auk; The Land; Living Wilderness; Nature Mag.; Jour. Washington Acad. of Sci.; etc.

OENSLAGER, George, retired Rsch. Chemist, 85 N. Wheaton Rd., Akron 13, Ohio. **RUBBER CHEMISTRY AND AGRICULTURAL CHEMISTRY.**



b. Harrisburg, Pa., Sept. 25, 1873. s. John and Harriet (Fraener) O. Edn.: A.B., Exeter Acad., Howard Coll., 1896; A.M., Harvard Univ., 1896. Hon. Deg.: Sc.D., Univ. of Akron, m. Ruth Santee Alderfer, July 15, 1939. Exp.: Rsch. Chemist, S. D. Warren and Co., 1896-1906; Rsch. Chemist, Diamond Rubber Co. of Akron, 1906-14; Rsch. Chemist, B. B. Goodrich Co., 1914-20; Technical Dir., Johohama Rubber Co., Japan, 1920-22; Rsch. Chemist, B. F. Goodrich Co., 1922-35; Re-

tired, 1935—. Mem.: Amer. Chem. Soc.; Amer. Inst. Chem. Engrs.; A.A.A.S. Special Int.: Rubber and Agril. Chem.

OESTER, Y. Thomas, Chmn., Dept. of Pharm., Assoc. Prof., Loyola Schl. of Med., Chicago, Ill.



PHARMACOLOGY AND TOXICOLOGY; MEDICINE. b. West Brooklyn, Ill. Dec. 21, 1908. s. Frank and Caroline (Hildmann) O. Edn.: B.S., Univ. of Notre Dame, 1931; M.S., ibid., 1933; Ph.D., Univ. of Chicago, 1938; M.D., ibid., 1943. m. Elizabeth Frances Elkin on Mar. 19, 1939. c.: Michael; Miriam; Yvonne. Exp.: Instr., Univ. of Notre Dame, 1933; Fellow Univ. of Chicago, 1934; Asst., ibid., 1934-38; Instr., Pharmacol., Loyola Univ., Chicago, Ill.

1938-39; Assoc. Prof., Chmn., Dept. of Pharmacol., Loyola Schl. of Med., 1947—; Chf. Chemist, Ill. Racing Bd., 1935—; Chf. Chemist, Fla. Racing Comm., 1939-43; Chief Chemist, Mich. Racing Comm., 1946-51; Chf. Chemist, New Mex. Racing Comm., 1949-51; Independent Consultant, Chicago Biological Rsch. Lab. Hon. Pos.: Secy., Walter Reed Soc.; Ex-Pres., Assn. of Official Racing Chemists. Mem.: A.M.A.; Amer. Chem. Soc.; Amer. Pharmaceutical Assn.; Amer. Congress of Phys. Med. and Rehabilitation; Walter Reed Soc.; A.A.A.S.; Ill Soc. for Med. Rsch.; N. Y. Acad. of Sci.; Sigma Xi. Contbr. to: Amer. Med. Jour.; Jour. Pharmacol. and Exptl. Therapeutics; Proc. Soc. of Exptl. Biol. and Med.; Jour. Amer. Pharmaceutical Assn.; Federation Proc.; Proc. Acad. of Forensic Sci. War Record: Capt., Army Med. Corps, 1944-46. Special Int.: Pharmacol. and Toxicology.

OESTERLING, M. Jane, Asst. Prof. of Physiol. Chem., Woman's Med. Coll. of Pa., Philadelphia 29, Pa. **BIOCHEMISTRY.** b. Butler, Pa., Oct. 24, 1917. d. H. Carl and Josephine (Critchlow) O. Edn.: A.B., Univ. of Ill., 1939; M.S., ibid., 1941; Ph.D., Geo. Washington Univ., 1945. Exp.: Marion Talbot Fellow, A. A.U.W., Yale Univ., New Haven, Conn., 1944-45; Alexander Brown Cox Memorial Fellow, ibid., 1945-46; Rsch. Asst. in Pharmacol., ibid., 1946-47; Rsch. Asst. in Chem., Univ. of Ill., Urbana, Ill., 1947-50; Bergquist Fellow of Amer.-Scandinavian Foundation, Karolinska



Inst., Stockholm, 1950-51; Asst. Prof. of Physiol. Chem., Woman's Med. Coll., Philadelphia, Pa., 1951—. Mem.: A.A.A.S.; N. Y. Acad. Sci.; Phi Beta Kappa; Sigma Xi; Iota Sigma Pi; Sigma Delta Epsilon. Contbr. to: Jour. Biol. Chem.; Sci.; Jour. Clinical Endocrinol. Special Int.: Nutrition and Metabolism of Amino Acids; Vitamin C Methodology; Relation of Vitamin C to Adrenal Hormones.

OETTEKING, Bruno, Curator, Physical Anthropology, Museum Amer. Indian, Broadway, 155th St., N. Y., N. Y. **PHYSICAL ANTHROPOLOGY.**

O'FLAHERTY, Fred, Prof. of Applied Sci. and Dir. of Rsch., Inst. Scientific Rsch., Univ. of Cincinnati, Cincinnati, Ohio. **BIOLOGY.**

OGBURN, William Fielding, Univ. of Chicago, Ill. **SOCIOLOGY.**

OGDEN, Ellsworth P., Harrop Ceramic Service, 35 E. Gay St., Columbus, Ohio. **CERAMICS.**

OGBURN, Sihon Cicero, Jr., Vice-Pres., in Chg. of Rsch. and Development, Foote Mineral Co., Philadelphia, Pa. **CHEMISTRY AND CHEMICAL ENGINEERING.** b. Winston-Salem, N. C., Oct. 8, 1900. s. Sihon Cicero, Sr. and Emma (Kapp) O. Edn.: B.S., Univ. of N. C., 1921; M.S., Wash. and Lee Univ., 1923; Ph.D., Univ. of N. C., 1926. m. Bettie Bell, July 2, 1921. c.: Hugh B.; Jean E. Exp.: Instr. in Chem., Wash. and Lee Univ., 1921-23; Asst. Prof. in Chem., ibid., 1923-26; Prof. and Hd. Dept., Chem. Engrng., Bucknell Univ., 1926-36; Chmn., Div. of Engrng.,



ibid., 1933-36; Rsch. Mgr., General Chem. Co., N. Y., 1936-43; Mgr. Rsch. and Development, Pa. Salt Mfg. Co., 1943-48; Mgr. Rsch. and Development, Foote Mineral Co., Philadelphia, Pa., 1948-51; Vice-Pres. in Chg. of Rsch. and Development, ibid., 1951—. Hon. Pos.: Vice Chmn. of Central Pa. Section Amer. Chem. Soc., 1934-35; Chmn. of Chem. Engrng. Lab. Com. and Mem. of Council of Amer. Soc. Engrng. Edn., 1935-38; Secy., Rsch. Management Group of Philadelphia, 1947—. Mem.: Amer. Chem. Soc.; Amer. Inst. of Chem. Engrs.; Amer. Assn. of Engrng. Edn.; Electrochem. Soc.; Alpha Chi Sigma; Pi Mu Epsilon; Sigma Xi. Author: Chem. Engrng. Lab. Manual, 1934. War Record: S.A.T.C., 1918. Gen. Int.: Winner of Smith Rsch. Award, Univ. of N. C., 1926. Special Int.: Platinum Metals; Fluorine Chem. and Industrial Rsch. Organization and Admin.

OGDEN, Eric, Prof. and Chmn., Dept. of Physiol., Ohio State Univ., Columbus, Ohio. **CARDIOVASCULAR PHYSIOLOGY.** b. London, England, Jan. 26, 1903. s. Michael Guy and Fannie (Bridge) O. Edn.: B.Sc., Univ. Coll., London, 1925; M.R.C.S., Royal Coll. of Surgeons, 1928; L.R.C.P., Royal Coll. Physicians, 1928. m. Olga Ogden, Sept. 18, 1928. c.: Michael; Eleanor; Kathryn. Exp.: Instr., Asst. Prof., Assoc. Prof. of Physiol., Univ. of Calif. Med. Schl., 1929-43; Instr., Asst. Prof., Assoc. Prof. of Physiol., Univ. of Calif. Colleges of Dentistry and Pharm., 1929-43; Consultant, Univ. Heart Clinic, San Francisco, Calif., 1929-43; Consultant, Univ. Clinic for Peripheral Vascular Diseases, San Francisco, Calif., 1929-43; Prof. of Physiol., Univ. of Tex. Med. Schl., 1943-49; Clinical Physiologist, John Sealy Hosp., 1943-49; Chmn., Dept. of Physiol., Univ. of Tex. Med. Schl., 1946-49; Prof. of Physiol., Ohio State Univ., Columbus, Ohio, 1949—; Prof. of Rsch. Cardiology, Dept. of Med., ibid., 1949—; Chmn., Dept. of Physiol., ibid., 1949—; Hon. Pos.: Bd. of Trustees, Ohio State Heart Assn. Mem.: Royal Coll. of Surgeons; Physiol. Soc.; Amer. Physiol. Soc.; Amer. Heart Assn.; A.A.A.S.; Soc. for Exptl. Biol. and Med.; Sigma Xi; N. Y. Acad. Sci. Contbr. to: Jour. of Physiol.; Proc. Soc. Exptl. Biol. and Med.; Amer. Jour. Physiol.; Jour. Pharmacol. and Exptl. Therap.; Arch. of Surgery; Tex. State Jour. of Med.; Bull. N. Y. Acad. of Med.; Amer. Rev. Physiol. Special Int.: Cardiovascular Physiol.

OGDEN, John T., Glass Indus., 55 W. 42nd St., N. Y. 36, N. Y. **CERAMICS.**

OGDEN, Robert Morris, Prof. Emer. of Psychol., Cornell Univ., 215 Dearborn Pl., Ithaca, N. Y. **PSYCHOLOGY.**

OGILIVE, Ida H., retired, Rt. 2, Germantown, N. Y. **GEOLOGY.**

OGLESBY, Nicholas Ewing, Technical Consultant, Behr-Manning Corp., R. F. D. 3, Troy, N. Y. **ABRASIVES, ADHESIVES, COATING.**

OGROSKY, Harold O., Chf., Water Conservation Div., U. S. Soil Conservation Service, Washington 25, D. C. **CIVIL ENGINEERING; HYDROLOGY.** b. Stockton, Minn., Feb. 4, 1911. s. O. C. and Dora

(Schettler) O. Edn.: B.C.E., Univ. of Minn., 1934. m. Ruth Bung, June 21, 1935. c.: Jean K.; Gary L. Exp.: Project Engr., Soil Conservation Service, Winona, Minn., 1935-38; Project Mgr., *ibid.*, 1938-39; Field Engr., Flood Control Activities, Winona, Minn., Cherokee, Iowa, Hannibal, Mo., 1939-42; Asst. State Conservationist, Soil Conservation Service, Sioux City, Iowa, 1946; Hydrologist, Water Conservation Div., Soil Conservation Service, Washington, D. C., 1946-51; Chf., *ibid.*, 1951—. Mem.: Amer. Geophys. Union; Amer. Soc. Civil Engrs. Contrb. to: Assn. Internatl. D'Hydrologie, Special Int.: Soil and Water Conservation, Watershed Protection and Flood Control.

O'HANLON, Mary Ellen, Prof. of Biol., Rosary Coll., River Forest, Ill. PLANT MORPHOLOGY.

OHLINGER, Leo Arthur, Dir. of Computing, Consultant on Atomic Energy, 9156 S. Wilton Pl., Los Angeles 47, Calif. RESEARCH AND INDUSTRIAL ADMINISTRATION; ATOMIC ENERGY; HIGH SPEED COMPUTERS; LECTURING AND TEACHING. b. Chicago, Ill., Jan. 7, 1907. s. Leo W. and Mae N. (Bansback) O. Edn.: B.S.C.E., Armour Inst. of Tech., cum Laude, 1927. m. Marie A. Kornke, June 5, 1931. c.: Claire Marie. Exp.: Consulting Structural Engr., Chf. Engr., Max Rosner, Chicago, Ill., 1927-34; Des. Engr. Specialist, Standard Oil Co. of Ind.,



Whiting, Ind., 1934-46; Asst. Div. Dir., Tech. Div., also Section Chf., Phys. Div., Univ. of Chicago Metallurgical Lab., Chicago, Ill., 1942-46; Public and Radio Lectr. on Atomic Energy, 1946—; Instr., Atomic Energy, U.C.L.A. Engrng. Ext. Div., 1946-50; Consultant, Atomic Energy Comm., Oak Ridge, Tenn., 1946—; Consultant on Atomic Energy Comm., Monsanto Chem. Co.-Union Elec. Atomic Energy Project, 1951—; Project Engr. in Chg. of Nuclear Rsch., Northrop Aircraft, Inc., Hawthorne, Calif., 1946-50; Dir. of Computing Div., *ibid.*, 1950-52. Hon. Pos.: Radiological Advisor for Civil Defense; Radiological Monitoring Tchr. Mem.: Assn. Computing Machinery; I.R.E.; Chi Epsilon. Contrb. to: Scientific Forum; Nucleonics. Gen. Int.: Seven Patents on Hydraulic Decoking; Approx. 40 Patents in Atomic Energy as Inventor or Coinventor. Special Int.: Cover the New Field of Computing with High Speed Electronic and Electromechanical Digital Computers; The Field of Atomic Energy; The Admin. of Rsch. and Industrial Projects.

OJEMANN, Ralph H., Prof. Psychology and Parent Edn., Child Welfare Res. Sta., State Univ. of Ia., Ia. City, Ia. PSYCHOLOGY AND EDUCATION. b. Aug. 30, 1901, Peoria, Ill. s. R. G. and J. C. (Menninga) O. Edn.: B.S., Univ. of Ill., 1924; M.S., *ibid.*, 1925; Ph.D., Univ. of Chicago, 1929. m. Freda Metzger, Aug., 1925. c.: Robert Gerdes; George Alvin; Kathryn Elizabeth. Exp.: Asst. in Edn., Univ. of Ill., 1925-28; Fellow in Edn., Univ. of Chicago, 1928-29; Asst. Prof., Univ. of Kans., 1929; Res. Assn., Ia. Child Wel. Res. Sta., State Univ. of Ia., 1929-31; Asst.

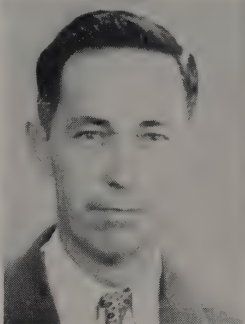


Prof., *ibid.*, 1931. Hon. Pos.: Chmn., Com. on Growth and Development, Amer. Edn. Rsch. Assn., 1944; Chmn., Parent Edn., Natl. Cong. of Parents and Tchr., 1943-49, 1951—; Chmn., Iowa Commn. on Children and Youth, 1951-52. Mem.: Soc. Rsch. Child Development; Natl. Council on Family Relations; Midwestern Psychol. Assn.; Kappa Delta

Pi; N.E.A.; A.A.S.A.; A.P.A.; A.A.A.S.; A.E.R.A.; Sigma Xi; Natl. Soc. for Study of Edn.; Phi Delta Kappa. Author: Rschs. in Parent Edn.; Integrated Plan for Edn. in Human Relations and Mental Health. Contrb. to: Jour. of Ednl. Psychol.; Jour. of Expt. Edn.; Schl. and Soc.; Jour. of Applied Psychol.; Jr. Ed. Res. Ph.D. Dissertation: A Study of the Relation of Handedness to Speech with Emphasis on the Technique of Testing Handedness.

O'KANE, Walter Collins, Prof. of Entomol., Univ. of N. H., Durham, N. H. ENTOMOLOGY.

O'KEEFE, Andrew Ellis, Rsch. Supvr., Rsch. Dept., Philip Morris and Co., Ltd., Inc., Box 1895, Richmond 15, Va. NATURAL PRODUCTS. b. Newark, N. J., Mar. 4, 1912. s. James G. and Lessie (Tyree) O'K. Edn.: B.S., Univ. of Notre Dame, 1933; M.S., Poly. Inst. of Brooklyn, 1938. m. Genevieve R. O'Brien, Aug. 22, 1942. c.: Mary Joseph and Margaret A. Exp.: Anal. Chem., Koppers Co., Kearny, N. J., 1933-39; Rsch. Assoc., The Squibb Inst. for Med. Rsch., New Brunswick, N. J., 1939-52; Rsch. and Development Dept., Philip Morris and Co.,



Ltd., Inc., Richmond, Va., 1952—. Mem.: Amer. Chem. Soc.; A.A.A.S.; Phi Lambda Upsilon. Contrb. to: Jour. of Amer. Chem. Soc. Special Int.: Natural Products; Chromatography; Ion Exchange and Countercurrent Distribution.

O'KELLY, Joseph Fred, Agronomist, Miss. State Expt. Sta., State College, Miss. AGRICULTURE.

OKEY, Ruth, Prof. of Home Econ. and Biochem. in Agri. Expt. Station, Univ. of Calif., Berkeley 4, Calif. BIOCHEMISTRY AND METABOLISM OF LIPIDS. b. Woodsfield, Ohio, Sept., 1893. d. Alfred and Mina (Reinbert) O. Edn.: B.S., Monmouth Coll., 1914; M.S., Univ. of Ill., 1915; Ph.D., *ibid.*, 1918. Exp.: Instr., Biochem., Univ. of Ill., Urbana, Ill., 1918-19; Asst. to Prof., Univ. of Calif., Berkeley, Calif., 1919—. Mem.: Amer. Chem. Soc.; Amer. Soc. of Biol. Chem.; Amer. Inst. of Nutrition; A.A.A.S.; Sigma Xi; Iota Sigma Pi; Omicron Nu. Contrb. to: Jour. of Biol. Chem.; Jour. of Nutrition; Jour. of Amer. Physiol. Soc.; Food Rsch.; Jour. of Amer. Chem. Soc.; Jour. Amer. Diet. Assn. Special Int.: Lipid Metabolism. Especially That of Cholesterol. Metabolism of Women.

OKKELBERG, Peter Olaus, Emeritus, Professor of Zoology and Assoc. Dean Emeritus of Horace H. Rackman Schl. of Graduate Studies, Univ. of Mich., Ann Arbor, Mich. ZOOLOGY. b. Novem-12, 1880, Goodhue, Minn. s. Bersvend L. and Anne Kjerstina (Hesselberg) O. Ancestry: Both Parents Born Near Trondhjem, Norway; Came to Amer. and Became Amer. Citizens. Edn.: Red Wing Sem.; A.B., Minn., 1906; A.M., Minn., 1909; Ph.D., Mich., 1918. m. Maud Zencie Hagberg of New Ulm, Minn., Sept. 2, 1915. d. Carl Albert and Julia Hagberg. Exp.: Tchr., Rural Schls., 1900-02; Instr. in Sci., Jewell Coll., Ia., 1906-08; Asst. in Zool., Univ. of Minn. and Grad. Student, 1908-10; Instr. in Zool., Univ. of Mich., 1910-18; Asst. Prof., 1918-27; Assoc. Prof., 1927-29; Assoc. Prof. and Exec. Sec. Dept. of Zool., 1929-31; Prof. and Exec. Sec., *ibid.*, 1931-33; Prof., 1933-51; Sec., Grad. Schl., 1930-35; Asst. Dean, Horace H. Rackham Schl. of Grad. Studies, 1935-47; Assoc. Dean, 1947-51; Prof. Emer. of Zool. and Assoc. Dean Emer. of the Horace H. Rackham Schl. of Grad. Studies, 1951—. Mem.: Fellow, A.A.A.S.; Amer. Soc. of Zool.; Amer. Soc. of Mammalogists; Mich. Acad. of Sci., Arts, and Letters, Ed., 1925-34; Sigma Xi; Phi Sigma; Gamma Alpha; Phi Kappa Phi; Phi Mu Alpha. Author: Pub. Papers on Embryol., Especially Origin and Development of Germ Cells. Contrb. to: Sect. Ed., Biol. Abstracts. Ph.D. Dissertation: The Early Hist. of the Germ Cells in the Brook Lamprey, *Entosphenus*

wilderi (Gage), Up to and Including the Period of Sex Differentiation, 1921. War Record: Faculty Capt., R.O.T.C., W. W. I.; Trng. of Students. Travel: Europe; N. Amer. Gen. Int.: Tchng. and Admin. Hobbies: Farming; Travel; Woodcarving. Listed in: A.M.S.; Who's Who in Amer.

OLDENBERG, Otto, Prof. of Physics, Lyman Lab., Harvard Univ., Cambridge 38, Mass. PHYSICS. b. Germany, Nov. 2, 1888. Edn.: Univ. of Heidelberg and Göttingen, 1913; Munich, 1920-22. Exp.: Asst. in Physics, Göttingen, Germany, 1913; 1919-20; Provadocent, *ibid.*, 1923-26; Asst. Prof., *ibid.*, 1926-30; Rockefeller Fellow, Calif. Inst. of Tech., Pasadena, Calif., 1924-25; Lectr. on Physics, Harvard Univ., 1929-30; Prof. of Physics, Harvard Univ., Cambridge, Mass., 1930—. Mem.: Amer. Phys. Soc.; A.A.A.S. Author: Intro. to Atomic Physics, 1949. Contrb. to: Phys. Rev.; Jour. of Chem. Phys. Special Int.: Physics and Spectroscopy.

OLDS, Edwin Glenn, Assoc. Prof. of Math., Carnegie Inst. of Tech., Schenley Park, Pittsburgh, Pa. MATHEMATICAL STATISTICS.

O'LEARY, Paul M., Westview Terrace Apts., Ithaca, N. Y. SOCIAL AND ECONOMIC SCIENCES, ANTHROPOLOGY.

OLIN, Stephen Munro, Organic Chemist, Miles Labs., Inc., Elkhart, Ind. MEDICAL CHEMISTRY. b. Mansfield, Ohio, Dec. 23, 1919. s. Edwin Mason and Edna (Munro) O. Edn.: A.B., DePauw Univ., 1941; M.A., Ohio State Univ., 1943; Ph.D., *ibid.*, 1948. m. Lois Saunders, Dec. 26, 1942. c.: Phillip and Patricia. Exp.: Fellow, Bristol Labs., The Ohio State Univ., Columbus, Ohio, 1946-48; Organic Chemist, Miles Labs., Inc., Elkhart, Ind., 1948—. Mem.: Amer. Chem. Soc.; A.A.A.S.; Alpha Tau Omega; Sigma Xi; Elkhart Civic Theatre. Contrb. to: Jour. of Amer. Chem. Soc. War Record: U. S. Navy, 2 Yrs., Aboard Minesweeper and Minelayer in Pacific Area. Special Int.: Synthetic Anaglesics and Antispasmodics.

OLITSKY, Peter K., Mem., Rockefeller Inst. Med. Rsch., N. Y., N. Y. PATHOLOGY.

OLIVE, Edgar William, retired, 1704 Rodman St., Hollywood, Fla. BOTANY AND AGRICULTURE.

OLIVE, Lindsay Shepherd, Assoc. Prof., Dept. of Botany and Plant Pathol., La. State Univ., Baton Rouge, La. MYCOLOGY.

OLIVER, Clarence Paul, Prof. of Zool., Univ. of Tex., Austin, Tex. GENETICS. b. Obion Co., Tenn., Nov. 8, 1898. s. Benjamin Wesley and Mary Eunellie (Massey) O. Edn.: B.A., Univ. of Tex., 1925; M.A., *ibid.*, 1930; Ph.D., *ibid.*, 1931. m. Cecile Wharton Worley, July 29, 1931. c.: Peter Lee and George Benjamin. Exp.: Asst. Prof. of Zool., Wash. Univ., St. Louis, Mo., 1930-32; Asst. Prof. of Zool., Univ. of Minn., Minneapolis, Minn., 1932-39; Assoc. Prof., *ibid.*, 1939-45; Prof., *ibid.*, 1945-46; Dir., Dight Inst. Human Genetics, *ibid.*, 1941-46; Prof. of Zool., Univ. of Tex., Austin, Tex., 1946—; Chmn., Dept. of Zool., *ibid.*, 1947—. Mem.: A.A.A.S.; Gen. Soc. of Amer.; Amer. Gen. Assn.; Amer. Soc. of Zool.; Amer. Soc. of Nat.; Soc. of Exptl. Biol. and Med.; Tex. Acad. of Sci.; Internat. Assn. of Dental Rsch.; Sigma Xi; Phi Beta Kappa. Contrb. to: Amer. Naturalist; Amer. Jour. of Diseases in Children; Genetics; Jour. of Dental Rsch.; Sci.; Tex. Jour. Sci.; Tex. Reports on Biol. and Med.; Zeit. f. indukt. Abstamm. u. Vererb. Special Int.: Development Genetics; Human Genetics; Dental Anomalies; Human Cancer; Mongolism; Genetic Counselling.

OLIVER, Jean, Dept. of Pathol., Long Island Coll. of Med., 335 Henry St., Brooklyn, N. Y. MEDICAL SCIENCES.

OLIVER, John W., Prof. of History and Hd. Dept., Univ. of Pittsburgh, Pittsburgh, Pa. HISTORY OF SCIENCE.

OLIVER, Wade Wright, Rockefeller Foundation, Div. Med. Sci., 49 W. 49th St., N. Y., N. Y. BACTERIOLOGY, MEDICAL.

OLMO, Paul Harold, Assoc. Prof. of Viticulture and Assoc. Viticulturist, Expt. Sta., Univ. of Calif., Coll. of Agri., Davis, Calif. GENETICS.

OLMSTEAD, Paul Smith, Consulting Statistician, Bell Telephone Labs., Murray Hill, N. J. MATHEMATICAL STATISTICS.

OLMSTED, James Montrose Duncan, Prof. of Physiology, Department of Physiology, Univ. of Calif., Berkeley 4, Calif. PHYSIOLOGY. b. Lake City, Iowa, May 21, 1886. s. Jephtha Montrose and Ada Maria (Duncan) O. Edn.: A.B., Middlebury Coll., 1907; B.A., Oxford Univ., 1911; M.A., *ibid.*, 1914; M.A., Harvard Univ., 1918; Ph.D., *ibid.*, 1920. Hon. Degrees: D.Sc., Middlebury Coll., 1942. m. Evangeline Harris of Toronto, Canada, June 30, 1927. d. Frank and Arma Nellie H. Exp.: Vice-Prin., Spring Valley H. S., N. Y., 1907-08; Prof., Biol., Shorter Coll., 1911-12; Assoc. Prof., Biol., Richmond Univ., 1912-15; Tchng. Fellow, Harvard Univ., 1915-18; Assoc., Coll. of Med., Univ. of Ill., 1920; Asst., Assoc. Prof., Univ. of Toronto, 1920-27; Prof., Univ. of Calif., 1927—. Mem.: Amer. Physiol. Soc.; Soc. Expt. Biol. and Med.; A.A.A.S.; Amer. Assn. Hist. Med.; Soc. Philomat. (Paris); Delta Kappa Epsilon; Phi Beta Kappa; Sigma Xi. Author: Claude Bernard, 1939; Francois Magendie, 1944; and others. Contrb. to: The New Yorker; Sci. Jour. such as the Amer. Jour. of Physiol. Ph.D. Dissertation: The Sense of Smell and Taste in the Common Catfish, *Amiurus Nebulosus*. War Record: Pvt. then 2nd Lt., 1917-20. Hobby: Water Colors. Listed in: Who's Who in Amer.; Who's Who on the Pacific Coast. Special Int.: Nervous System and Special Senses. History of Medicine.

OLMSTED, William Harwood, Assoc. Prof. of Clinical Med., Wash. Univ., St. Louis, Mo. MEDICINE.

OLNEY, Jackson Albert, Hd., Dept. of Horticulture, Univ. of Ky., Lexington, Ky. POMOLOGY.

OLNEY, Louis Atwell, Prof. Emer. Chem., Lowell Textile Inst., 118 Riverside St., Lowell, Mass. CHEMISTRY.

OLPIN, Albert Ray, Pres., Univ. of Utah, Salt Lake City, Utah. PHYSICS.

OLSEN, Aksel Gilkrog, Mgr., Central Rsch. Labs., General Foods Corp., Hoboken, N. J. FOOD TECHNOLOGY.

OLSEN, Leonard O., Assoc. Prof. of Physics, Case Schl. Applied Sci., Cleveland, Ohio. PHYSICS.

OLSON, Axel Ragnar, Prof. of Chem., Univ. of Calif., Berkeley, Calif. PHYSICAL CHEMISTRY.

OLSON, E. C., Univ. of Chicago, Chicago, Ill. PALEONTOLOGY.

OLSON, Henry William, Asst. Prof. of Biol., Wilson Tehrs. Coll., 11th and Harvard St., N. W., Washington, D. C. INVERTEBRATE ZOOLOGY.

OLSON, Lawrence Carroll, Assoc. Agronomist in Chg. Soil Analysis, Ga. Agri. Expt. Sta., Experiment, Ga. SOIL CHEMISTRY.

OLSON, Peter John, Prof. of Plant Sci., Univ. of Manitoba, Winnipeg, Man., Can. AGRONOMY.

OLSON, Willard Clifford, Prof. of Edn. and Psychol. and Dir. Rsch. Child Development, Univ. of Mich., Ann Arbor, Mich. CHILD DEVELOPMENT.

OLT, Theodore F., Dir. of Rsch., Armco Steel Corp., Middletown, Ohio. METALLURGICAL ENGINEER. b. Dayton, Ohio, May 18, 1905. s. Fred and Laura (Greve) O. Edn.: Ch.E., Univ. of Cincinnati, 1928. m. Marjorie, May 16, 1930. c.: Robert O.; Theodore F. Exp.: Metallurgical Asst., Armco Steel Corp., Middletown, Ohio, 1928-34; Metallurgist, *ibid.*, 1930-32; Senior Metallurgist, *ibid.*, 1932-34; Sr. Rsch. Engr., *ibid.*, 1934-36; Supv., Metallurgist, *ibid.*, 1936-40; Assoc. Dir. of Rsch., *ibid.*, 1940-45; Asst. Dir. of Rsch., *ibid.*, 1945-47; Dir., Rsch. Div., 1947—. Hon. Pos.: Chmn. Tech. Comm. on Stainless Steel-Amer. Iron and Steel

Inst. Mem.: A.I.S.I.; A.S.M.; A.S.T.M.; A.I.M.M.E.; British Iron and Steel Inst.; Inst. of Metals; West Alpha Chi Sigma; Tau Beta Pi; Electrochemical Scotland Iron and Steel Inst.; Sigma Alpha Epsilon; Soc. Contrb. to Metal Progress; Trans. A.S.M.E.; Jour. Iron and Steel Engrs.; Proceedings A.S.T.M. Special Int.: Stainless Steel; Physical Chem. of Steel Making; Beneficiation and Smelting of Iron Ores.

OMOHUNDRO, Allen Llewellyn, Vice-Pres. and Technical Dir., Plant and Labs., McKesson and Robbins, Inc., Bridgeport, Conn. **CHEMISTRY.**

ONCLEY, John Lawrence, Univ. Lab. of Phys. Chem., Harvard Univ., 25 Shattuck St., Boston 15, Mass.

O'NEAL, Claude Edgar, Prof. of Botany and Hd. Dept., Ohio Wesleyan Univ., Delaware, Ohio. **PLANT MORPHOLOGY AND GENERAL BOTANY.**

O'NEILL, Hugh Thomas, Prof. of Biol., Catholic Univ. of Amer., Washington, D. C. **SYSTEMATICS OF CYPERUS, CYPERACEAE.**

ONSAGER, Lars, Yale Univ., 225 Prospect St., New Haven, Conn.

OPIE, Eugene Lindsay, Rockefeller Inst. for Med. Rsch., 66th St. and York Ave., N. Y., N. Y.

OPPE, Greta, Miss, Hd., Science Dept., Ball High Schl., 1609 Ave. K, Galveston, Tex. **CHEMISTRY.**



b. Galveston, Texas, Sept. 4, 1893. d. Frederick and Amelia Wilde O. Edn.: B.A., The Univ. of Tex., 1921; M.A., N. Y. Univ., 1928; Grad. Study: Syracuse Univ., Univ. of Michigan, and Harvard Grad. Schl. of Edn. Exp.: Hd., Sci. Dept., Ball H. S., Galveston, Tex. Hon. Pos.: So. Vice-Pres., Natl. Sci. Tchrs. Assn.; Dir., Jr. Div., Tex. Acad. of Sci. Mem.: Fellow, Amer. Geog. Soc.; Fellow, Amer. Assn. for Adv. of Sci.; Fellow, Tex. Acad. of Sci.; Natl. Assn. for Rsch. in Sci. Tchng.;

A.A.U.W.; Delta Kappa Gamma; Natl. Education Assn.; Assn. for Childhood Edn. Author: Chem., A Worktext for High Schls. Contrb. to: Sci. Edn.; Jour. Chemical Edn.; Biological Abstracts; Metropolitan Detroit Sci. Review.

OPPENHEIMER, Bernard Sutro, Clinical Prof. of Med., Columbia Univ., N. Y., N. Y. **INTERNAL MEDICINE.**

OPPENHEIMER, Jane Marion, Asst. Prof. of Biol., Bryn Mawr Coll., Bryn Mawr, Pa. **EXPERIMENTAL EMBRYOLOGY.**

OPPENHEIMER, Robert, Dir., Institute for Advanced Study, Princeton, N. J. **PHYSICS.** b. N. Y., N. Y., Apr. 22, 1904. s. Julius and Ella (Freedman) O. Edn.: A.B., Harvard Univ., 1925; Ph.D., Gottingen Univ., 1927. Hon. Deg.: D.Sc., Univ. of N. Mex., 1947; D.Sc., Univ. of Pa., 1946; D.Sc., Harvard Univ., 1947; LL.D., Univ. of Calif., 1948. m. Katherine Puening, Nov., 1940. c.: Peter; Katherine. Exp.: Prof. of Physics, Univ. of Calif., Berkeley and Calif. Inst. of Tech., Pasadena, 1929-47; Dir., Los Alamos Scientific Lab., Los Alamos, N. Mex., 1943-45; Chmn., General Advisory Com., Atomic Energy Comm., 1946-52; Dir., Inst. for Advanced Study, Princeton, N. J., 1947—. Hon. Pos.: Bd. of Overseers, Harvard Coll., 1949—. Mem.: Amer. Philos. Soc.; Natl. Acad. Sci.; Royal Danish Acad. of Sci. and Letters; Fellow, Amer. Physical Soc.; Fellow, Amer. Acad. Arts and Sci.; Hon. Fellow, Christ's Coll., Cambridge, England; Hon. Mem., Japan Acad. Sci.

OPPERMANN, Paul, Dir. of Planning, City and Co. of San Francisco, 100 Larkin Plaza, San Francisco, Calif. **CITY AND REGIONAL PLANNING.**

ORBISON, J. Lowell, 2085 Adelbert Rd., Cleveland 6, Ohio. **PATHOLOGY AND BACTERIOLOGY.**

ORCHARD, John Ewing, Prof. of Economic Geography, Graduate Schl. of Business, Columbia Univ., New York. **ECONOMIC GEOGRAPHY.** b. Exeter, Nebr., July 19, 1893. s. William J. and Laura (Ewing) O. m. Dorothy A. Johnson of Alexandria, Va., December 27, 1920. Edn.: A.B., Swarthmore Coll., 1916; A.M., Harvard Univ., 1920; Ph.D., Harvard, 1923; Univ. of Pa., 1917-18; Univ. of Chicago, summer, 1920. Exp.: Instr., Eng. and Hist., George Schl., Pa., 1916-17; Asst. Mine Econ., U. S. Bureau of Mines, 1918-19; Instr. Econ. Geog., Schl. of Bus., Columbia, 1920-24; Asst. Prof., ibid., 1924-29; Assoc. Prof., ibid., 1929-38; Prof., Econ. Geog., ibid., 1938; Acting Dean, 1947; Econ. and Ind. Analyst, O.P.M., 1941; Sr. Asst. Admr., Lend-Lease Admin., 1941-43; Dir., Gen. Areas Br., For. Econ. Admin., 1943-44; Special Asst. to Asst. Sec. and Undersec. of State, 1944-45; Sr. Consultant to For. Liquidation Commissioner, 1945-46; Special Adv. on Overseas Territories, Econ. Coop. Admin., Paris, 1949-50; Consultant, Econ. Coop. Admin., 1950—; Bd. of Mgrs., Swarthmore Coll., 1949-50; Presidential Certificate of Merit, 1947. Mem.: Assn. of Amer. Geog. (Treas., 1937-37); Delta Upsilon; Phi Beta Kappa; Beta Gamma Sigma. Ph.D. Dissertation: The World's Coal Resources and Some of Their Influences on Natl. Econ. Author: Japan's Econ. Pos., 1930. Contrb. to: Geog. Rev.; Jour. of Geog.; Quarterly Jour. of Econ.; Annals of Amer. Acad. of Polit. and Soc. Sci.; Foreign Affairs; Polit. Sci. Quart. Rsch.; Econ.; Econ. Geog. (special emphasis on minerals and mfg.). Travel: Japan; India; China; Europe. Spec. Int.: Industrialization of the Far East; Development of Underdeveloped Areas. Gen. Int.: Coun. on For. Relations (Mem.); Amer. Coun., Inst. of Pacific Relations (Mem.); Fellow, John Simon Guggenheim Mem. Foundation, 1931-32. Special Int.: Industrialization of Asia, and Development of Underdeveloped Areas.

ORDWAY, Thomas, Consulting Physician, Albany Hosp., 161 S. Lake Ave., Albany, N. Y. **INTERNAL MEDICINE.**

ORE, Oystein, Prof., Yale Univ., New Haven, Conn. **MATHEMATICS.**

ORELUP, John Westley, 335 McLean Blvd., Paterson, N. J. **CHEMISTRY.**

ORNSTEIN, George Guttman, Assoc. Prof. of Med., N. Y. Med. Schl. and Flower Hosp., 965 Fifth Ave., N. Y., N. Y. **CHEST DISEASES.**

O'ROKE, Earl Cleveland, Assoc. Prof. of Forest Zool., Univ. of Mich., Schl. of Forestry and Conservation, Ann Arbor, Mich. **PARASITOLOGY AND PATHOLOGY BIRDS AND MAMMALS.**

ORR, Grover Lewis, Prof. of Chem., Capital Univ., Columbus, Ohio. **CHEMISTRY.**

ORR, Henry Porter, Assoc. Prof. of Horticulture, Ala. Polytech. Inst., Auburn, Ala. **FLORICULTURE.** b. Opelika, Ala., August 20, 1921. s. James D. and Ermine (Watson) O. Edn.: B.S., Ala. Polytech. Institute, 1942; M.S., Ohio State Univ., 1947. Exp.: Assoc. Prof., Ala. Poly. Inst., 1947-51. Mem.: Amer. Soc. for Horticultural Sci.; Assn. of Sou. Agri. Workers; Sigma Xi; Phi Kappa Phi; Pi Alpha Xi; Gamma Sigma Delta. Travel: Eastern U. S.; Mexico; England; Scotland; Europe. Hobbies: Hiking; Japanese Flower Arranging; Collection of old Bottles. Special Int.: Greenhouse Rose Watering and Production Studies of Azalea Leaf Abscission.

ORR, Leslie Wayne, Asst. Div. Leader, Forest Insect Investigations, Bureau Entomol. and Plant Quarantine, U. S. D. A., Beltsville, Md. **ENTOMOLOGY.**

ORT, John Mouk, Dir. of Rsch., Carroll Dunham Smith Pharmacal Co., 401 Codwise Ave., New Brunswick, N. J. **BIOCHEMISTRY.**

ORTENBURGER, Arthur Irving, Prof. of Zool., Curator Div. Zool., Univ. Museum, Univ. of Okla., Norman, Okla. **HERPETOLOGY.**

ORTMAN, Fred B., Gladding, McBean and Co., 2901 Los Feliz Blvd., Los Angeles 39, Calif. **CERAMICS.**

ORTON, Clayton Roberts, Dir., Agri. Expt. Sta. and Dean, Coll. of Agri., W. Va., Univ., Morgantown, W. Va. **PLANT PATHOLOGY AND MYCOLOGY.**

OSBORN, Frederick H., Social Sci. Rsch. Council, 230 Park Ave., N. Y., N. Y. **DEMOGRAPHY.**

OSBORN, Herbert, Emer. Prof. Zool. and Entomol., Ohio State Univ., Columbus, Ohio. **ZOOLOGY.**

OSBORN, Herbert Tirrill, Survey Entomologist, State Dept. of Agri., Bureau Entomol. and Plant Quarantine, Sacramento, Calif. **ENTOMOLOGY.**

OSBORN, Sidney Jose, General Chemist, Great Western Sugar Co., P. O. Box 5308, Denver, Colo. **SUGAR CHEMISTRY AND TECHNOLOGY.**

OSBORN, Stanley Hart, Conn. State Commissioner of Health, 41 Brace Rd., West Hartford, Conn. **MEDICINE, PUBLIC HEALTH.**

OSBORNE, Harold Smith, Chf. Engr., Amer. Telephone and Telegraph Co., 195 Broadway, N. Y., N. Y. **ENGINEERING.**

OSBURN, Raymond Carroll, Rsch. Assoc., Allan Hancock Foundation, Univ. of Southern Calif., Los Angeles, Calif. **ZOOLOGY.**

OSENBURG, Albert, Chf. Dry-Land Crop Investigations, U. S. Belle Fourche Field Sta., Newell, S. Dak. **AGRONOMY.**

OSER, Bernard L., Dir. and Vice-Pres., Foods Rsch. Lab., Inc., 48-14 33rd St., Long Island City, N. Y. **BIOCHEMISTRY.**

OSGOOD, Cornelius, Prof. and Curator of Anthrop., Yale Univ., New Haven, Conn. **ANTHROPOLOGY.**

O'SHAUGHNESSY, Louis, Prof. and Hd., Dept. of Applied Mechanics, Dir. Grad. Studies, Va. Poly. Inst., Blacksburg, Va. **MECHANICS, MATHEMATICS.**

O'SHEA, Harriet E., Assoc. Prof. of Psychol., Purdue Univ., Lafayette, Ind. **PSYCHOLOGY.**

OSOL, Arthur, Prof. of Chem. and Dir., Chem. Dept., Philadelphia Coll. of Pharmacy and Sci., Philadelphia, Pa. **CHEMISTRY.**

OSTERBERG, Arnold Erwin, Assoc. in Clinical Investigation, Abbott Labs., North Chicago, Ill. **CLINICAL INVESTIGATION.** b. Minneapolis, Minn., Feb. 9, 1894. s. Emanuel and Marie (Olsen) O. Edn.: B.S. in Ch.E., Univ. of Wash., 1916; M.S., Univ. of Minn., 1920; Ph.D., ibid., 1925. m. Anne E. Curtis, May 11, 1918. c.: Annette L.; Arnold C.; Donna M. Exp.: Asst. Chemist, Univ. of Wash., 1916-17; Asst. Biochemist, Rsch., Mayo Clinic, 1917-24; Assoc. Biochemist, ibid., 1924-30; Clinical Biochemist, ibid., 1930-46; Assoc. Prof. of Chem., Univ. of Minn., 1924-44; Prof., ibid., 1944-46; Assoc. Clinical Investigation, Abbott Labs., North Chicago, Ill., 1946—. Mem.: Amer. Chem. Soc.; Soc. Biol. Chemists; A.A.A.S.; Soc. Exptl. Biol. and Med.; Phi Lambda Upsilon; Sigma Xi; Amer. Legion; Kiwanis; etc. War Record: Lt., Signal Corps, 1918. Special Int.: Clinical Chem. and Clinical Investigation.

OSTERHOF, H. J., Dir. of Rsch., Goodyear Tire & Rubber Co., Akron, Ohio. **CHEMISTRY.**

OSTERHOUT, Winthrop John Van Leuven, Mem. Emeritus, Rockefeller Inst. for Med. Rsch., 66th and York Ave., N. Y. 21, N. Y. **GENERAL PHYSIOLOGY.** b. Brooklyn, N. Y., Aug. 2, 1871. s. John

Van Leuven and Annie L. (Beman) O. Edn.: A.B., Brown Univ., 1893; A.M., ibid., 1894; Ph.D., Calif., 1899. Hon. Deg.: Sc.D., Harvard Univ., 1925; Ph.D., Brown Univ., 1926. m. Marion Irwin, Feb. 27, 1933. c.: Anna; Olga. Exp.: Instr. Botany, Brown Univ., 1893-95; Instr. Botany, Calif., 1896-1901; Asst. Prof., ibid., 1901-08; Assoc. Prof., ibid., 1908-09; Asst. Prof., Harvard Univ., 1909-13; Prof., ibid., 1913-25; Mem., Rockefeller Inst. for Med. Rsch., 1925-39; Emer. Mem., ibid., 1939—. Mem.: Natl. Acad. Sci.; A.A.A.S.; Botanical Soc.; Amer. Physiol. Soc.; Soc. Exptl. Biol.; Amer. Chem. Soc.; Philos. Soc.; etc. Author: Nature of Life, 1924; Injury Recovery and Death, 1922. Contrb. to: Co-Editor, Jour. General Physiol. Special Int.: Permeability of Living Cells; Electrical Properties of Living Cells.

OSTERUD, Hjalmar Laurits, Prof. of Anatomy, Med. Coll. of Va., Richmond, Va. **ANATOMY.**

OSTROW, Sidney M., Physicist, Central Radio Propagation Lab., Natl. Bureau of Standards, Washington, D. C. **RADIO WAVE PROPAGATION.**

OSWALD, Albert G., Physicist, Ames Aeronautical Lab., Moffett Field, Calif. **PHYSICS, ENGINEERING.**

OSWALT, Edna Rickey, Assoc. Prof. of Psychol., Kent State Univ., Kent, Ohio. **CLINICAL PSYCHOLOGY.**

OTHMER, Donald Frederick, Chem. Engr., Poly. Inst. of Brooklyn, 99 Livingston St., Brooklyn, N. Y.



CHEMICAL ENGINEERING; PHYSICAL CHEMISTRY. b. Omaha, Neb., May 11, 1904. s. Frederick Geo. and Fredericka Darling (Snyder) O. Edn.: Student, Armour Inst., Chicago, 1921-23; B.Sc., Univ. of Neb., 1924; M.S., Univ. of Mich., 1925; Ph.D., 1927. m. Mildred Jane Topp of Omaha, Neb., Nov. 18, 1950. Exp.: Dev. Engr., Eastman Kodak Co. and Tenn. Eastman Corp., 1927-31; Instr., Poly. Inst. of Brooklyn, 1932-33, Prof., 1933—, Hd. of Dept. of Chem. Engrng., 1937—; Hon. Prof., Univ. of Concepcion, Chile; Licensed Chem. Engr., in N. Y., N. J., Pa., Ohio; Consulting Chem. Engr. since 1931 to numerous companies and governmental agencies in U. S., Canada, Sweden, Spain, France, England, Belgium, Switzerland, Italy, India, Burma, South Africa, Japan, Philippine Islands, Mexico, Central and S. Amer. in Fields of Chem. Manufacture, Refrigeration and Heat Transfer, Petroleum Refining and Petro-chem., Fermenting, Penicillin and other Antibiotics, solvents, distilling, wood Utilization, Wallboard, Engrng. Equip., Synthetic Rubber, Plastics, Rayon, Sugar Refining, Wood Distillation; also to Chem. Corps and the Ordnance Corps—U. S. Army, Special Devices Div.—U. S. Navy, War Production Bd., U. S. Dept. of State, and other Branches of U. S. and Foreign Govts., Sr. Gas Officer of Brooklyn, Citizens Defense Corps; Designer of Plants and Processes for Many Natl. and Interantl. Crops in Numerous Plants in the U. S. and Various Foreign Countries; Officer and Dir., Various Corporations, Mem., Arbitration Panel, Amer. Arbitration Assn.; Patentee of Seventy-five Inventions, Mainly of Chem. Processes, Equipment and Manufacturing Methods, Licensed by Many Domestic and Foreign Companies; Co-inventor of Smith-Othmer Wallboard, made from wood and Other Cellulosic Wastes. Author: More than 175 Articles on Chem. Engrng., Physical Chem., Chem. Processes and Mfgs. Thermodynamics, etc., in Amer. and Foreign Technical Jours.; Co-Editor, Encyc. of Chem. Tech. (14 volumes), Lectr. in Engrng. and Sci. Subj. in U. S., Europe, India, Japan, 1948; Lectr. in Swiss Univ. Sponsored by Amer.-Swiss Foundation for Scientific Relations; 1950, Lectr. tour for Chem. Inst. of Can.; 1952, Lectr. tour for Amer. Chem. Soc. Mem.: A.A.A.S.; Amer. Institute of Chemical Engrs.; Amer. Institute

of Consulting Engrs.; Soc. of Chemical Indus.; Amer. Soc. Mech. Engrs.; Chmn. Process Indus. Div.; Amer. Inst. of Chem.; A.C.S.; A.S.E.E.; Sigma Xi; Tau Beta Pi; Phi Lambda Upsilon; Iota Alpha; Alpha Chi Sigma; Lambda Chi Alpha; Chem. Club, N. Y. Listed in: Who's Who in Amer.; Who's Who in Engrng.; Who's Who in N. Y.; Who's Who in the East; Encyc. of the World; A.M.S.; Chem. Who's Who; Who's Who in Commerce and Indus.; etc.

OTIS, Arthur Sinton, Psychol. and Aeronautical Cons., Civil Aeronautics Admin., 4815 N. Capitol, Washington, D. C.

OTIS, Charles Herbert, Prof. of Biol., Bowling Green State Univ., Bowling Green, Ohio. **BIOLOGY, PHYSIOLOGY.**

OTIS, Marshall Voigt, Rsch. Chemist, Rsch. Labs., Tenn. Eastman Co., Kingsport, Tenn. **APPLIED SPECTROSCOPY.** b. New London, Wis., Aug. 28, 1919. s. Milton G. and Bessie Evelyn (Voigt) O. Edn.: B.S., Univ. of Wis., 1942. m. Ila Audiss, Dec. 25, 1942. c.: Michael; James; John. Exp.: Analytical Chemist, Hercules Powder Co., Baraboo, Wis., 1942-44; Shift Supvr. of Smokeless Powder, Badger Ord. Works, Baraboo, Wis., 1944-45; Dev. Supvr. of Supersonics Testing Program of Rocket Powder, *ibid.*, 1945; Rsch. Chemist in Applied Spectroscopy of Rsch. Lab., Tenn. Eastman Co., Div. of Eastman Kodak Co., Kingsport, Tenn., 1946—. Mem.: Amer. Chem. Soc.; Soc. for Applied Spectroscopy; Rosicrucian Order, A.M.O.R.C., Rosicrucian Natl. Rsch. Coun.; Jr. C. of C.; Toastmasters Internatl. Contrb. to: Analytical Chem. Special Int.: Infrared Absorption Spectroscopy.

OTTENBERG, Reuben, Consulting Physician, Mt. Sinai Hosp. and Clinical Pathol., Columbia Univ., 1112 Park Ave., N. Y., N. Y. **INTERNAL MEDICINE.**

OTTLEY, Alice Maria, 1877 Alta Mira Pl., San Diego, Calif. **TAXONOMIC BOTANY.**

OTTO, Carl Everett, Assoc. Prof. of Chem., Univ. of Maine, Orono, Maine. **CHEMISTRY.**

OTTO, Edna Bishop, 430 College Ave., Orono, Maine. **CHEMISTRY.**

OTTO, Gilbert Fred, Assoc. Prof. of Parasitology and Asst. Dir., Schl. of Hygiene and Public Health, Johns Hopkins Univ., 615 N. Wolfe St., Baltimore, Md. **PARASITOLOGY.**

OVERBERGER, Charles Gilbert, Prof. of Organic Chem., Assoc. Dir. of the Polymer Inst., Poly. Inst. of Brooklyn, 99 Livingston St., Brooklyn 2, N. Y. **ORGANIC AND POLYMER CHEMISTRY.** b. Barnesboro, Pa., Oct. 12, 1920. s. Charles Edward and Beatrice (MacAulity) O. Edn.: B.S., Pa. State Coll., 1941; Ph.D., Univ. of Ill., 1944. m. Peggy Bachman, 1945. c.: Erica Marie; Carla Lee. Exp.: Rsch. Assoc., Univ. of Ill., 1944-46; Rsch. Assoc. (Dupont Fellowship), Mass. Inst. of Tech., 1946-47; Asst. Prof. of Organic Chem., Poly. Inst. of Brooklyn, 1947-50; Assoc. Prof., *ibid.*, 1950-52; Prof. of Organic Chem., *ibid.*, 1952—; Assoc. Dir. of Polymer Inst., *ibid.*, 1952—.



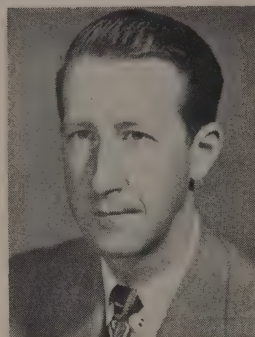
Hon. Pos.: Chmn., Program Com., Metropolitan Long Island Sub-Section of N. Y. Section, Amer. Chem. Soc., 1952-53. Mem.: Sigma Xi; Phi Lambda Upsilon; Amer. Chem. Soc.; Chem. Soc. (Britain); Sigma Xi; Alpha Chi Sigma; Phi Kappa Phi. Contrb. to: Jour. Amer. Chem. Soc.; Jour. Polymer Sci. and Organic Synthesis. Special Int.: Organic Chem.; Polymer Chem.; Organic Reactions Mechanisms; Synthetic Organic.

OVERHAGE, Carl F. J., Physicist, Eastman Kodak Co., Rochester, N. Y. **PHOTOGRAPHY.**

OVERHOLSER, Milton David, Prof. and Chmn., Dept. of Anatomy, Univ. of Mo. Med. Schl., Columbia, Mo. **ANATOMY.**

OVERMAN, James Robert, Prof. of Math. and Dean, Coll. of Liberal Arts, Bowling Green State Univ., Bowling Green, Ohio. **MATHEMATICS.**

OVERMAN, Ralph Theodore, Chmn., Special Trng. Div., Oak Ridge Inst. of Nuclear Studies, Post Office Box 117, Oak Ridge, Tenn. **NUCLEAR CHEMISTRY.** b. Clifton, Ariz., Aug. 9, 1919. s. Rev. C. V. and Elva (Cole) O. Edn.: B.S., Kans. State Tchrs. Coll., 1939; M.S., *ibid.*, 1940; Ph.D., La. State Univ., 1943. m. Frances Henson, 1945. c.: Ralph, Jr.; Ann Frances. Exp.: Hd., Chem. Dept., La. Coll., 1943-44; Technical Supt., Fercleuve Corp., Oak Ridge, Tenn., 1944-45; Sr. Chemist, Oak Ridge Natl. Lab., 1945-48; Chmn., Special Trng. Div., Oak Ridge Inst. of Nuclear Stud-



ies, Oak Ridge, Tenn., 1948—. Mem.: Amer. Chem. Soc.; A.A.A.S.; Sigma Xi; Kappa Delta Pi; Kappa Mu Epsilon; Phi Lambda Upsilon; Sigma Pi Sigma; Rotary. Contrb. to: Jour. Amer. Chem. Soc.; Nucleonics; Jour. Chem. Edn.; Atomic Energy Comm. Reports. Gen. Int.: Young Man of the Year, Oak Ridge, 1952. Special Int.: Radioisotope Rsch. in Standardization and Tehng. of Radioisotopes Techniques.

OVERN, Oswald Benjamin, Prof. of Physics, Concordia Coll., St. Paul, Minn. **PHYSICS.**

OVERPECK, John Clay, Prof. of Agron. and Agronomist, Expt. Sta., N. Mex. Coll. of Agri. and Mech. Arts, State Coll., N. Mex. **AGRONOMY.**

OWEN, E. Robert, Fluorescent Materials, E. I. du Pont de Nemours and Co., Inc., Towanda, Pa. **PHYSICS.**

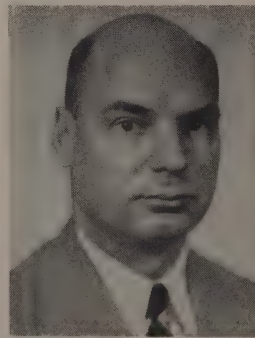
OWEN, Gwilym Emyr, Prof. of Physics, Antioch Coll., Yellow Springs, Ohio. **PHYSICS.**

OWEN, R., VIROLOGIST.

OWEN, Seward E., Supvr. Lab., U. S. Veterans Admin, Hines, Ill. **BIOCHEMISTRY.**

OWENS, Charles Elmer, Prof. and Hd., Dept. of Botany and Plant Pathol., Ore. State Coll., Corvallis, Ore. **PLANT PATHOLOGY.**

OWENS, Conrad Dale, Technical Staff, Bell Telephone Lab., Murray Hill, N. J. **PHYSICS APPLIED IN COMMUNICATION ENGINEERING.** b. Wadesville, Ind., May 15, 1906. s. Flavius Dalton and Elizabeth Margaret (Kolb) O. Edn.: A.B., Ind. Univ., 1928; M.A., Columbia Univ., 1936 m. Josephine Brown, May 16, 1930. c.: Emily Pauline; Mary Josephine. Exp.: Design of Condensers, Loading Coils and Filter Coils, Bell Telephone Labs., Murray Hill, N. J., 1928-41; Design of Inductors and Radar Pulse Networks for Military Applications, *ibid.*, 1941-45; Specialized Studies on Magnetic Materials, *ibid.*, 1945—. Hon. Pos.: Chmn. Subcom. on Magnetic Measurements, IRE. Mem.: Fellow, A.A.A.S.; Inst. of Radio Engrs.; Amer. Physical Soc.; Kappa Delta Rho; Phi Beta Kappa; Chatham Fish and Game Protective Assn. Contrb. to: Bell Labs.



Record; Proc. Inst. of Radio Engrs. Gen. Int.: Elder and Active Laymen, Presbyterian Church, USA. Special Int.: Development, U. S. Patents: Measurement and Application of Magnetic Materials, Especially Magnetic Powers and Ferrites.

OWENS, Frederick William, Prof. and Hd. Dept. of Math., Pa. State Coll., State College, Pa. GEOMETRY

OWENS, Harry Sutphin, Rsch. Chemist, Western Regional Rsch. Lab., Albany, Calif. COLLOID CHEMISTRY.

OWENS, Henry Grady, Assoc. Prof. of Edn. and Dir. Summer Session, Furman Univ., Greenville, S. C. EDUCATION, PSYCHOLOGY.

OWENS, William Abbott, Vice-Pres. and Chmn., Div. of Psychol. and Edn., Winona State Tchrs. Coll., Winona, Minn. PSYCHOLOGY.

OWNBEY, Marion, Asst. Prof. of Botany and Curator Herbarium, State Coll. of Wash., Pullman, Wash. SYSTEMATIC BOTANY.

PACELLA, Bernard Leonard, Psychiatrist and Psychoanalyst, 115 E. 61st St., N. Y. 21, N. Y. **PSYCHOANALYSIS AND SHOCK THERAPY**. b. Toronto, Ont., Can., July 25, 1912. s. Andrew and Sarah (Brick) P. Edn.: M.D., Univ. of Colo., Schl. of Med., 1935. m. Theresa Pacella, Apr. 21, 1937. c.: Karen Joan; Richard Bernard and Madelyn Joyce. Exp.: Rsch. Fellow in Psychiatry, N. Y. Psychiatric Inst., N. Y. C., 1938-40; Asst. Rsch. Psychiatrist, *ibid.*, 1940-44; Assoc. Rsch. Psychiatrist, Acting Chf. of Dept. of Rsch., *ibid.*, 1944-48; In Chg. of Dept. of Electroencephalography, N. Y. Univ., N. Y. C., 1940-51; Attending Psychiatrist, N. Y. State Psychiatrist Inst., N. Y. C., 1951—; Asst. Attending Neurol., *ibid.*, 1951—; Attending Psychiatrist, St. Vincent's Hosp., N. Y. City, 1951—; Dir. of Neurol. and Psychiatry, St. Clare's Hosp., N. Y. C., 1951—; Cons. in Psychiatry, Roosevelt Hosp., N. Y. City, 1951—; Consultant in Psychiatry, St. Joseph's Hosp., Yonkers, N. Y., 1951—; Teacher, Assoc. in Psychiatry, Coll. of Physicians and Surgeons, Columbia Univ., N. Y. City; Lectr. in Psychiatry, N. Y. State Dept. of Mental Hygiene. Mem.: N. Y. Psychoanalytic Soc.; Amer. Med. Assn.; N. Y. State and Co. Med. Soc.; N. Y. Neurol. Soc.; Assn. for Rsch. in Nervous and Mental Disease; N. Y. Soc. for Clin. Psychiatry; A.A.A.S.; Fellow, N. Y. Acad. of Med.; Fellow, Amer. Psychiatric Assn.; Amer. Soc. of Electroencephalographers; Eastern Soc. of Electroencephalographers; Bronx Soc. of Psychiatry and Neurol.; Soc. of Biol. Psychiatry. Author: Modern Trends in Child Psychiatry, 1945. Contrb. to: Amer. Jour. of Physiol.; Jour. of Neurophysiol.; Archives of Pediatrics; Jour. of Comparative Neurol.; Jour. Nervous and Mental Diseases; Psychiatric Quarterly; Proc. of N. Y. Neurol. Soc.; Amer. Jour. of Neurol.; Electroencephalography and Clin. Neurophysiol. Jour. Special Int.: Rsch. in Psychiatry; Neuro-Physiol. and Electroencephalography.

PACK, Dean Alvin, Rsch. Chemist, Griffith Labs., Inc., 1114 W. 41st St., La Grange, Ill. **BOTANY**.

PACKARD, Charles, Dir., Marine Biol. Lab., Woods Hole, Mass. **RADIOBIOLOGY**.

PACKARD, Clyde Monroe, Entomologist in Chg. Div. Cereal Forage Insect Investigation, Bureau Entomol. and Plant Quarantine, Agri. Rsch. Admin., U. S. D. A., Washington, D. C. **ENTOMOLOGY**.

PACKCHANIAN, Ardzoony Arthur, Dir., Lab. of Microbiol. and Prof. of Bacteriol. and Parasitol., Univ. of Tex. Med. Br., Galveston, Tex. **MICROBIOLOGY, TROPICAL MEDICINE, IMMUNOLOGY**. b. Armenia, Nov. 17, 1900. Edn.: M.S., Univ. of Mich., 1930; Ph.D., *ibid.*, 1933. Exp.: Asst. Bacteriol., Med. Schl., Univ. of Mich., 1928-32; Rsch. Bacteriologist and Protozoologist, Schl. of Med., Wash. Univ., St. Louis, Mo., 1933-34; N. Y. Post-Grad. Med. Schl., Columbia Univ., 1934-36; Protozoologist, Natl. Inst. of Health, U. S. Public Health Service, 1936-41; Assoc. Prof. of Bacteriol. and Tropical Med., Schl. of Med., Univ. of Tex., Galveston, Tex., 1941-46; Prof. of Bacteriol. and Parasitol. and Dir., Microbiol. Lab., *ibid.*, 1946—. Hon. Pos.: Relator, Int.-Amer. Med. Congress, Rio de Janeiro, Brazil, 1946. Mem.: A.A.A.S.; Amer. Soc. Parasitol.; Fellow, Royal Soc. Tropical Med. and Hygiene; Soc. Exptl. Biol.; A.M.A.; Public Health Assn.; Genetic Assn.; Soc. Mammalogy; Assn. Tropical Med.; Assn. Immunol. Contrb. to: Sci.; Amer. Jour. Hygiene; Jour. Lab. and Clinical Med.; Amer. Jour. Tropical Med.; Jour. Bacteriol.; Proc. Soc. Exptl. Biol. and Med.; etc. War Record: Capt., U. S. Army, 1942-45. Special Int.: Antiseptics and Disinfectants; Bacterial Variations; Micrurgy, Tissue Culture; Trypanosomes; Spirochetes; Endamoeba Histolytica; Cultivation of Protozoa; Electrophoresis; Relapsing Fever; Rat-Bite Fever; Nagana; Murrina, Toxicity Tests; Chagas' and Weil's Diseases; Epidemic Jaundice; Yellow Fever; Transmission Diseases by Insects; Immunochem.; Epidemiol.

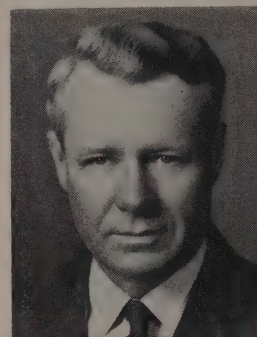
PACSU, Eugene, Frick Chem. Labs., Princeton Univ., Princeton, N. J. **CHEMISTRY**.

PADDOCK, Floyd B., Extension Prof. of Agri. and State Apiarist, Iowa State Coll., Ames, Iowa. **ENTOMOLOGY**.

PADDOCK, Wendell, Prof. of Horticulture Emer., Mich. State Coll., East Lansing, Mich.; 1085 Westwood Ave., Columbus, Ohio. **HORTICULTURE**.

PADY, Stuart McGregor, Assoc. Prof. of Botany, McGill Univ., Montreal, Que., Can. **MYCOLOGY**.

PAFFENBARGER, George Corbly, Sr. Rsch. Assoc. of the Amer. Dental Assn., Natl. Bureau of Standards, Washington 25, D. C. **DENTAL MATERIALS**. b. McArthur, Ohio, Nov. 3, 1902. s. Dr. Andrew Wolf and Ida Priscilla (Seal) P. Edn.: D.D.S., Ohio State Univ., 1927-28; Hon. Deg.: D.Sc., Ohio State Univ., 1944. m. Rachel Ada Appleman on July 9, 1925. c.: George C., Jr.; Gretchen; Anne. Exp.: Externe, Palama Settlement Dental Clinic, Honolulu, T. H., 1925-27; Instr., Coll. of Dentistry, Ohio State Univ., 1927-28; Rsch. Assoc., Amer. Dental Assn., Natl. Bureau of Standards, Washington, D. C., 1929-42; U. S. Navy Dental Corps, 1942-46; Rsch. Assoc., Amer. Dental Assn., Natl. Bureau of Standards, Washington, D. C., 1946—. Mem.: Amer. Dental Assn.; Internatl. Assn. for Dental Rsch.; Amer. Coll. of Dentists; A.A.A.S.; N. Y. Acad. of Dentistry; Xi Psi Phi; Omicron Kappa Upsilon; Phi Sigma; Sigma Xi. Co-Author: Physical Properties of Dental Materials, 1942. Contrb. to: Jour. Amer. Dental Assn.; Jour. of Dental Rsch. War Record: U. S. Navy Dental Corps, 1942-46; Commodore (1945). Special Int.: Phys. and Chem. of Dental Materials.



PAFFORD, Ray W., Acme Brick Co., Box 425, Fort Worth 1, Tex. **CERAMICS**.

PAGE, Ben Markham, Assoc. Prof. of Geol., Stanford Univ., Stanford, Calif. **PHYSICAL GEOLOGY**.

PAGE, Charles Hunt, Prof. Sociol., Smith Coll., Northampton, Mass. **SOCIOLOGY**. b. April 12, 1909, Tonawanda, New York. s. Ralph and Laura (Hunt) P. Edn.: A.B., Univ. of Ill., 1931; Ph.D., Columbia Univ., 1939. m. Leonora McClure of N. Y., N. Y., June 15, 1936. d. Robert and Edith McClure. Exp.: Tchrr., Birch-Wathen Schl., N. Y., 1931-33; Instr., City Coll. N. Y., 1933-40; Field Sec., Natl. Ref. Serv., 1940-41; Lectr., Sociol., Grad. Schl., Columbia Univ., 1941-42; Prof., Sociol., Smith Coll., 1946-52; Prof. Sociol. and Anthropol., City Coll. of N. Y., N. Y. C., 1952-53; Prof. Sociol., Smith Coll., Northampton, Mass., 1953—. Mem.: Amer. Sociol. Soc.; N. E.A.; A.A.U.P.; A.A.A.S.; Amer. Acad. Polit. and Soc. Sci.; Phi Delta Kappa; Sigma Phi Sigma. Author: Class and Amer. Sociol., 1940; Soc.: An Introductory Analysis, 1949. Travel: S. Pac.; P. I.; U.S. War Record: U.S. N. R., 1942-46. Hobbies: Theatre; Sports. Listed in: Who's Who in New England; Who's Who in America.



PAGE, Frederick Smythe, Prof. of Biol., Dartmouth Coll., Hanover, N. H. **BOTANICAL SCIENCES**.

PAGE, John Lorence, Assoc. Prof. of Geography, Univ. of Ill., Urbana, Ill. **GEOGRAPHY**.

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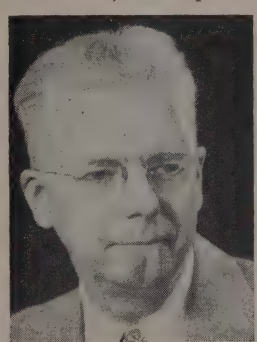
PAGE, Edgar J., Chf. Chemist, Rsch. Div., Belding Heminway Corticelli, Putnam, Conn. **CHEMISTRY**



OF TEXTILES AND HIGH POLYMERS. b. Putnam, Conn., Nov. 7, 1919. s. Eugene J. and Mary Anne (Durand) P. Edn.: B.S., Marianapolis Coll., 1943; M.S., Boston Coll., 1949. m. Eleanor Cournoyer, May 12, 1945. Exp.: Chemist, Belding Heminway Corticelli, Putnam, Conn., 1943-45; Control Chemist, Natl. Chromium Co., Putnam, Conn., 1942-44; Instr., Marianapolis Acad., Thompson, Conn., 1944-45; Rsch. Chemist, Belding Heminway Corticelli, Putnam, Conn., 1945-51; Chf.

Chemist, *ibid.*, 1951—. Hon. Pos.: Mem. Exec. Bd., Conn. Valley Section, Amer. Chem. Soc. Mem.: A.C.S.; A.A.A.S.; N. Y. Acad. Sci.; Soc. of Rheology; Biological Photographic Assn.; Amer. Assn. Text. Chem. and Colorists; Tech. Div., P.S.A. Special Int.: Cellulose Chem.; Wetting and Detergency; Colorimetric Analysis; High-Polymer Reactions.

PAGE, Robert Morris, Assoc. Dir. of Rsch. for Electronics, and Supt. Radio Div., III, Naval Rsch. Lab., 5400 Branch Ave., Washington 23, D. C.



ELECTRONICS. b. St. Paul, Minn., June 2, 1903. s. Clarence Quincy and Lillie (Wintermute) P. Edn.: B.S., Hamline Univ., 1927; M.S., George Washington Univ., 1932. Hon. Deg.: D.Sc., Hamline Univ., 1943. m. Signe Astrid Benson, June 16, 1928. c.: John Robert; Jennifer Jeanne; Morris LaVern. Exp.: Physicist and Electronics Scientist, U. S. Naval Rsch. Lab., Washington 25, D. C., 1927—. Mem.: Sigma Chi;

Kappa Phi; Eta Phi; Natl. Geophys. Union; Acoustical Soc. of Amer.; Fellow A.A.A.S.; Fellow and Mem., Bd. of Editors, I.R.E.; Amer. Natl. Com. (U.R.S.I.), Rsch. Soc. of Amer. Contrib. to Proc. of the Inst. of Radio Engrs. Special Int.: Radar; Precision Elec. Instrumentation; Communication Engineering.

PAIGE, Beryl Holmes, Asst. Prof. of Pathol., Coll. of Physicians and Surgeons, Columbia Univ., N. Y., N. Y., **PATHOLOGY.**

PAIGE, Sidney, Prin. Geologist, North Atlantic Div. U. S. Engrng. Corps, 111 E. 116th St., N. Y., N. Y. **GEOLOGY.**

PAINE, Harold William, Dir., Chem. Div. Lab., E. I. du Pont de Nemours and Co., Inc., 626 Schuyler Ave., Arlington, N. J. **RESEARCH CHEMISTRY.**

PAINTER, Henry Raymond, Entomologist, Retired, 705 Bexley Rd., W. Lafayette, Ind. **ENTOMOLOGY.**

PAINTER, Theophilus Shickel, Univ. of Tex., Austin 12, Tex.

PALACHE, Charles, Box 205D, R. D. No. 3, Charlottesville, Va.

PALLISTER, Hugh Davidson, Consulting Geologist, Geol. Survey of Ala., Univ. of Ala., University, Ala. **GEOLOGY.** b. Cleveland, Ohio, May 31, 1883. s. John and Clara Virginia (Davidson) P. Edn.: B.S., Case Inst. of Tech., 1906, E.M., 1914. m. Elizabeth Marion Beavis in 1911. d. John and Margaret B.; 2nd: Clara Maybelle Stith in 1947.

d. John and Lou Ella S. c.: Hugh Davidson, Jr.; Clara Emma; John Stith. Exp.: Mining Engr., Chisos Mining Co., Tex., 1906-08; Instr., Case Inst., 1908-10; Instr. and Asst. Prof., Mining Engrng., Pa. State, 1910-15; Prof. and Hd., Dept. of Geol. and Mining, Tex. Schl. of Mines, 1915-19; Gen. Supt., Ky. Coal Operations, McKinney Steel Co., 1919-21; Prof. of Mining Engrng. and Dir., Schl. of Mines, and State Mining Expt. Sta., Univ. of Ala., 1921-29; Vice-Pres., Mech. Dev. Co., Cleveland, 1929-42; Mining Engr., U. S. Bur. of Mines, Tuscaloosa, 1942-45; Rsch. Prof. on Iron and Steel Indus. in Southeast, Schl. of Mines and Schl. of Commerce, Univ. of Ala., 1945-47; Sr. Geol., Geol. Survey of Ala., 1947-52; Consulting Geologist; Geological Survey of Ala., 1952—. Mem.: Ala. Acad. of Sci.; A.A.A.S.; Amer. Inst. of Mining Engrs.; Amer. Ord. Assn.; Chi Phi; Tau Beta Pi; Sigma Xi; Theta Tau; Mason; Kiwanis. Author: Preliminary Investigation of the Lignite Deposits of S. Ala., 1950; and Many Others. War Record: World War II, U. S. Bur. of Mines. Travel: Canada; Mexico; U. S. Hobbies: Raising Timber; Study of Rocks and Minerals. Listed in: A.M.S.; Internatl. Who's Who; Who's Who in the Southeast and Southwest.

PALMER, C. E., Inst. of Geophysics, Univ. of Calif. at Los Angeles, Los Angeles 24, Calif. **METEOROLOGY.**

PALMER, Dewey H., Rsch. Dir., Hosp. Bureau Standards and Supplies, 247 Park Ave., N. Y., N. Y. **COMMODITY RESEARCH.**

PALMER, Edmund Frank, Dir., Horticultural Expt. Sta., Ontario Dept. of Agri., Vineland Station, Ontario, Can. **PLANT BREEDING.**

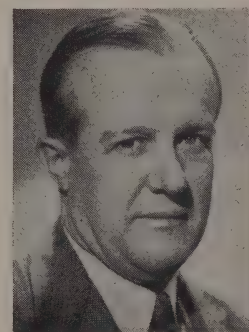
PALMER, Elton Mayhew, Physicist, Gulf Rsch. and Development Co., P. O. Box 2038, Pittsburgh, Pa. **GEOPHYSICS.**

PALMER, Ephraim Laurence, Prof. of Rural Edn. and Editor, Cornell Rsch. Schl. Leaflet, Cornell Univ., Ithaca, N. Y. **NATURE STUDY, CONSERVATION.**

PALMER, Ernest Jesse, Collector and Rsch. Asst., Arnold Arboretum, Harvard Univ., Jamaica Plain, Mass. **BOTANY, GEOLOGY.**

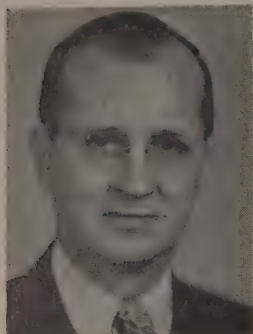
PALMER, Frederic, Jr., Prof. Emer. Physics, Haverford Coll., 1 College Lane, Haverford, Pa. **PHYSICS.**

PALMER, George David, Jr., Hd., Dept. of Org. Chem., Univ. of Ala., Univ. Ala. **ORGANIC CHEMISTRY.** b. Helena, Ark., Dec. 7, 1897. s. George David and Sophie (Ladd) P. m. Maude Roberts Collins of Geneva, Ala., Dec. 28, 1928. c.: George David.



III. Edn.: Clemson Coll., B.S., 1919; Johns Hopkins Univ., M.A., 1921; Johns Hopkins, Ph.D., 1924. Exp.: Asst. Bur. of Standards, 1919; Hd., Dept. of Chem., Guilford Coll., 1921-22; Instr., Organic Chem., Kans. State Coll., 1924-25; Asst. Prof., Organic Chem., Kans. State Coll., 1925-27; Asst. Prof. of Chem., Univ. of Ala., Chem., *ibid.*, 1930-45; Prof., Hd., Dept. of Org. Chem., *ibid.*, 1945—. Mem.: A.A.A.S. (Fellow); Hopkins Club; Amer. Chem. Soc.; Ala. Acad. of Sci. (Pres.,) 1939-40; Ala. Edn. Assn.; Gamma Sigma Epsilon; Sigma Xi; Hon. Mem., C. of C. of the South; Founder and First Pres. of the South Assn. of Sci. and Indus.; First S.A.S.I. Award, 1947, for work in Sci. in South; Mason. Ph.D. Dissertation: Influence of Sulphur on Color of Azo Dyes. Author: Introduction to Organic Chem.; The Inside of the Atom and Chapt. on "Hydrolysis" in "Unit Processes in Organic Synthesis"; Many Papers on "Sulfur Org. Compounds" and "Lignin."

PALMER, John Frank, Jr., Rsch. Group Leader, Monsanto Chem. Co., 1700 S. Second Street, St. Louis 4, Mo. **PETROLEUM CHEMISTRY; PHYSICAL CHEMISTRY.** b. Cedar Rapids, Iowa, Oct. 23, 1915. s. J. Frank and Charlotte E. (Wagner) P. Edn.: B.A., Coe Coll., 1937; Ph.D., Iowa State Coll., 1941. m. Mildred Draughon, March 29, 1944. c.: Patricia Sue; Linda Fay; Judith Ann; Marjory Ann. Exp.: Rsch. Chemist, Monsanto Chem. Co., St. Louis, Mo., 1941-47; Rsch. Group Leader, *ibid.*, 1947—. Mem.: Amer. Chem. Soc.; Amer. Soc. Lib. Engrs.; Alpha Chi



Sigma. War Record: Capt., C.W.S., 1942-46. Special Int.: Chem. Agents for Addition to Lubricating Oils; Methods of Testing, Synthesizing and Commercial Manufacture; Spectroscopy, Particularly Absorption Studies.

PALMER, Martin F., **SPEECH AND HEARING.**

PALMER, Miriam Augusta, Asst. Prof. Emeritus, Colo. A. and M. Coll., 621 S. Howes St., Fort Collins, Colo. **ENTOMOLOGY; TAXONOMY.** b. Mont Claire, Pa., Aug. 28, 1878. d. Samuel S. and Henrietta (Werner) P. Edn.: B.A., Univ. of Kans., 1903; M.A., *ibid.*, 1904; M.S., Colo. A. and M. Coll., 1926. Exp.: Delineator and Asst. Prof. of Entomol., Colo. A. and M. Coll., Fort Collins, Colo., 1904-26; Delineator and Assoc. Prof., *ibid.*, 1926-40; Delineator and Asst. Prof., *ibid.*, 1940-47; Retired, *ibid.*, 1947. Mem.: Phi Beta Kappa; Sigma Xi; Fellow, A.A.A.S.; Fellow, Entomological Soc. of Amer.; Soc. Systematic Zool. Contrb. to: Jour. Econ. Entomol.; Annals Entomol. Soc. Amer. Special Int.: Entomology; Aphidae.

PALMER, Ralph Mallory, Pres., Ferro-Nil Corp. and Public Service Testing Labs., Inc., 381 Fourth Ave., N. Y., N. Y. **CHEMICAL ENGINEERING.**

PALMER, Ralph S., N. Y. State Museum, Albany, N. Y. **ORNITHOLOGY AND MAMMALOLOGY.**

PALMER, Theodore Sherman, retired, 1939 Biltmore St., N. W., Washington, D. C. **ORNITHOLOGY, BIOGRAPHY.**

PALMER, Walter Walker, Bard Prof. of Med., Columbia Univ., N. Y., N. Y. **INTERNAL MEDICINE.**

PALMQUIST, Edward Marshall, Prof. of Botany, Univ. of Mo., Columbia, Mo. **GENERAL BOTANY, PLANT PHYSIOLOGY.**

PALSGROVE, Grant Knauer, Prof. of Mech. and Hydraulic Engrng., Rensselaer Polytech. Inst., Troy, N. Y. **HYDRAULICS AND WATER POWER.** b. Oct. 1, 1888., Pottstown, Pa. s. James Lincoln and Mary Elizabeth (Knauer) P. Ancestry: German. Edn.: M.E., Rensselaer Polytech. Inst., 1911; P.E., Univ. of the State of N. Y., 1923. m. Elsie May Adams of Wilmington, Del., Sept. 4, 1911. d. Joseph E. and Ella Louise Leidv Adams. Exp.: Prof. Hydraulic Engrng., R.P.I., Troy, N. Y., 1920; Sec. of Faculty, *ibid.*, 1920-44; Consultant and Tech. Expert, Sou. States Power Co., 1938-44; Consul. for W. and L. E. Gurley Co., Hyd. Dept., 1939-49; Consult. Practice for D. and H. R. Co., Blue Ribbon Potato Chip Co., Cluet Peabody Co.; Parkersburg Rig and Reel Co.; Doehler-Jarvis Die Casting Corp., 1948-50; Mem., Edn. Staff of Municipal Trng. Inst. of N. Y., 1937-40; Federation for Railway Progress; Chmn. of the Bd. of Dir., Renss. Central Rwy. Co., 1938—. A.S.M.E. Rep., Engrng. Sect. of Natl. Safety Coun. on Safety Code for Walking Surfaces, 1939—. Mem.: Amer. Soc. of Mech. Engrs., Hon. Chmn., Rensselaer Student Br., 1924-29, 1937-40; Internatl. Assn. for Hydraulic Rsch.; A.A.A.S. (Fellow); The Franklin Inst.; Soc. for Promotion of Engrng. Edn., Vice-Chmn., Mid-Atlantic States

Sect., 1936-37; Amer. Soc. for Engrng. Edn., Natl. Coun. Rep., Upper N. Y. Sect., 1946-54; Soc. of Engrs. of E. N. Y., Pres., 1930-31 and Life Mem. of Bd.; Soc. of Amer. Milit. Engrs.; Amer. Acad. of Polit. and Social Sci.; Soc. for the Adv. of Edn.; Natl. Soc. of Professional Engrs.; N. Y. State Soc. of Professional Engrs., Pres., Renss. Co. Chapt., 1935-36; Amer. Adv. Coun. of Yenching Univ., Peiping, China; Life Mem., Hui O. Pele Hawaii; Hon. Mem., Eugene Field Soc., Natl. Assn. Authors and Journalists; Hon. Mem. Internatl. Mark Twain Soc.; Natl. Geographic Soc.; Natl. Travel Club; The Scientific Rsch. Soc. of Amer.; Sigma Xi; Pres., Rensselaer Chapt., 1928-29; Tau Beta Pi; Adv. Bd. Gamma of N. Y. Chapt., 1936—; Pi Tau Sigma; Rensselaer Phi Chapt. Adviser, 1940—; Pi Gamma Mu; Pi Kappa Phi; Alpha Tau Chapt. Adv., 1931—; Square and Compass; Masonic Knight Templar and Shrine. Author: Solution of Spec. Problems in Pipe Flow by Graphical Analysis; Variable Flow of Fluids, Contrb. to: A.S.M.E. Jour.; Jour. of Amer. Water Works Assn.; Water Works Engrng.; Engrng. News Record. War Record: U. S. Fuel Admin., Rensselaer Co. Power Plant Inspector During World War I, Licensed Professional Engr., State of N. Y. Travel: Extensively through All States of U. S.; All Provinces of Canada; Alaska; Mexico; Brazil; Uruguay; Argentina; Chile; Peru; Ecuador; Colombia; Panama; Cuba; England; Scotland; Holland; Belgium; Germany; Switzerland; Italy; France; Norway; Sweden; Denmark; Hawaiian Islands of Oahu; Maui; Hawaii; Samoa; Fiji; New Zealand; Tahiti; Australia. Hobbies: Reading; Travel. Listed in: Who's Who in Amer.; Internatl. World Who's Who; Who Knows—The Book of Authorities; Who's Who in Engrng.; Who's Who in the Eastern U. S.; A.M.S.; Who's Who in Masonry (England); Who's Who in Western Hemisphere; Who's Who in Commerce and Indus.

PANKRATZ, David Schultz, Prof. of Anatomy, Dean, Schl. of Med., Univ. of Miss., Oxford, Miss. **ANATOMY.**

PAPAGEORGE, Evangeline Thomas, Asst. Prof. of Biochem., P. O. Box 747, Emory Univ., Ga. **BIOCHEMISTRY.**

PAPANICOLAOU, George N., **STERILITY.**

PAPPENHAGEN, Louis Abelly, Prof. of Chem., Mt. Union Coll., Alliance, Ohio.

PAPPENHEIMER, John, Jr., Harvard Univ., Cambridge, Mass. **PHYSIOLOGY.**

PARFITT, Elliott Hill, Asst. Exec. Secy., Evaporated Milk Assn., 228 N. La Salle St., Chicago 1, Ill. **BACTERIOLOGY AND SANITATION.** b. Brooklyn, N. Y., July 2, 1897. s. Albert E. and Jessie (Deacon) P. Edn.: B.S., Toronto Univ., 1918; M.S., Purdue Univ., 1924; Ph.D., Iowa State Coll., 1934. m. Mildred Christman, Sept. 7, 1921. c.: Charles Robert and Thomas Elliott. Exp.: Instr., Univ. of Md., College Park, Md., 1919-20; Asst. in Bacteriol., U. S. Dept. of Agri., 1920-21; Prof. of Dairy Bacteriol., *ibid.*, 1921-40; Dir. of Sanitary Standards, Evaporated Milk Assn., 1940-50; Asst. Exec. Secy., Evaporated Milk Assn., Chicago, Ill., 1950—. Mem.: Amer. Pub. Health Assn.; Sigma Xi; Phi Kappa Phi; Kappa Alpha. Contrb. to: Jour. of Dairy Sci.; Jour. of Bacteriol.; Jour. of Amer. Pub. Health; Milk and Food Tech. Special Int.: Bacteriol. in Sanitation; Influence of Machine Design on Sanitation; Procedures for Evaluating Sanitary Quality of Milk and Its Products.

PARDEE, Joseph Thomas, retired, Philipsburg, Mont. **GEOLOGY.**

PARK, Hubert Vern, Assoc. Prof. of Math., N. C. State Coll., Raleigh, N. C. **MATHEMATICS.** b. Salisbury, N. C., Dec. 29, 1911. s. J. B. and Pearl V. (Trexler) P. Edn.: A.B., Lenoir Rhyne Coll., 1931; M.A., Univ. of N. C., 1933; Ph.D., *ibid.*, 1939. m. Mary Alice Herman, Mar. 31, 1934. c.: Richard; Elizabeth; Alice; Robert. Exp.: Instr. in Math., N. C. State Coll., 1934-39; Asst. Prof. in Math., *ibid.*, 1939-44; Visiting Assoc. Prof. in Math., Duke Univ., summer 1944; Assoc. Prof. of Math., N. C. State Coll., Raleigh, N. C., 1944—. Mem.: Amer. Math. Soc.; A.S.E.E.; N. C. Acad. Sci.; Sigma Xi; Sigma Chi. Special Int.: Algebra and Numerical Analysis.

PARK, Harold Francis, Sr. Scientist in Rsch. Dept., Monsanto Chem. Co., Springfield, Mass. **EMULSION TECHNOLOGY, POLYMERIZATION, CARCINOGENESIS**. b. East



Corning, N. Y., June 19, 1914. s. Gerald R. and Alice (Miller) P. Edn.: B.S., Rennesslaer Poly. Inst., 1936; M.S., ibid., 1937; Ph.D., Univ. of Mass., 1952. m. Edna Linen, 1936. c.: Nancy; Beverly. Exp.: Analytical Chemist, Hampden Color and Chem. Co., Springfield, Mass., 1937-38; Rsch. Chemist, ibid., 1938-40; Asst. Supt. in Chg. of Rsch. and Prod., ibid., 1940-44; Rsch. Chemist, Monsanto Chem. Co., Springfield, Mass., 1944-46; Sr. Scientist of Plastics Div., ibid., 1946—. Hon. Pos.: Chmn. of Publicity Comm. Amer. Chem. Soc., 1951-52. Mem.: Amer. Chem. Soc.; A.A.A.S. Author: Phys. Chem. of Emulsions. Contrb. to: Jour. of Amer. Chem. Soc.; Jour. of Phys. Chem. Gen. Int.: 27 Patents. Special Int.: Reactions of Unpaired-Electron Molecules in Homogeneous and Heterogeneous Media.

PARK, Jay B., Weslaco Hotel, Weslaco, Tex. **BOTANICAL SCIENCES**.

PARK, John Callaway, Prof. of Civil Engrng., Dean of Coll. of Engrng., Univ. of Ariz., Tucson, Ariz. **CIVIL AND HIGHWAY ENGINEERING**. b. Dnksburg, Mo., Aug. 12, 1888. s. Wm. and Oda (Fisher) P. Edn.: B.S., Univ. of Ariz., 1926; Central Mo. State Tehrs. Coll.; M.S., Ia. State Coll., 1930. m. Marjorie A. Nelson of Owatonna, Minn., 1922. d. Mr. and Mrs. S. R. Nelson. c.: John Nelson. Exp.: Mo. Public Schl., 1907-16; Corp. Exec. Dept. of Civil Engrng., Univ. of Ariz., 1926—; Designer for Engrg. Rsch. and Development Labs. During World War II. Mem.: Amer. Soc. for Engrng. Edn.: Highway Rsch. Bd. of the Natl. Acad. of Sci.; Amer. Soc. of C.E.; Past Chmn., Comm. on Ednl. Policy, C.E. Dept.; Past Chmn., Pacific Southwest Sect.; Past Chmn. Comm. on Tehng. of Highway Engrng. for Amer. Roadbuilders Assn.; Natl. Soc. Pro. Engrs.; Tau Beta Pi; Theta Tau; Kiwanis; Newcomen Soc. Contrb. to: Amer. Soc. for Engrng. Edn. Jour.; Proc. Amer. Rd. Builders Assn.; Engrng. News-Record. Listed in: Who's Who in Engrng.; A.M.S.; Who's Who in the South and Southwest.

PARK, Orlando, Prof., Dept. of Zool., Northwestern Univ., Evanston, Ill. **ECOLOGY**.

PARK, Oscar Wallace, Rsch. Assoc. Prof. of Agri., Iowa State Coll., Ames, Iowa. **AGRICULTURE**.

PARK, Robert Hiram, Cons. Engr. and Physicist; 36 Pearl St., Hartford, Conn.

PARK, Thomas, Assoc. Prof. of Zool., Univ. of Chicago, Chicago, Ill. **POPULATION ECOLOGY**.

PARKER, Allan Elwood, Prof. of Physics, Worcester Poly. Inst., Worcester, Mass. **OPTICS**.

PARKER, Dorothy Inez, Botanist and Bibliographer, Rockefeller Foundation, Calle Viena 26, Mexico, D. F., Mex. **BOTANY**.

PARKER, Edwin Robert, Assoc. Horticulturist, Expt. Sta., Univ. of Calif. Citrus Expt. Sta., Riverside, Calif. **HORTICULTURE**.

PARKER, Frederic, Jr., Pathologist-in-Chg. and Assoc. Prof. of Pathol., Harvard Med. Schol., Boston, Mass. **PATHOLOGY**.

PARKER, George Howard, Prof. Emer. Zool., Harvard Univ. Zool. Lab., 16 Berkeley St., Cambridge, Mass. **ZOOLOGY**.

PARKER, Henry Cole, Patent Attorney, Natl. Press Bldg., Washington, D. C. **PHYSICAL CHEMISTRY**.

PARKER, Howard Edgar, Supt. of Production, Paul B. Elder Co., Bryan, Ohio. **PHYSICAL CHEMISTRY**.

PARKER, Hugh Klemme, Asst. Dir. of Rsch., Novadel-Agene Corp., Belleville, N. J. **CHEMISTRY**.

PARKER, John Huntington, Dir., Midwest Barley Improvement Assoc., 407 Underwriter's Exchange Bldg., 828 N. Broadway, Milwaukee, Wis. **PLANT BREEDING**.

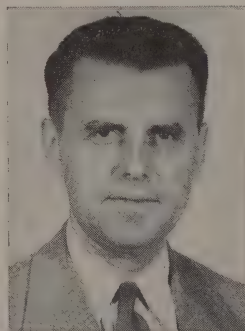
PARKER, John Robert, Entomologist, Chf. Grasshopper Rsch. Lab., Bureau Entomol. and Plant Quarantine, U. S. D. A., Bozeman, Mont. **ENTOMOLOGY**.

PARKER, Kenneth G., Assoc. Prof. of Plant Pathol., Cornell Univ. Ithaca, N. Y. **PLANT PATHOLOGY**.

PARKER, Marion W., Sr. Plant Physiologist, U. S. D. A., Bureau Plant Indus. Sta., Beltsville, Md. **PLANT PHYSIOLOGY**.

PARKER, Melbourne Carroll, Geneticist, Gallatin Valley Seed Co., Bozeman, Mont. **GENETICS**.

PARKER, Milton Ellsworth, Dir. and Prof. of Food Engrng., Ill. Inst. of Tech., Chicago, Ill. **CONSULTING FOOD ENGINEER**. b. New Bedford, Mass., Oct. 26, 1899. s. Franklin and Martha (Dahl) P. Edn.: S.B., Mass. Inst. of Tech., 1923. m. Louise Smith of Vineyard Haven, Mass., July 18, 1925. d. Jesse and Mary S. c.: Brian Prescott; Oriana Joy. Exp.: Rsch. Assoc., Mass. Inst. of Tech., 1924; Dir. of Lab., Walker-Gordon Lab. Co., Plainsboro, N. J., 1925; Dir. of Lab., Phila. Dairy Products Co., 1926-27; Dairy Technol., Rsch. Labs., Natl. Dairy Products Corp., Baltimore, Md., 1928-29; Dir., Regional Rsch. Lab., Natl. Dairy Products Corp., Danville, Ill., 1930-36; Mgr. of Production, Beatrice Foods Co., 1936-44; Counselor in Food Production Development, Chicago, Ill., 1944 to date. Hon. Pos.: Councilor and Chmn. Chicago Section, Inst. of Food Tech.; Dir., Amer. Dairy Sci. Assn., 1938-41; Mem. Governing Coun., Food and Nutrition, Section A.P.H.A. Mem.: Amer. Dairy Sci. Assn.; Inst. Food Tech.; Fellow and Life Mem., A.P.H.A.; A.S.E.E.; A.C.S.; Amer. Soc. of Mech. Engrs.; Fellow; Amer. Inst. of Chem.; Amer. Assn. of Engineers; Sigma Xi. Author: Food Plant Sanitation, 1948. War Record: Special Consultant to the Quartermaster Gen., Mem. 3rd Army Orientation Course, Ft. Leavenworth, Kan., 1944; Mem. Advisory Bd., Milit. Planning Div. Office of the Quartermaster Gen. Travel: U. S.; Canada; Mexico. Hobbies: Hunting; Gardening. Listed in: A.M.S.; Who's Who in the Middle West; Who Knows— and What; Who's Who in Chicago and Ill.; Chem. Who's Who.



PARKER, Ralph Langley, Prof. Agriculture, Entomol., Kans. State Coll., Manhattan, Kans. **ENTOMOLOGY**.

PARKER, Ralph Robinson, Dir., Rocky Mountain Lab., U. S. P. H. S., Hamilton, Mont. **MEDICAL ENTOMOLOGY**.

PARKER, Raymond Crandall, Rsch. Assoc., Connaught Med. Rsch. Lab., and Lectr., Schl. of Hygiene, Univ. of Toronto, Toronto, Ont., Can. **CELLULAR BIOLOGY**.

PARKER, Walter Huntington, Prof. of Mining, Univ. of Minn., Minneapolis, Minn. **MINING AND PETROLEUM ENGINEERING**.

PARKER, Walter Robert, Prof. Emer. Ophthalmol., Univ. of Mich., Ann Arbor, Mich.; 1 Woodland Pl., Grosse Pointe, Mich. **OPHTHALMOLOGY**.

PARKS, George Sutton, Prof. of Chem., Stanford Univ., Stanford, Calif. **PHYSICAL CHEMISTRY.**

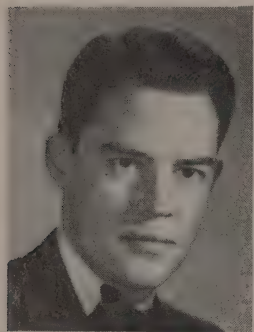
PARKS, Hal B., Dentist, Div. Dentistry, State Health Dept., 627 W. 34th St., Austin, Tex. **DENTISTRY.**

PARKS, Harold E., Assoc. Curator, Univ. of Calif., Berkeley, Calif. **MYCOLOGY.**

PARKS, Lloyd McClain, Prof. of Pharmaceutical Chem., Univ. of Wis., Madison, Wis. **PHARMACEUTICAL CHEMISTRY.**

PARKS, Wilbur George, Prof. of Chem. and Consulting Chemist, R. I. State Coll., Kingston, R. I. **CHEMISTRY.**

PARLIN, Ransom B., Asst. Prof. of Chem., Univ. of Utah, Salt Lake City, Utah. **PHYSICAL CHEMISTRY.**



1922. s. Elwyn and Madeleine (Slee) P. Edn.: B.A., Cornell Coll., 1943; M.A., 1944, Ph.D., 1947, Princeton Univ. Exp.: Asst., Princeton Univ., 1943-44; Asst., ibid., 1944-46; Instr., ibid., 1946-47; Rsch. Assoc., Textile Res. Inst., 1947; Instr., Univ. of Utah, 1947-48; Asst. Prof., ibid., 1948 to date. Mem.: Phi Beta Kappa; Sigma Xi; Sigma Pi Sigma; A.A.U.P.; A.C.S. Author: L. Farkas Memorial Volume on Kinetics, 1951. Contbr. to: Chem. Reviews; Jour. Chem. Phys. Ph.D. Dissertation: Theory of Detonations. Hobbies: Music; Lit. Listed in: A.M.S. Special Int.: Catalysis, Theory of Detonation; Theory of Liquids.

PARMAN, Daniel Cleveland, Entomologist in Chf., Uvalde Tex. Lab., U. S. Bureau Entomol. and Plant Quarantine, Washington, D. C. **ENTOMOLOGY.**

PARMELE, Harris B., Chf. Chemist, P. Lorillard Co., Middletown, Ohio. **BIOCHEMISTRY.**

PARMENTER, Charles L., Prof. of Zool., Univ. of Pa., Philadelphia, Pa. **CYTOLOGY.**

PARMENTER, George Freeman, Prof. and Hd., Dept. of Chem., Colby Coll., Waterville, Maine. **CHEMISTRY.**

PARR, Harry L., Stevens Prof. Emer., Mech. Engrng., Columbia Univ., 35 Gilbert Pl., Yonkers, N. Y. **MECHANICAL ENGINEERING.**

PARR, Leland Wilbur, Prof. of Bacteriol., George Washington Univ., 1335 H St., N. W., Washington 5, D. C. **BACTERIOLOGY, PUBLIC HEALTH.** b. Cooksville, Ill., Nov. 2, 1892. s. Marion Elmer and Edna May (Brigham) P. Edn.: S.B., Univ. of Chicago, 1916; Ph.D., ibid., 1923. m. Grace Gormley, June 16, 1915. c.: Patricia; Robert. Exp.: Instr. in Sci., Assiut Coll., Assiut, Egypt, 1916-19; Asst. to Assoc. Prof., Amer. Univ. of Beirut, Beirut, Syria, 1923-30; Assoc. Prof., Univ. of Chicago, Chicago, Ill., 1930 and in Extension to 1932; Chf. Bacteriologist, Rsch. Lab., Rockefeller Foundation, Andalusia, Ala., 1931-32; Assoc. Prof. to Prof. and Dept. Hd., George Washington Univ., Washington, D. C., 1932—. Hon. Pos.: Pres., Wash. Acad. Sci.; Secy.-Treas., Soc. of Amer. Bacteriologists; First Secy., later Chmn., Conf. of Profs. of Preventive Med. Mem.: Soc. Amer. Bacteriologists; Amer. Public Health Assn.; Amer. Genetic Assn.; Soc. for Exptl. Biol. and Med.; Amer. Soc. for Exptl. Pathol.; Phi Beta Kappa; etc. Co-author: Anthropology of the Near East, 1930. Contbr. to: Jour. of Bacteriol.; Bacteriol. Rev.; Jour. Amer. Water Works Assn.; Jour. Wash. Acad. Sci.; Jour. A.M.A.; Jour. Southern Med. Assn.; Jour. Amer. Public Health Assn.; Science; etc. War Record: Consultant in Infectious Diseases, Office of the Surgeon General, Preventive Med., World

War II. Special Int.: Bacteriol. Ecology, particularly in the Enteric Field, Tuberculosis in Med. Students; Med. Edn.; The Health Team.

PARR, Rosalie M., Assoc. Chem., Univ. of Ill., Urbana, Ill. **CHEMISTRY.**

PARR, Thaddeus, Sr. Rsch. Entomologist, White-marsh Rsch. Labs., P. Salt Mfg. Co., P. O. Box 4288, Chestnut Hill, Pa. **ENTOMOLOGY.**

PARROTT, Percival John, retired, 386 Castle St., Geneva, N. Y. **ENTOMOLOGY.**

PARSEGAN, V. Lawrence, Dir. of Rsch., Portable Products Corp., C. J. Tagliabue Div., 540 Park Ave., Brooklyn, N. Y. **INSTRUMENTOLOGY, NUCLEAR PHYSICS.**

PARSHALL, Ralph Leroy, Chf. Irrigation Investigations, U. S. D. A., Colo. Agri. Expt. Sta., 926 Akin Ave., Fort Collins, Colo. **ENGINEERING.**

PARSHLEY, Howard M., Prof. of Zool., Smith Coll., Northampton, Mass. **ENTOMOLOGY.**

PARSONS, Dickson Ward, Tch.-Trainer, Vocational Agri., Coll. of Agri., W. Va., Morgantown, W. Va. **AGRICULTURE.**

PARSONS, Helen Tracy, Prof. of Home Econ., Univ. of Wis., Madison, Wis. **NUTRITION.**

PARSONS, John L., Rsch. Dir., Hollingsworth and Whitney Co., Waterville, Maine. **PULP, PAPER.**

PARSONS, Joseph Greeley, Crookston, Minn. **MEDICAL SCIENCES.**

PARSONS, Rhey Boyd, Prof. of Edn., Murray State Coll., Murray, Ky. **EDUCATION, PSYCHOLOGY.**

PARSONS, Talcott, Prof. of Sociol. and Chmn., Dept. of Social Relations, Harvard Univ., Cambridge, Mass. **SOCIOLOGY. HORTICULTURE.**

PASEK, Dwight Miner, Sr. Development Engr., Hazeltine Electronics Corp., 58-25 Little Neck Pkwy., Little Neck, N. Y. **ELECTRONICS.**

PASSOW, A. Harry, Physics, Chem. Instr., and Dean of Boys, Eden Central Schl., Eden, N. Y. **CHEMISTRY.**

PASTERNAK, Simon, Instr., Brookhaven Natl. Lab., Upton, L. I., N. Y. **THEORETICAL PHYSICS.**

PATCH, Edith M., Entomologist, Me. Agri. Expt. Sta., Orono, Me. (1903-37). **ENTOMOLOGY.**



Worcester, Mass., July 27, 1876. d. William Whipple and Salome (Jenks) P. Edn.: B.S., Univ. of Minn., 1901; Sc.D., Univ. of Me., 1937; M.S., Univ. of Me., 1910; Ph.D., Cornell Univ., 1911; Mem., Amer. Nature Study Soc. (Pres., 1937); Amer. Soc. Naturalists; Natl. Audubon Soc.; Amer. Assn. Econ. Entomologists; Amer. Sci. Tchrs. Assn.; Natl. Coun. Supvrs. of Elem. Sci.; Bird Conservation Soc., Bangor, Me.; Fellow, A.A.A.S.; Entomol. Soc. of Amer. (Pres., 1930). Mem.: Sigma Xi; Phi Beta Kappa; Phi Kappa Phi; Phi Sigma; Pi Gamma Mu; Delta Kappa Gamma. Ph.D. Dissertation: Homologies of the Wing Veins of the Aphididae, Psyllidae, Aleurodidae, and Coccidae. Author: Bird Stories; Hexapod Stories; First Lessons in Nature Study; Holiday Pond; Holiday Meadow; Holiday Hill; Hunting, 1932; Outdoor Visits, 1932; Surprises, 1933; Through Four Seasons, 1933; Sci. at Home, 1934; The Work of Scientists, 1935; Holiday Shore, 1935; Mountain Neighbors, 1936; Desert Neighbors, 1937;

Forest Neighbors, 1938; Prairie Neighbors, 1940; More Than 80 Tech. Pubs. on Insects, the Latest Being "Food-Plant Catalogue of the Aphids of the World." Retired in June, 1937, after 34 Yrs. of Rsch. Work, as Hd. of Dept. of Entomology, Me. Agri. Expt. Sta.

PATCH, Lawrence Henry, Entomologist, European Corn Borer Rsch., U. S. D. A., Purdue Agri. Expt. Sta., Lafayette, Ind. ENTOMOLOGY.

PATEL, Babubhai N., Schl. of Pharm., Coll. of the Ozarks, Clarksville, Ark. PHARMACY.

PATERSON, Donald Gilderson, Prof. of Psychol., Univ. of Minn., Minneapolis, Minn.

PATON, Robert Frederick, Assoc. Prof. of Physics, Univ. of Ill., Urbana, Ill. SPECTROSCOPY.

PATRAS, Mary C., Asst. Prof. of Physiol., Med. Schl., Loyola Univ., 706 Wolcott Ave., Chicago, Ill. PHARMACY, EDUCATION.

PATRICK, Catharine, Rsch. Psychologist, 822 W. 58th St., Kansas City, Mo. RESEARCH IN CREATIVE THINKING.



b. Topeka, Kans., Sept. 16, 1908. d. Frank and Myrtle Maria (Jetmore) P. Edn.: B.A., cum laude, Smith Coll., 1928; M.A., Univ. of Mo., 1930; Ph.D., Columbia Univ., 1935. Exp.: Research Psychologist, 1936-39; Rsch. for Internat. Federation of Business and Professional Women during 1939; Instr., Univ. of Kansas City, 1940-42; Rsch. Psychologist, 1942-47; Asst. Prof., Univ. of Mo., 1948-50; Rsch. Psychologist, Kansas City, Mo., 1950—. Hon.

Pos.: Secy.-Treas., Div. on Esthetics of the Amer. Psychol. Assn., 1948-50. Mem.: Fellow, A.A.A.S.; Fellow, Amer. Psychol. Assn.; Amer. Soc. for Aesthetics; N. Y. Acad. Sci.; Amer. Sociol. Soc.; Sigma Xi; Alpha Pi Zeta; Alpha Kappa Delta. Contrb. to: Jour. Social Psychol.; Amer. Jour. Psychol.; Jour. Gen. Psychol.; Jour. of Psychol.; Archives of Psychol.; Pi Lambda Theta Jour.; etc. Gen. Int.: Mem. of Com. on Roles of Men and Women in Post-War Soc., 1943-44 for the Soc. for the Psychol. Study of Social Issues; Rsch. on Attitudes about Women Executives in Govt. Positions reported at meeting of Internat. Federation of Business and Professional Women, Trondheim, Norway, 1939. Special Int.: Creative Thinking; The Status of Women; Child Psychol.; Responses to Art.

PATRICK, George Thomas White, Prof. of Philos., Univ. of Iowa, Iowa City, Iowa. PHILOSOPHY.

PATRICK, Ruth, Assoc. Curator Microscopy, Acad. Natural Sciences, Philadelphia, Pa. ALGAE.

PATTEN, Andrew J., Dir. of Rsch., Huron Milling Co., Harbor Beach, Mich. CHEMISTRY.

PATTEN, Bradley M., Prof. and Chmn., Dept. of Anatomy, Univ. of Mich., Ann Arbor, Mich. EMBRYOLOGY.

PATTERSON, Austin McDowell, Prof. Emer. Chem., Antioch Coll., Yellow Springs, Ohio; 221 N. King St., Xenia, Ohio. CHEMISTRY.

PATTERSON, B., Chicago Natural History Museum, Chicago, Ill. PALEONTOLOGY.

PATTERSON, Harry Jacob, Dean Emer. and Dir., Univ. of Md., 7514 Rhode Island Ave., College Park, Md. AGRICULTURAL CHEMISTRY.

PATTERSON, Herbert, Dean, Admin., Okla. A. and M. Coll., Stillwater, Okla. EDUCATION.

PATTERSON, Irving Wooster, P. O. Box 36, Hamilton, R. I. ENGINEERING, CIVIL.

PATTERSON, John Thomas, Distinguished Prof. of Zool. and Dir. of Zool. Rsch., Univ. of Tex., Box



1594, Austin, Tex. GENETICS AND EVOLUTION. b. Piqua, Ohio, Nov. 3, 1878. s. James N. and Anna (Linn) P. Edn.: B.S., Wooster Coll., 1903; Ph.D., Univ. of Chicago, 1908. Hon. Deg.: D.Sc., Coll. of Wooster, 1938. m. Alace Jane Tozer, Sept. 12, 1906. c.: Edith Ruth; Robert Maitland; John Thomas, Jr. Exp.: Prof. of Biol., Buene Vista Coll., Storm Lake, Iowa, 1903-05; Asst. in Zool., Univ. of Chicago, Chicago, Ill., 1905-08; Instr. in Zool., Univ. of Tex., Austin, Tex., 1908-11; Adj. Prof., ibid., 1911-13; Prof. of Zool., ibid., 1913—; Dist. Prof., ibid., 1937—. Mem.: Natl. Acad.; Soc. of Nat.; Soc. of Zool.; Soc. Ant.; Soc. for Study of Evolution; Genetics Soc.; Sigma Xi; P.B.K.; Town and Gown Club. Author: The Drosophilidae of the Southwest, 1943; Evolution in the Genus Drosophila, with W. S. Stone, 1952. Contrb. to: Biol. Bull.; Jour. of Morphol.; Genetics; Exptl. Zool.; Anat. Anz. Gen. Int.: Summa cum laude honor, Univ. of Chicago, 1908; Daneil Giraud Elliot Gold Medal, Natl. Acad. of Sci., 1951. Special Int.: Embryol. of Birds; Embryol. of Armadillo; Polyembryonic Development in Insects; Genetics of Drosophila.

PATTERSON, Paul Morrison, Prof. and Hd., Dept. of Biol., Hollins Coll., Hollins Coll., Va. BRYOLOGY.

PATTERSON, Robert Alexander, Asst. Dir., Brookhaven Natl. Lab., Upton, N. Y. PHYSICS.

PATTERSON, Thomas Leon, Rsch. Prof. of Physiol., Coll. of Med., Wayne Univ., 1512 St. Antoine St., Detroit, Mich. PHYSIOLOGY.

PATTON, Alva Rae, Assoc. Prof. of Chem., Colo. A. and M. Coll., Fort Collins, Colo. NUTRITION CHEMISTRY.

PATTON, Francis L., Leavenworth Prof. of Econ., Hamilton Coll., Clinton, N. Y. ECONOMICS.

PATTON, Robert Lee, Asst. Prof. of Insect Physiol., Cornell Univ., Ithaca, N. Y. PHYSIOLOGY, ENTOMOLOGY.

PATTY, Frank Arthur, Hd., Indus. Hygiene Dept., General Motors Corp., Rsch. Labs. Div., Detroit, Mich. INDUSTRIAL HYGIENE.

PATTY, John Roland, Hd. and Prof., Dept. of Physics, Furman Univ., Greenville, S. C. PHYSICS.

PAUL, John Rodman, Yale Univ. Schl. of Med., 333 Cedar St., New Haven, Conn.

PAUL, Mary Frances, Section Hd., Biochem. and Nutrition, Norwich Pharmacol. Co., 119 N. Broad St., Norwich, N. Y. BIOCHEMISTRY.

PAULI, Wolfgang Ernst, Visiting Prof., Inst. for Advanced Study, Princeton, N. J. PHYSICS.

PAULIN, Eugene Adam, Inspector Schls., Maryhurst Normal Schl., 1101 S. Lindberg Blvd., Kirkwood, Mo. MATHEMATICAL PHYSICS.

PAULING, Linus Carl, Prof. of Chem., Chmn. of the Div. of Chem. and Chem. Engrng., Dir. of the Gates and Crellin Labs., Calif. Inst. of Tech., Pasadena, Calif. **CHEMISTRY.** b. Portland, Ore., Feb. 28, 1901. s. Herman William and Lucy Isabelle (Darling) P. Edn.: B.S., Ore. State Coll., 1922; Ph.D., Calif. Inst. of Tech., 1925. Hon. Deg.: Sc.D., Ore. State Coll., 1933; Sc.D., Univ. of Chicago, 1941; Sc.D., Princeton Univ., 1946; Sc.D., Cambridge Univ., Univ. of London, 1947; Sc.D., Yale Univ., 1947; Sc.D., Oxford Univ., 1948; M.A., Oxford Univ., 1948; D. Hon. Caus.,



Univ. of Paris, 1948; Univ. of Toulouse, 1949; Dr. of Humanities, Univ. of Tampa, 1949; U.J.D., Univ. of New Brunswick, 1950. m. Ava Helen Miller, June 17, 1923. c.: Linus Carl, Jr.; Peter Jeffress; Linda Helen; Edward Crellin. Exp.: Full-time Assistant in Quantitative Analysis, Ore. State Coll., 1919-20; Part-time Assistant in Chemistry and in Mechanics and Materials, *ibid.*, 1920-22; Graduate Assistant, Calif. Inst. of Technology, 1922-23; Tehng. Fellow, *ibid.*, 1923-25; Rsch. Assoc., *ibid.*, 1925-26; Natl. Rsch. Fellow in Chem., *ibid.*, 1925-26; Fellow, John Simon Guggenheim Memorial Foundation, 1926-27; Asst. Prof. of Chem., Calif. Inst. of Tech., 1927-29; Assoc. Prof., *ibid.*, 1929-31; Prof., *ibid.*, 1931—; Chmn., Div. of Chem. and Chem. Engrng. and Dir. of Gates and Crellin Labs., 1937—; Lectr. in Chem. and Physics, Univ. of Calif., 1929-33; George Fisher Baker Lectr. in Chem., Cornell Univ., 1937-38. Hon. Pos.: Hon. Pres., Physical Chem. Div., Internatl. Congress of Pure and Applied Chem., London, 1947; Hon. Pres., Section on Biosynthesis of Proteins, 2nd Internatl. Congress of Biochem., Paris, 1952. Mem.: Natl. Acad. Sciences; Amer. Philos. Soc.; Amer. Acad. Arts and Sci.; Acad. Political Sci.; Chem. Soc. London; Royal Institution of Great Britain; Royal Soc. of London; Swiss Chem. Soc.; Accademia Benedettina, Bologna; Inst. of France, Acad. of Sci.; Indian Acad. Sci.; Royal Soc. Liege; Norwegian Acad. Arts and Letters; Bavarian Acad. Sci.; Tau Beta Pi; Sigma Tau; Sigma Xi; Phi Lambda Upsilon; Alpha Chi Sigma; Phi Kappa Phi; Scabbard and Blade; Delta Upsilon. Co-author: The Structure of Line Spectra, 1930; Introduction to Quantum Mechanics, 1935. Author: The Nature of the Chemical Bond, 1939, 1940; General Chem., 1947; Coll. Chem., 1950. Contrb. to: Jour. Amer. Chem. Soc.; Jour. Chem. Phys.; Phys. Rev.; etc. War Record: Mem., Div. 8, Natl. Defense Rsch. Com.; West. Advisory Com. of Committee on Med. Rsch.; Med. Advisory Com. in Preparation of Bush Report; Chmn., Ad Hoc Com. on Internal Ballistics, NDRC; Consultant, Div. 19, NDRC; Prin. Investigator on 14 OSRD Contracts; Mem., Rsch. Bd. for Natl. Security, 1945-46. Special Int.: Structure of Crystals by Diffraction of X-rays; Application of Quantum Mechanics to Physical and Chemical Problems; Structure of Metals and Intermetallic Compounds; Nature of the Chemical Bond; Determination of Structure of Gas Molecules by Diffraction of Electrons; Structure and Properties of Hemoglobin and Related Substances; Structure of proteins; Structure of Antibodies and Nature of Serological Reactions; Discovery and Investigation of Abnormal Forms of Human Hemoglobin in Relation to Sickle Cell Anemia and other Diseases; Development of a Substitute (Oxypolgelatin) for Human Plasma; etc.

PAULS, Miriam D., SPEECH AND HEARING.

PAULY, Frank Robert, Dir. of Rsch., Tulsa Public Schls., 220 E. 27th Pl., Tulsa, Okla. **SCHOOL ADMINISTRATION.**

PAVLISH, Arnold E., Kelley Island Lime and Transport Co. Leader Bldg., Cleveland, Ohio. **CERAMICS.**

PAYNE, Charles Kenneth, Assoc. Prof. of Math., N. Y. Univ., 100 Washington Square East, N. Y., N. Y. **STATISTICS.**

PAYNE, Fernandus, Chmn., Dept. of Zool. and Dean, Grad. Schl. Ind. Univ., Bloomington, Ind. **CYTOLOGY.**

PAYNE, George Calvin, Fellowship Advisor, Internatl. Health Div., Rockefeller Foundation, Rm. 55-00, 49 W. 49th St., N. Y., N. Y. **EPIDEMIOLOGY.**

PAYNE, Nellie Maria de Cottrell, Zoologist, Amer. Cyanamid Co., Stamford, Conn. **ZOOLOGY.**

PAYNTER, Richard H., Sr. Personnel Technician, Personnel Rsch. Section, Adjutant General Office, War Dept., 270 Madison Ave., N. Y., N. Y. **PSYCHOLOGY.**

PEABODY, Dean, Jr., Assoc. Prof. of Structural Design, Rm. 1-138, Mass. Inst. of Tech., Cambridge, Mass. **CIVIL ENGINEERING.**

PEABODY, Elizabeth Barrett, Assoc. Prof. of Biol. Wilson Coll., Chambersburg, Pa. **BOTANY, ZOOLOGY.**

PEACH, Harry, Instructor, 357 9th Street, Brooklyn, New York. **PHYSICS.** b. Randolph, Mass., May 30, 1898. s. Henry and Elizabeth (Schraut) P. Edn.: B.S., Mass. Inst. of Tech., 1918 M.A., N. Y. Univ., 1929; Ph.D., *ibid.*, 1933. Exp.: Rsch. Chemist, DuPont, 1918-22; Rsch. Chemist Beacon Blanket, 1922-26; Tehr., Nashua, N. H., High Schl., 1926-29; Instr., Physics, Brooklyn Coll., 1929—. Mem.: Amer. Meterol. Soc.; A.A.A.S.; Amer. Assn. of Physics Tehrs. Contrb. to: Radio Electron.; Schl. and Soc.; Amer. Jour. of Physics. Ph.D. Dissertation: Determination of Aromatic Hydrocarbons by Sulfonation and Subsequent Hydrolysis. Travel: World. Hobbies. Tennis; Model Railroad. Listed in: A.M.S. Special Int.: Mechanics and Electronics.

PEACHER, William G., SPEECH AND HEARING.

PEACOCK, Frederic Lockwood, Commander, U. S. Coast and Geodetic Survey, Washington, D. C. **SURVEYING, MAPPING.**

PEAIRS, Leonard Marion, Prof. of Entomol. and Entomologist, W. Va. Univ., Morgantown, W. Va. **ENTOMOLOGY.**

PEAK, Philip, MATHEMATICS.

PEALE, Rodgers, Consulting Geologist, 315 Montgomery St., San Francisco, Calif. **MINING GEOL-OGY.**

PEARCE, Charles S., Amer. Ceramic Soc., 2525 N. High St., Columbus 2, Ohio. **CERAMICS.**

PEARCE, Joseph Algernon, Dir., Dominion Astrophysical Observatory, Victoria, B. C., Can. **ASTRONOMY.**

PEARCE, Louise, Assoc. Mem., Rockefeller Inst. Med. Rsch., Princeton, N. J. **PATHOLOGY.**

PEARL, Richard Maxwell, Asst. Prof. of Geol., Colo. Coll., Colo. Springs, Colo. **MINERAL-OGY.** b. Wayne Co., Mich., May 4, 1913. s. Morse and Etta (Stocker) P. Edn.: B.A., Univ. of Colo., 1939; M.A., *ibid.*, 1940; A.M., Harvard Univ., 1946. m. Mignon Wardell of Denver, Colo., 1941. d. William and Mignon W. Exp.: 1940, Instr. in Geol., Univ. of Colo.; 1941-42, Engr., duPont Co., Denver, Colo.; 1944, Geologist, Shell Oil Co., Tulsa, Okla.; Instr. in Geol., Colo. Coll., 1946-49; Asst. Prof. of Geol. *ibid.*, 1949—; Acting Hd. of Dept., *ibid.*, 1951—. Hon. Pos.: Chmn., Sub-Com. on Earth Sci. Edn., Amer. Geol. Inst.; Adviser in Mineral and Gemol., Denver Pub. Lib. Mem.: Amer. Geographical Soc. (Fellow); Mineral. and Petrographical Soc. of Switzerland; Mineral. Soc.; Gemol. Assn. of Australia; Gemol. Assn. of Gt. Britain (Fellow); A.A.A.S.; A.I.M.E.; Amer. Crystallographic Assn.; Sigma Gamma Epsilon; Winter Night Club; Rocky Mtn. Harvard Club. Author: Nature as Sculptor; A Geologic Interpretation of Western Scenery,

1941; Art of Gem Cutting, 1945; Mineral Collectors Handbook, 1947; Popular Gemol., 1948; Guide to Geologic Lit., 1951; Colo. Gem Trails, 1951. Contr. to: Econ. Geol.; Amer. Mineral.; Jour. of Gemology. War Record: Corps of Engrs., U. S. Army, 1942-44. Listed in: Who's Who in Amer.; A.M.S.; Who Knows—and What; Directory of Amer. Scholars. Special Int.: Gems, Colorado Minerals.

PEARSE, Arthur Sperry, Prof. of Zool., Duke Univ., Durham, N. C. ECOLOGY, PARASITOLOGY.

PEARSE, Langdon, Sanitary Engr., The Sanitary District of Chicago, 7th Floor, 910 S. Michigan Ave., Chicago 5, Ill. SANITARY ENGINEERING; TREATMENT OF SEWAGE AND INDUSTRIAL WASTES. b. Boston, Mass., Nov. 12, 1877. s. John B. and Mary Langdon (Williams) P. Edn.: A.B., Harvard Coll., 1899; B.S., Mass. Inst. of Tech., 1901; M.S., ibid., 1902. m. Eleanor H. Dean, June 1, 1910. Exp.: Asst. Engr., Div. Engr. and Sanitary Engr., The Sanitary District of Chicago, Chicago, Ill., 1909—. Mem.: Phi Beta Kappa; Amer. Acad. Arts and Sci.; Amer. Soc. Civil Engrs.; Amer. Inst. Consulting Engrs.; Institution of Civil Engrs.; Engrng. Inst. of Can. Contr. to: Sewage and Industrial Wastes. Special Int.: Control of Stream Pollution; Treatment of Sewage and Industrial Wastes.

PEARSON, Anthony A., Jr., Prof. of Anatomy, Med. Schl., Univ. of Ore., Portland, Ore. ANATOMY.

PEARSON, Carl August, Radio Engr., Naval Rsch. Chesapeake Bay Annex, Lab., North Beach, Md. PHYSICS.

PEARSON, Donald Stuart, Assoc. Prof., Elec. Engrng., Pa. State Coll., State Coll., Pa. ELECTRICAL ENGINEERING. b. Feb. 19, 1905 Cleveland, Ohio. s. Rev. David B. and Dorothy P. Edn.: B.S. in E.E., Case Schl. of Applied Sci., 1929; M.S. in E.E., ibid., 1933. m. Marian E. Gildard of Solon, Ohio, Nov. 30, 1935. d. Mr. and Mrs. H. E. Gildard. Exp.: Test Engr., Gen. Elec. Co., 1929-32; Asst. to Dean of Men, Hiram Coll., 1934-35; Asst. Prof., Elec. Engrng., Ohio North Univ., 1937-39; Prof. and Hd., Elec. Engrng., 1939-43; Reconstructed Lab. and Reorganized E.E. Dept.; Asst. Prof. Elec. Engrng., Mich. State Coll., 1946-49; Assoc. Prof. of Elec. Engrng., Pa. State Coll., State Coll., Pa., 1949—. Mem.: Kiwanis Club; A.I.E.E.; Chmn., Mich. State Coll. Br., A.S.E.E., 1948-49; A.A.U.P.; Registered Professional Engr.; Eta Kappa Nu; Nu Theta Kappa (Hon. Mem.); Sigma Tau Delta; Case Club; State Coll. Club. Contr. to: Misc. Tech. Articles and Lectures. Author: "Experiments in Elec. Engrng.," 1948, M. S. C. Press, (John Swift and Co.); "D. C. Machinery Experiments," 1948, M. S. C. Press. War Record: Asst. Prof., Army Spec. Trng. Program at Rose Poly. Inst., E.E. Dept., 1943-44, Instr., Navy V-12 Program at Univ. of Louisville, 1945-46. Gen. Int.: Designed a Line of 400 Cycle Induction Motors; Westinghouse Elec. Corp., 1944-45. Hobbies: Reading; Collecting Old Books and Lit. Recreation: Golf; Fishing. Listed in: Who's Who in Engrng., 1941, 1948; Who's Who in the Midwest, 1950.

PEARSON, Gustaf Adolph, Collaborator, U. S. Forest Service, Southwestern Forest Expt. Sta., P. O. Box 951, Tucson, Ariz. FORESTRY.

PEARSON, Jay Frederick Wesley, Prof. of Zool. and Dean Faculty, Univ. of Miami, Coral Gables, Fla. ECOLOGY AND ENTOMOLOGY.

PEARSON, John Magnus, Dir., Sun Physical Rsch. and Development Lab., Sun Oil Co., Philadelphia, Pa. ELECTRICAL PHYSICS.

PEARSON, Nathan Everett, Prof. and Hd., Dept. of Zool., Butler Univ., Indianapolis, Ind. ZOOLOGY.

PEARSON, Oscar Harris, Plant Breeder and Dir., Plant Indus. Center, Eastern States Farmers Exchange, West Springfield, Mass. PLANT BREEDING.

PEARSON, Paul B., Grad. Prof. and Nutritionist, Tex. A. and M. Coll., College Station, Tex. BIO-CHEMISTRY AND NUTRITION.

PEARSON, R. W., Dept. of Agron. and Soils, Auburn, Ala. AGRICULTURAL RESEARCH.

PEASE, Robert Norton, Assoc. Prof. of Chem., Princeton Univ., Princeton, N. J. PHYSICAL CHEMISTRY.

PEATTIE, Donald Culross, 84 Glendessary Lane, Santa Barbara, Calif. BOTANY.

PECK, Edward Bates, 180 Lincoln Ave., Elizabeth, N. J. CHEMISTRY.

PECK, Edson Ruther, Asst. Prof. of Physics, Northwestern Univ., Evanston, Ill. PHYSICS.

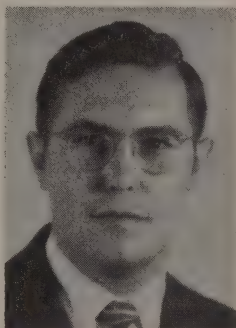
PECK, Morton Eaton, Prof. Emer. Biol., Willamette Univ., Salem, Ore. BOTANY.

PECK, Samuel M., Mt. Sinai Hosp., 100 St. and Fifth Ave., N. Y., N. Y. DERMATOLOGY.

PEEBLES, Florence, Lectr. and Counsellor, Amer. Inst. Family Relations, 380 Rosemont Ave., Pasadena, Calif. EXPERIMENTAL EMBRYOLOGY.

PEELE, Talmage Lee, Assoc. Prof., Anat., Asst. Prof. in Med., Duke Univ. Schl. of Med., Box 3811, Duke Hosp., Durham, N. C. HUMAN NEURONANATOMY AND CLINICAL NEUROLOGY. b. Wayne Co., N. C., Aug. 16, 1908. s. I. and Nora (Spence) P. Edn.: A.B., Duke Univ., 1929; M.D., Duke Univ., Schl. of Med., 1934. Exp.: Interne, Med., Duke Hosp., 1934-35; Asst. Res. Physic. Med., Duke Hosp., 1935-36; Interne, Res. Neurology, Bellevue Hosp., N. Y. C., 1936-37; Fellow in Anat., Johns Hopkins Univ., Schl. of Med., 1937-38; Instr. in Anat., Univ. of Rochester Schl. of Med., 1938-39; Instr., Asst. Prof., Anat., Duke Univ., Schl. of Med., 1939-48; Assoc. Prof., Anat. and Med., ibid., 1948—; Visit. Asst. Prof., Neurol., Northwestern Univ., Feb.-Aug., 1945. Mem.: Amer. Assn. Anatomists; Phi Beta Pi; Phi Beta Kappa; Theta Alpha Phi; Alpha Omega Alpha. Contr. to: Jour. Comp. Neurol.; Jour. Neurophysiol.; Amer. Jour. Physiol. Special Int.: Human Neuroanatomy and Clinical Neurology.

PEEPLES, William Dewey, Jr., Assoc. Prof. of Math., Howard Coll., 5001 7th Ave., S., Birmingham, Ala. MATHEMATICS—ALGEBRA AND ALGEBRAIC GEOMETRY. b. Bessemer, Ala., April 19, 1928. s. William Dewey and Thelma Jeannette (Chastain) P. Edn.: B.S., Howard Coll., 1948; M.S., Univ. of Wis., 1949; Ph.D., Univ. of Ga., 1951. Exp.: Rsch. Mathematician, Aberdeen Proving Grounds, Aberdeen, Md., summer 1951; Asst. Prof. of Math., Howard Coll., Birmingham, Ala., 1951—. Mem.: Amer. Math. Soc.; Amer. Math. Assn.; A.A.A.S.; Sigma Xi; Lambda Chi Alpha; Pi Mu Epsilon; Kappa Phi Kappa; Shriner. Contr. to: Amer. Math. Monthly; Proc. Amer. Math. Soc. Special Int.: Valuation Theory; Elliptic Curves.



PEGRAM, Annie McKimie, Prof. of Math., Greensboro Coll., Greensboro, N. C. MATHEMATICS.

PEGRAM, George Braxton, Columbia Univ., N. Y. 27, N. Y.

PEHRSON, Ernest William, Prof. of Math., Univ. of Utah, Salt Lake City, Utah. MATHEMATICS.

PEILER, Karl E., Hartford-Empire Co., Div. of Emhart Mfg. Co., Box 1620, Hartford 2, Conn. CERAMICS.

PEIRCE, George James, Prof. Emer. Botany and Plant Physiol., Stanford Univ., Calif.; 182 Embarcadero Rd., Palo Alto, Calif. **PLANT PHYSIOLOGY.**

PEIRCE, Sidney James Shepard, Pathologist, Biglow Clinic, 1608 Lorne Ave., Brandon, Man., Can. **PATHOLOGY.**

PEKERIS, Chaim L., Inst. for Advanced Study, Princeton, N. J.

PELCZAR, Michael J., Jr., Prof. of Bact., Univ. of Md., Coll. Park, Md. **BACTERIOLOGY.** b. Baltimore, Md., Jan. 28, 1916. s. Michael and Josephine (Polek) P. Edn.: B.S., Univ. of Md., 1936; M.S., *ibid.*, 1938; Ph.D., State Univ. of Ia., 1941. m. Merna Foss of La Porte City, Ia., Aug. 24, 1941. d. M. G. Foss. c.: Ann Foss; Patricia Mary; Michael Rafferty; Rita Margaret; Josephine Merna. Exp.: Instr., State Univ. of Ia., 1941; Instr., Univ. of Md., 1941-42; U. S. Army, 1942-46; Dept., E. R. Squibb & Sons, Inc., 1946; Assoc. Prof., Univ. of Md., 1946-51; Prof., *ibid.*, 1951—. Hon. Pos.: Assoc. Referee, Media For Disinfectant Testing, A.O.A.C.; Internation Comm. on Nomenclature and Classification of Bacteria; Soc. of Amer. Bact. Comm. on Bact. Technic. Mem.: Soc. of Amer. Bact.; Soc. for Gen. Microb.; A.A.A.S.; Sigma Xi; A.A.U.P.; Alpha Gamma Rho; Phi Kappa Phi; Sigma Alpha Omicron; Phi Beta Pi; Coll. Park Citizens Assn. Author: Lab. Exercises in Gen. Bact., 1950. Contrb. to: Jour. Bact.; Numerous Scientific Publications; Jour. Bact.; Sci. Jour. Inf. Dis. Ph.D. Dissertation: Biochem. Characteristics of Proteus. War Record: 1942-46, Lab. Officer and Chief of Lab. Service in State and Gen. Hosp. Travel: England; France; Belgium. Hobby: Hunting. Special Int.: Physiology and Nutrition of Microorganisms.

PELTIER, George Leo, Prof. and Chmn., Dept. of Bacteriol., Univ. of Nebr., Lincoln, Nebr. **BACTERIOLOGY.**

PEMBERTON, John deJ., Surgeon, Mayo Clinic and Prof. of Surgery, Mayo Foundation, Rochester, Minn. **SURGERY.**

PENCE, Forrest K., Ceramic Engrng. Rsch., Univ. of Tex., Austin 12, Tex. **CERAMICS.**

PENCE, Sallie Elizabeth, Assoc. Prof. of Math., Univ. of Ky., 153 North Arcadia Park, Lexington 10, Ky. **MATHEMATICS.** d. Merry Lewis and Belle P. Edn.: City Schls., Lexington, Ky.; A.B., Univ. of Ky., 1914; M.A., *ibid.*, 1928; Ph.D., Univ. of Ill., 1937. Exp.: Tchr. in H. S. of Ky., 1914-27; Instr. in Math., Murray S. T. C., 1928-29; Instr. in Math., Univ. of Ky., 1929-38; Asst. Prof. of Math., Univ. of Ky., 1938-47; Assoc. Prof. of Math., Univ. of Ky., 1947—. Mem.: Mortar Bd.; Pi Mu Epsilon; Kappa Delta Pi; Sigma Delta Epsilon; Amer. Math. Soc.; Math. Assn. of Amer.; Alpha Gamma Delta; Central Ky. Women's Club. Contrb. to: Bull. of Amer. Math. Soc.; Math. Assn. of Amer. Ph.D. Dissertation: The Configuration of Double Points of Cubics of a Pencil. Travel: U. S.; Canada; Europe; Mexico. Gen. Int.: Lectr. on Flowers. Hobbies: Travel; Golf; Photography. Listed in: A.M.S.; Who's Who Among Women; Who's Who in the South and Southwest.

PENDERGRASS, Eugene Percival, Prof. and Dir., Dept. of Radiology, Univ. of Pa., Philadelphia, Pa. **RADIOLOGY.**

PENDLETON, Ray A., Soil Technologist, Ore. State Coll., Corvallis, Ore. **AGRICULTURE (SOILS).**

PENDLETON, Robert Larimore, Prof. of Tropical Soils and Agri., Isaiah Bowman Dept. of Geography, Johns Hopkins Univ., Baltimore 18, Md. **TROPICAL SOILS AND LAND USE; LATERITE, ITS NATURE AND ORIGIN.** b. Minneapolis, Minn., June 25, 1890. s. John Louis and Jessie (Larimore) P. Edn.: B.S., Univ. of Calif., 1914; Ph.D., *ibid.*, 1917. m. Anne Miltimore, June 10, 1917. Exp.: Asst. in Soil Survey, Calif. Agril. Expt. Sta., 1914-15; Asst. Dir., then Dir. of the Agri., Gwallo State, Central India, 1918-23; Prof. of Soil Tech., Coll. of Agri., Univ. of the Philippines, 1923-35; Hd., Dept. of Soils, *ibid.*, 1930-35; Chf. Soil

Technologist, Natl. Geol. Survey of China, Peking, China, 1931-33; Soil Technologist, His Siamese Majesty's Govt., Bangkok, 1935-42; Soil Technologist, Office of Foreign Agril. Relations, U. S. D. A., 1942-52; Soil Scientist, Special Technical and Econ. Mission to Siam, 1952-53; Prof. of Tropical Soils and Agri., Isaiah Bowman Schl. of Geography, Johns Hopkins Univ., Baltimore, Md., 1945—. Hon. Pos.: Editor, Natural History Section, The Siam Soc., Bangkok, Siam.; Mem., FAC Mission to Siam, 1948. Mem.: Amer. Chem. Soc.; Hon. Mem., Amer. Geographical Soc.; Amer. Soc. Agron.; Soil Sci. Soc. of Amer.; Amer. Geophysical Union; The Siam Soc.; Bangkok: INCIDI; Sigma Xi; Alpha Zeta. Co-author: Laterite and Lateritic Soils. Contrb. to: Soil Sci.; Proc. Amer. Soc. Agron.; Geographical Rev. War Record: G-2 at HQ, Military Geol., 1943-44. Gen. Int.: David Livingstone Medal of the Hispanic Soc.; Order of the Crown of Siam, Second Class. Special Int.: Tropical Regions; S. E. Asia; Central and Northern S. Amer.; Central Africa.

PENDRAY, George Edward, Asst. to Pres., Westinghouse Elec. and Mfg. Co., 150 Broadway, N. Y., N. Y. **PUBLIC RELATIONS.**

PENFIELD, Wilder Graves, Prof. of Neurol. and Neurosurgery, McGill Univ., 4302 Montrose Ave., Westmount, Montreal, Que., Can. **NEUROSURGERY.**

PENLAND, C. William T., Prof. of Botany, Colo. Coll., Colorado Springs, Colo. **TAXONOMY, ECOLOGY OF SEED PLANTS.**

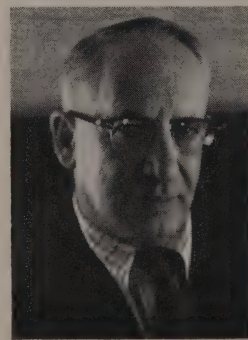
PENN, John C., Prof. of Civil Engrng., Ill. Inst. of Tech., 11127 S. Park Ave., Chicago, Ill. **ENGINEERING.**

PENNELL, Francis W., Curator of Plants, Acad. Natural Sciences, Philadelphia, Pa. **BOTANICAL SCIENCES.**

PENNINGTON, Mary Engle, 233 Broadway, N. Y., N. Y. **BACTERIOLOGICAL CHEMISTRY.**

PEOPLES, Joe Webb, Prof. of Geol., Wesleyan Univ., Middletown, Conn. **GEOLOGY.**

PEPINSKY, Abe, Prof. of Psychol., Haverford Coll., 7 Coll. Lane, Haverford, Pa. **PSYCHOACOUSTICS.** b. Cinn., Ohio, Dec. 3, 1889. s. Robert and Mrs. Jennie (Tiger) P. Edn.: Univ. of Berlin, Germany, 1907-11, 1929-30; B.A., Univ. of Minn., 1931; M.A., *ibid.*, 1932; Ph.D., State Univ. of Ia., 1939. m. Rae R. Brenner, M. D., of Evansville, Ind., Dec. 28, 1909. d. Nathan Isaac and Carrie Brenner. c.: Minerva H.; Raymond S.; Eugene E.; Harold B. Exp.: Prof. of Edn. Univ. of Minn., Asst. Prof., Assoc. Prof., Professorship, 1913-41; Rsch. Fellow, Bartol



Rsch. Foundation, Franklin Inst., Swarthmore, Pa., 1941; Assoc. Prof., Psychol., Haverford Coll., 1942-46; Prof. of Psychol., 1946—. Visit. Prof. of Psychol., Hamilton Coll., Summer of 1946; Consultant Psychologist with U. S. Navy Electronics Laboratory, Summers of 1947-48-49 and the Year of 1950 While on Sabbatical Leave of Absence; Consultant Psychologist with Solar Aircraft Co., 1948. Hon. Pos.: Guest Conductor of the Minneapolis and other Symphony Orchestras in the U. S. and in Europe. Mem.: Sigma Xi; Psi Chi; Minn. and Ia. Acad. of Sci.; Amer. Acoustical Soc. (Fellow); Amer. Musicological Soc.; Phi Delta Kappa; Phi Mu Alpha; Chmn. of the Psychol. of Music Com., M.T.N.A.; Vice-Pres., Mental Hygiene Soc. of Montgomery County, Pa.; Mem., Bd. of Dirs., The Philadelphia Musical Acad. Contrb. to: Jour. of the Acoustical Soc. of Amer.; Amer. Jour. of Musicology; Music Tchrs. Natl. Assoc. Proceeding. Ph.D. Dissertation: Pitch as a Function of the Extent and Rate of Frequency Modulation. War Record: 1st Lt., Personnel Of-

ficer, 206th Inf., M.N.G. Travel: Germany; England; Holland. Gen. Int.: Effects of Musical Sound on the Human Organism; Rsch. in Human Relations. Hobbies: Precision Shop Work; Experimentation with Musical Instruments; Weaving and Art Work; Marksmanship. Listed in: Who's Who in Music; A.M.S.; Who Knows—and What. Special Int.: Projective Techniques and Clinical Psychology.

PEPINSKY, Ray, Pa. State Coll., State College, Pa. X-RAY DIFFRACTION ANALYSIS.

PEPPER, Bailey Breazeale, Hd., Dept. of Entomol., Agri. Expt. Sta., Rutgers Univ., New Brunswick, N. J. ENTOMOLOGY.

PEPPER, Echo D., Asst. Prof. of Math., Univ. of Ill., Urbana, Ill. MATHEMATICS.

PEPPER, Oliver Hazard Perry, Prof. of Med., Univ. of Pa., Philadelphia, Pa. INTERNAL MEDICINE.

PERKINS, Granville Akers, Dir. of Rsch., Carbide and Carbon Chemicals Corp., 30 E. 42nd St., N. Y., N. Y. ORGANIC CHEMISTRY.

PERKINS, Henry A., Prof. Emer. Physics, Trinity Coll., 55 Forest St., Hartford, Conn. PHYSICS.

PERKINS, Henry Farnham, Prof. Emer. Zool., Univ. of Vt., 205 S. Prospect St., Burlington, Vt. HEREDITY.

PERKINS, Nellie L., Prof. of Child Developments and Family Relationships, Univ. of Ill., Urbana, Ill. PSYCHOLOGY OF CHILDHOOD.

PERLMAN, Isadore, Radiation Lab., Univ. of Calif., Berkeley 4, Calif. NUCLEAR CHEMISTRY.

PERLMAN, Kalman Isadore, Chf. Pharmacist, Highland Park Hosp. Foundation, 4252 W. 14th St., Chicago 23, Ill. HOSPITAL PHARMACY AND CHEMOTHERAPEUTICS. b. Chicago, Ill., May 27, 1915. s. Morris and Mary (Weiner) P. Edn.: B.S. in Pharm., Univ. of Ill., Coll. of Pharm., 1940. m. Ida Faye Bauer, July 2, 1939. Exp.: Pharmacist, Various Retail Drug Stores, 1932-44; with U. S. Army under U. S. Civil Service as Civilian Pharmacist, 1944-46; Asst. Chief Pharmacist, Michael Reese Hosp., Chicago, Ill., 1946-47; Chf. Pharmacist, Evangelical Hosp., Chicago, Ill., 1947-48; Own and Operate, Retail Drug Store, Chicago, Ill., 1948—; Chf. Pharm., Highland Park Hosp., Found., Chicago, Ill., 1952—. Mem.: Assoc. Mem., Internat. Pharm. Federation; Fellow, A.A.A.S.; Amer. Pharmaceutical Assn.; A.S.H.P.; N.A.R.D.; Ill. Pharm. Assn.; C.R.D.A.; Ancient Free and Accepted Masons of Ill. Gen. Int.: Licensed in Ill., Ariz. and Calif. Special Int.: Rsch. Goal—Oral Control of Human Hyperglycemia through Chemotherapy.



PERLZWEIG, William Alexandre, Prof. of Biochem., Duke Univ., Durham, N. C. BIOCHEMISTRY.

PERNERT, John Carl, Chf. Rsch. Chemist, Oldbury Electro Chemical Co., Niagara Falls, N. Y. CHEMISTRY.

PERRIN, Fred Hiram, Physicist, Eastman Kodak Co., Rochester, N. Y. OPTICS.

PERRINE, Irving, Independent Geologist and Oil Operator, 1619-21 Petroleum Bldg., Oklahoma City, Okla. PETROLEUM GEOLOGY.

PERRINE, James Owen, Asst. Vice-Pres., Amer. Telephone and Telegraph Co., 195 Broadway, N. Y., N. Y. PHYSICS.

PERRY, Cornelius Alfred, Chf., Bureau Bacteriol. and Dir. Bacteriol. Labs., Md. State Dept. of Health, 2411 N. Charles St., Baltimore, Md. BACTERIOLOGY.

PERRY, Elwyn Lionel, Edward Brust Prof. of Geol. and Mineralogy, Williams Coll., Williamstown, Mass. STRUCTURAL GEOLOGY.

PERRY, Esther Parsons, Jr. Soil Technologist, Coll. of Agri., Univ. of Calif., Berkeley, Calif. SOILS.

PERRY, Horace Greeley, Acadia Univ., Wolfville, N. S., Can. ZOOLOGICAL SCIENCES.

PERRY, Rufus Patterson, Administrative Dean, Langston Univ., Langston, Okla. CHEMISTRY.

PERRY, Stuart Hoffman, Publisher, Adrian Daily Telegram, Adrian, Mich. METALLOGRAPHY. b. Pontiac, Mich., Oct. 13, 1874. s. Aaron and Sallie (Hoffman) P. Edn.: A.B., Univ. of Mich., 1894; LL.B., ibid., 1896. Hon. Deg.: A.M., Univ. of Mich., 1919; LL.D., Adrian Coll., 1921. m. Maude Caldwell, 1895. c.: Elizabeth. Exp.: Dir. Associated Press, 1923-51; Pulitzer Prize Board, 1926—; Michigan Judicial Commission 1929—. Mem.: Fellow, A.A.A.S.; Fellow, Amer. Geographical Soc.; Fellow, Meteoritical Soc.; Mem.: Amer. Acad. Political Sci.; Amer. Acad. Political and Social Sci.; Amer. Judicature Soc.; Fellow, Canbrook Inst. of Sci.; Phi Beta Kappa. Author: The Metallography of Meteoric Iron, 1944. Contrb. to: Amer. Jour. Sci. Special Int.: Meteorites; Metallography of Iron Meteorites. Assoc. mineralogist U. S. Nat. Museum. Lawrence Smith gold medal Natl. Acad. of Sci., 1945.

PERRY, Thomas Gregory, Asst. Prof. of Geol. Indiana Univ., Bloomington, Ind. PALEONTOLOGY AND STRATIGRAPHY. b. Toronto Canada, Nov. 5, 1918. s. Clarence Gregory and Minnie Irene (Bennett) P. Edn.: A.B., Univ. of Toronto, 1947; A.M., ibid., 1948; Ph.D., ibid., 1951. m. Lillian Hopkins, June 9, 1945. c.: John Clarence and Michael Francis. Exp.: Dept. of Geology, Indiana Univ., Bloomington, Ind., 1950—. Mem.: Ind. Acad. of Sci.; Assn. of Geol. Tchrs.; A.A.A.S.; Sigma Xi; Sigma Gamma Epsilon. Contrb. to: Ind. Acad. of Sci. War Record: Royal Canadian Air Force, W. W. II. Special Int.: Chester Stratigraphy of Ind.

PERRYMAN, Francis S., Asst. U. S. Manager and Actuary, Royal Liverpool Insurance Group, 150 William St., New York 38, N. Y. ACTUARIAL SCIENCE.

PERSING, Charles Oscar, Dir. of Agril. Rsch., Stauffer Chemical Co., 636 California St., San Francisco, Calif. ENTOMOLOGY.

PERSONIUS, Catherine Jane, Prof., Hd. Dept. of Food and Nutrition, Cornell Univ., Ithaca, N. Y. FOOD CHEMISTRY.

PERVIER, Norville Clarence, Assoc. Prof. of Inorganic Chem., Univ. of Minn., Minneapolis. Minn. INORGANIC AND BIOLOGICAL CHEMISTRY.

PESCHEL, Ernst, Rsch. Assoc. in Med., Duke Univ., Schl. of Med., Durham, N. C. INTERNAL MEDICINE, CARDIOVASCULAR DISEASES, ELECTROLYTE METABOLISM, NITROGEN METABOLISM. b. Dessau, Germany, Dec. 5, 1901. s. Erich and Margarete (Tobias) P. Edn.: Dr. Dip., Univ. of Berlin, Schl. of Med., 1930. m. Ruth Lohmann, Feb. 7, 1936. Exp.: Asst. in Med., Univ. Hosp., Berlin, Germany, 1930-33; Private Practice as Specialist in Internal Med., Berlin and Nuremberg, Germany, 1933-46; Rsch. Asst. in Med., Duke Univ., Schl. of Med., Durham, N. C., 1947-52; Rsch. Assoc. in Med., ibid., 1952—. Contrb. to: Jour. of Clin. Investigation; Amer. Practitioner; Endocrinol.; Arch. of Internal Med.; Arch. of Path.: Circulation Rsch.; Handbook of Biological Data. Special Int.: Cardiovascular and Renal Diseases, Electrolyte Metabolism, Nitrogen Metabolism, Exptl. Cardiovascular Diseases (Hypertension, Polyarteritis nodosa, Myocardial Necrosis).

PESCHEL, Ruth Lohmann, Rsch. Asst. in Med., Duke Univ., Schl. of Med., Durham, N. C. **INTERNAL MEDICINE, CARDIOVASCULAR DISEASES, ELECTROLYTE METABOLISM, NITROGEN METABOLISM.** b. Berlin, Germany, Dec. 23, 1904. d. Willi and Caroline (Habermas) Lohmann. Edn.: Dr. Diploma, Univ. of Berlin Schl. of Med., 1931. m. Ernst Peschel, Feb. 7, 1936. Exp.: Asst. in Med., Univ. Hosp., Berlin, Germany, 1931-34; Privatdozent in Internal Med., Univ. of Berlin, Schl. of Med., Berlin, Germany, 1934-38; Private Practice as Specialist in Internal Med., Berlin, Germany, 1938-46; Rsch. Asst. in Med., Duke Univ., Schl. of Med., Durham, N. C., 1947—. Contrb. to: Jour. of Clin. Investigation; Arch. of Internal Med. Special Int.: Cardiovascular and Renal Diseases, Electrolyte Metabolism, Nitrogen Metabolism.

PESMAN, Walter, 372 S. Humboldt, Denver, Colo. BOTANY AND LANDSCAPE GARDENING.

PESSIN, Louis Jerome, Consulting Technologist Plant Sciences, 502 Millaudon St., New Orleans, La. BOTANY.

PETER, Alfred Meredith, Prof. Emer. Soil Tech., Univ. of Ky., Rt. 3, Lexington, Ky. CHEMISTRY.

PETERS, C. G., 1104 21st St. S., Arlington, Va. INTERFEROMETRY AND METEOROLOGY.

PETERS, Charles Adams, Prof. Emer. Analytical Chem., Mass. State Coll., 16 S. Sunset Ave., Amherst, Mass. CHEMISTRY.

PETERS, Isaac Isaac, Assoc. Prof. in Dairy Mfgs., Dairy Husb. Dept., A. and M. Coll. of Tex., College Sta., Tex. b. Berghthal, Russia, July 19, 1910. s. Isaac and Elizabeth (Riediger) P. Edn.: B.S.A., Univ. of Manitoba, 1942; M.S., Mich. State Coll., 1944; Ph.D., Ia. State Coll., 1947. m. Maurine Grace Champlin of Saskatoon, Sask., Can., June 26, 1948. d. Manley and Mabel C. c.: Marion Catherine. Exp.: Grad. Asst., Mich. State Coll.; Rsch. Fellow, Ia. State Coll., 1945-47; Rsch. Assoc., *ibid.*, 1947-48; Asst. Prof. and Asst. Rsch. Prof., *ibid.*, 1948-50; Asst. Prof., A. and M. Coll. of Tex., 1950-53; Assoc. Prof., *ibid.*, 1953—. Mem.: Amer. Dairy Sci. Assn.; Soc. of Amer. Bacteriol.; Inst. of Food Tech.; A.A. S.; Sigma Xi; Kiwanis Club. Contrb. to: Jour. of Dairy Sci.; Jour. of Bacteriol. Ph.D. Dissertation: The Lipolytic Enzyme System of Mycotolura Lipolytica. Travel: Canada; Great Britain; Europe. Hobbies: Bowling; Golf; Literature; Writing. Listed in: A.M.S.; Who Knows—and What.



PETERS, Iva Lowther, Specialist in Vocational Guidance, Fishkill, Dutchess Co., N. Y. SOCIAL SCIENCE.

PETERS, John Punnett, Prof. of Med., Yale Univ., Schl. of Med., 789 Howard Ave., New Haven 11, Conn. INTERNAL MEDICINE. b. Philadelphia, Pa., Dec. 4, 1887. s. John P. and Gabriella Brooke (Forman) P. Edn.: A.B., Yale Univ., 1908; M.D., Columbia Univ., 1913. Hon. Deg.: M.A., Yale Univ., 1927. m. Charlotte Morse Hodge, June 19, 1915. c.: John H.; Alice Irwin; Richard M.; Charles H. Exp.: Interne, Presbyterian Hosp., N. Y. C., 1913-15; Coolidge Rsch. Fellow in Clin. Med., Columbia and Presbyterian Hosp., N. Y. C., 1915-17; Instr. in Clin. Med., Columbia Univ., N. Y. C., 1916-17; Rsch. Fellow, Russell Sage Inst. of Pathol., 1919-20; Instr. of Internal Med., Cornell Univ., Med. Schl., N. Y. C., 1919-20; Assoc. Prof. of Internal Med., Vanderbilt Univ., Nashville, Tenn., 1920-21; Rsch. Work, Rockefeller Inst., N. Y. C., 1920-21; Assoc. Prof. of Internal Med., Yale Univ., Schl. of Med., New Haven, Conn., 1921-27; Attending Physician, New Haven Hosp., *ibid.*, 1921—; John Slade Ely Prof. of Internal Med.,

ibid., 1927—; Consulting Physician Norwalk and Stamford Hosp., 1947—. Mem.: Conn. State Med. Assn.; New Haven Med. Soc.; Harvey Soc.; Amer. Assn. of Biol. Chemists; Amer. Assn. of Physicians; Soc. for Clin. Investigation; Soc. for Exptl. Biol. and Med.; Interurban Clin. Club; Century Club; Nu Sigma Nu; Alpha Omega Alpha; Sigma Xi; Natl. Acad. of Sci.; Royal Soc. of Med., London; Editorial Bd. of Jour. of Clin. Investigation; Editorial Bd. of Metabolism; Consultant to the Army Med. Center, Adv. Bd., Office of Quartermaster Gen., U. S. Public Health Service Study Section. Author: Quantitative Clin. Chem., 1931; 1946. Contrb. to: Amer. Jour. of Med.; Amer. Jour. of Physiol.; Arch. Int. Med.; Jour. Biol. Chem.; Jour. Clin. Invest.; Metabolism; Yale Jour. of Biol. Med.; Proc. Soc. of Exptl. Biol. and Med.; Med.; Ann. Int. Med.; Physiol. Rev.; Amer. Jour. of Med.; Jour. Lab. and Clin. Med.; Amer. Jour. Obstet. Gyn.; Ann. Rev. Physiol.; New England Jour. of Med.; Endocrinol.; New Int. Clinics; Jour. Mt. Sinai Hosp.; Fed. Proc.; Ann. N. Y. Acad. of Sci.; Amer. Jour. Digest. Diseases; Jour. Clin. Endocrinol.; Surgery; Nutrition Reviews; R. I. Med. Jour.; Jour. Amer. Med. Assn.; Jour. Urology; Amer. Jour. of Surgery; Amer. Jour. of Tropical Med.; Bull., N. Y. Acad. of Med.; Annual Rev. of Biochem.; Trans. Assn. of Amer. Physicians. War Record: Capt., M. C., U. S. R., 1917-19; Chf. Med. Officer, U. S. Base Hosp. No. 2, Presbyterian Unit, British Gen. Hosp. No. 1, Etretat, France. Gen. Int.: Work on Med. Social and Promotion of a Natl. Health Program Through Chiefly the Comm. of Physicians for the Improvement of Med. Care. Special Int.: Diseases and Disorders of Metabolism; Clin. Chem.

PETERS, Lawrence, Sr. Instr. in Pharmacol., Western Reserve Univ. Med. Schl., Cleveland, Ohio. PHARMACOLOGY.

PETERS, Paul Erwin, 136 McKinley Ave., Kenmore, N. Y. CHEMISTRY.

PETERSEN, Fred A., Hunter-Thomas Assoc., Keith Bldg., Cleveland 15, Ohio. CEMAMICS.

PETERSEN, Theodore Christian, Assoc. Prof., St. Paul's Coll., Fourth and Hamlin Sts., N. E., Washington, D. C. SEMITIC AND EGYPTIAN LANGUAGES.

PETERSEN, William Earl, Prof. of Dairy Husbandry, Univ. Farm, Univ. of Minn., St. Paul, Minn. PHYSIOLOGY, BIOCHEMISTRY.

PETERSON, Alvah, Prof. of Entomol., Ohio State Univ., Columbus, Ohio. ENTOMOLOGY.

PETERSON, Elmer George, Pres., Utah State Agri. Coll., Logan, Utah. ZOOLOGICAL SCIENCES.

PETERSON, George Maxwell, Prof. of Psychol., Univ. of N. Mex., Albuquerque, N. Mex. PSYCHOLOGY.

PETERSON, Gordon E., SPEECH AND HEARING.

PETERSON, John C., Prof. of Psychol., Kans. State Coll., Manhattan, Kans. PSYCHOLOGY. b. Huntsville, Utah, Jan. 10, 1884. s. Hans J. and Annie C. (Hoxer) P. Edn.: A.B., Univ. of Utah, 1913; Ph.D., Univ. of Chicago, 1917. m. Janette Wade, Dec. 28, 1910. c.: Virginia Janette. Exp.: Prin. of Schl., Sugar City, Idaho, 1909-10; Tchng. Asst., Univ. of Utah, 1913-14; Principal, Elem. Schls., Tooele, Utah, 1914-15; Prof. of Psychol., Kans. State Coll., 1917—; Assoc. Dir. and Chf. Civilian Consultant, Academic Instr., Div. SSS, Air Univ., Ala., 1948-49. Hon. Pos.: Pres.,

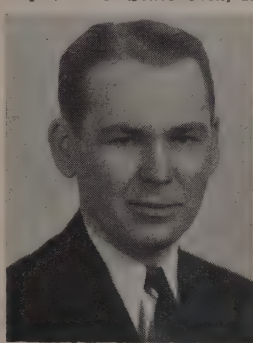


Kans. Acad. of Sci., 1947-48; Mem., Bd. of Dirs., Associated Personnel Technicians, Wichita, Kans. Mem.: Fellow, Amer. Psychol. Assn.; Midwestern

Psychol. Assn.; Kans. Psychol. Assn.; A.A.A.S.; Kans. Acad. of Sci.; Sigma Xi; A.A.U.P.; Phi Kappa Phi. Author: The Higher Mental Processes in Learning, 1920. Contrb. to: Trans. Kans. Acad. of Sci.; Jour. of Higher Edn.; Jour. of Tch. Edn.; Schl. and Soc. Gen. Int.: Constructed and Statistically Evaluated Several Aptitude Tests for Coll. and H. S. Students, and Devised with H. J. Peterson Electrical, Chemical and Mechanical Means for Quick Accurate Scoring. Special Int.: Analysis and Organization of Learning; Provision of Means for Guidance and Self-Direction in Learning; Dev. of Relatively Culture-Free Psychol. Test with Norms for Wide Ranges of Age, Edn. and Cultural Background; Effective Management of Production and Personnel in Indus.

PETERSON, Oscar John, Prof. and Hd., Dept. of Math., Kans. State Tchrs. Coll., Emporia, Kans. MATHEMATICS.

PETERSON, Walter John, Prof. and Hd., Chem. Dept., N. C. State Coll., Raleigh, N. C. BIOCHEMISTRY.



b. Negaunee, Mich., June 21, 1909. s. Fred and Hulda (Larson) P. Edn.: B.S., Mich. State Coll., 1930; M.S., ibid., 1933; Ph.D., Univ. of Iowa, 1935. m. Helen Bosman, Aug. 30, 1934. c.: John; Mary. Exp.: Tchng. Fellow in Chem., Mich. State Coll., 1931-33; Tchng. Fellow, Chem. Dept., Univ. of Iowa, Iowa City, Iowa, 1933-35; Asst. Prof. of Chem., Kans. State Coll., Manhattan, Kans., 1935-42; Prof. and Hd., Nutr. Sect., Dept. of Animal Indus., N. C. State Coll., Raleigh, N. C., 1942-49; Prof. and Hd., Chem. Dept., ibid., 1949—. Mem.: Amer. Chem. Soc.; A.A.A.S.; N. C. Acad. Sci.; Alpha Chi Sigma; Phi Kappa Phi; Sigma Xi; Phi Sigma. Contrb. to: Jour. Amer. Chem. Soc.; Jour. Nutrition; Jour. Dairy Sci.; Jour. Organic Chem.; Poultry Sci.; Indus. and Engrng. Chem.; Jour. Agri. Rsch.; Sci.; Jour. Animal Sci.; Food Rsch. Special Int.: Techniques of Vitamin Analysis; Influence of Environmental Factors (Soil and Climate) Upon the Composition of Plants.

PETERSON, William Harold, Prof. of Biochem., Univ. of Wis., Madison, Wis. BIOCHEMISTRY OF MICROORGANISMS.

PETRAN, Laurence Armstrong, Chmn., Dept. of Music, Univ. of Calif., Los Angeles, Calif. PSYCHOLOGY OF MUSIC.

PETRIDES, George A., WILDLIFE.

PETRIE, Earl C., N. Amer. Refractories Co., 1012 Natl. City Bank Bldg., E. Sixth St., Cleveland 14, Ohio. CERAMICS.

PETRUNKOVITCH, Alexander, Prof. Emer. Zool., Osborn Zool. Lab., Yale Univ., 548 Orange St., New Haven, Conn. DRACHNOLOGY.

PETRY, Loren Clifford, Prof. of Botany and Dir. Veterans Edn., Cornell Univ., 104 Devon Rd., Ithaca, N. Y. PALEOBOTANY.

PETRY, Robert Lowell, Prof. and Hd., Dept. of Physics, Univ. of the South, Sewanee, Tenn. PHYSICS.

PETTERSEN, Sverre, Prof., Dept. of Meteorol., Univ. of Chicago, Chicago 37, Ill. METEOROLOGY.

PETTIJOHN, Francis John, Prof. of Geol., Univ. of Chicago, Chicago, Ill. SEDIMENTARY PETROLOGY.

PETTINGILL, Olin Sewall, Dept. of Zool., Carleton Coll., Northfield, Minn. ORNITHOLOGY.

PETTIS, Charles Roberts, Hd., Dept. of Math., Miss. State Coll., State College, Miss. MATHEMATICS.

PETTIT, Harvey P., Prof. and Hd., Dept. of Math., Marquette Univ., Milwaukee, Wis. MATHEMATICS.

PETTIT, Lincoln C., Prof. of Biol., Hiram Coll. Box 217, Hiram, Ohio. BIOLOGY. b. W. Hoboken N. J., Feb. 12, 1911. s. Irving and Bertha (Lichtner) P. Edn.: St. John's Coll. (Md.); A.B., Cornell Univ., 1934; A.M., ibid., 1935; Ph.D., ibid., 1940. m. Marie Bolton of Lockport, N. Y., 1941. d. Bernard Bolton. c.: Robert; Richard; David. Exp.: Cornell Coll. of Agri., 1935-40; N. Y. Cons. Dept., Summers, 1936-38; Univ. of Md., summer, 1940; Wash. and Lee Univ., 1940-42; U. S. Army, 1942-46; St. Lawrence Univ., 1946-48; Hiram Coll., 1948—. Hon. Pos.: Exec. Officer to the Acad. Dir., Biarritz (France) Amer. Univ.; Elder, Hiram Ch. Mem.: Phi Kappa Phi; Sigma Xi; A.A.A.S.; A.O.U.; Natl. Assn. Biol. Tchrs.; Amer. Soc. Mammalogists; Ohio Acad. of Sci.; Wilson Orn. Club; Gamma Alpha; Sigma Phi Sigma; Dir., Civil Defense, Township. Contrb. to: Bios. Fauna, N. E. Naturalist, Amer. Biol. Tch. Ph.D. Dissertation: Embryology and Life History of Blattella germanica. War Record: Lt., 77th Div.; Capt., 94th Div.; Major XXI Corps Asst. G-2; Liaison Officer, U. K. Base, London; T-Force; C. & GS Schl., Class XII; Dir., Bn. Combat Firing, L.A.M.A.; Gen. O. Commendation and Bronz Star Medal; E.T.O.: Lt. Col., Milit. Intel. Res. Travel: Europe. Hobbies: Audio-visual and Sci. Edn. Methods; Painting; Ornithology, Geology and Bird Banding. Listed in: A.M.S.; Who's Who in the Midwest. Special Int.: Insect Embryology.

PETTY, Dabney E., Vice-Pres., Petty Geophysical Co., 317 Sixth St., San Antonio, Tex. PETROLEUM GEOLOGY.

PETTY, Julian Jay, Prof. of Geography, Univ. of S. C., Columbia, S. C. GEOGRAPHY.

PEYTON, Garland, State Geologist and Dir., Dept. of Mines, Mining and Geol., 425 State Capitol, Atlanta, Ga., MINING, GEOLOGY.

PFANSTIEL, Robert, Rsch. Chemist, E. I. du Pont de Nemours and Co., Inc., Wilmington, Del. INDUSTRIAL CHEMISTRY.

PFEIFFER, Carl Curt, Prof. and Hd., Dept. of Pharmacol., Univ. of Ill., 1853 Polk St., Chicago, Ill. PHARMACOLOGY.

PFEIFFER, Norma Etta, Morphologist, Boyce Thompson Inst. Plant Rsch., Yonkers, N. Y. BOTANY, MORPHOLOGY.

PFEIFFER, Robert Henry, Hancock Prof. of Hebrew and other Oriental Languages, Harvard Univ. and Prof., Boston Univ., 67 Francis Ave., Cambridge 38, Mass. SEMITIC LANGUAGES, ANCIENT HISTORY, OLD TESTAMENT. b. Bologna, Italy (U. S. Citizen by Birth), Feb. 14, 1892. s. G. Washington and Adelia (Rodenbach) P. Edn.: B.D., Univ. of Geneva, Switzerland, 1915; A.M., Harvard Univ., 1920; Ph.D., ibid., 1922; S.T.M., ibid., 1923. Hon. Deg.: LL.D., Bennett Coll., 1949. m. Matilde Valentini, Mar. 29, 1916. c.: Paul Henry; Louise Anna. Exp.: Pastor, Methodist Church, Sanborn, N. Y., 1916-19; Instr., Harvard Univ., 1922-28; Lectr., ibid., 1929-30; Asst. Prof., ibid., 1930-36; Lectr., ibid., 1936-53; Hancock Prof. of Hebrew and other Oriental Languages, ibid., 1953—; Curator of the Semitic Museum, ibid., 1931—; Instr., Boston Univ., 1924-25; Asst. Prof., ibid., 1925-27; Assoc. Prof., ibid., 1927-29; Prof., ibid., 1929-30, 1947—; Dir. of the Harvard-Baghdad Schl. excavations at Nuzi, Kirkuk, Iraq, 1928-29; Editor of the Jour. of Biblical Lit., 1943-47. Hon. Pos.: Pres., Soc. of Biblical Lit. and Exegesis, 1950; Lebanese Order of Merit, first class with gold medal, 1949. Mem.: Amer. Acad. Arts and Sci.; Archaeol. Inst.; Soc. Biblical Lit. and Exegesis; Amer. Oriental Soc.; Natl. Assn. of Biblical Instrs. Author: The Archives of Shilwateshub, 1932; State Letters of Assyria, 1935; One Hundred New Selected Texts from Nuzi, 1937; Introduction to the Old Testament, 1941; History of New Testament Times, 1949; etc. Contrb. to: Amer. Jour. Semitic Languages; Jour. Amer. Oriental Soc.; Jour. Biblical Lit.; Crozer Quarterly; etc. Special Int.: Semitic Languages (Hebrew, Aramaic,

Akkadian); History of Western Asia before the Christian Era; Old Testament.

PFEIFFER, Wilbur H., Engrng. Lab., Plant 2, Frigidaire Div., General Motors Corp., Dayton 1, Ohio. CERAMICS.

PFISTER, Karl H. T., Rsch. Chemist and Dept. Hd., General Dyestuff Corp., 435 Hudson St., N. Y., N. Y. ORGANIC CHEMICALS.

PFUND, Marion Caroline, Prof. of Home Econ., N. Y. State Coll. Home Econ., Cornell Univ., Ithaca, N. Y. CHEMISTRY.

PHALEN, Harold Romaine, 404 Griffin Ave., Williamsburg, Va. MATHEMATICS.

PHELMAN, Earl Walter, Prof. of Chem. and Hd. Dept., Ga. State Woman's Coll., Valdosta, Ga. CHEMISTRY.

PHELPS, Arthur Lee, Dir. of Chem., Phoenix Jr. Coll., Phoenix, Ariz. CHEMISTRY.

PHELPS, Earle Bernard, Rsch. Engr., Univ. of Fla., Gainesville, Fla. SANITARY ENGINEERING.

PHELPS, Ethel Lowerre, Prof. of Tehng. and Rsch., Home Econ. Dept., Coll. of Agri., Univ. of Minn., 2213 Folwell St., University Gr., St. Paul, Minn. TEXTILES.

PHELPS, Everett R., Prof. of Phys., Wayne Univ., Detroit, Mich. PHYSICS. b. Mansfield, Conn., May 4, 1894. s. I. D. and Eugenia (Stephens) P. Edn.: A.B., Clark Univ., 1914; A.M., Univ. of Mich., 1917; Ph.D., ibid., 1923. m. Edith Smith of Buffalo, N. Y., 1917. d. Mr. and Mrs. Charles W. Smith. c.: Richard; Charlotte. Exp.: Phys. and Chem. Tchr., Pontiac, Mich. H. S. and Jr. Coll., 1917-22; Wayne Univ. Phys. Dept., 1922—. Mem.: Amer. Phys. Soc.; A. A. U. P.; Amer. Assn. Physics Tchrs.; Amer. Inst. Physics; N.E.A.; Mich. Ednl. Assn.; Sigma Xi; Kiwanis. Contrb. to:



Amer. Jour. of Surgery; Philos. of Sci. Jour. Ph.D. Dissertation: The Fine Structure of the Near Infra-Red Absorption Bands of Water Vapor. Hobbies: Astronomy; Television; Master of Ceremonies Magic of Sci TV series Station WXYZ-TV, 1949; Mr. Weather, WXYZ-TV, 1950; Producer weekly Sci. programs by Wayne Univ., WJBK-TV, 1951; TV Weatherman WJBK-TV, since 1951. Author: (with John H. Wolfe) Practical Shop Mathematics—2 vol., 3rd edition 1948; Mechanics Vest Pocket Reference Book, 5th edition, 1945. Special Int.: Presenting Sci. on Television.

PHELPS, Isaac King, Prof. of Chem., Rollins Coll., Winter Park, Fla. CHEMISTRY.

PHELPS, Stuart M., Mellon Inst., Pittsburgh 13, Pa. CERAMICS.

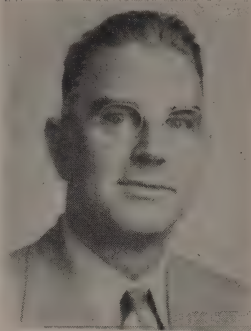
PHILBRICK, Shailer S., U. S. Corps of Engrs., Federal Bldg., Pittsburgh, Pa. GEOLOGY—ENGINEERING.

PHILIP, Cornelius Becker, Prin. Med. Entomologist, Rocky Mountain Lab., Natl. Inst. Health, Federal Security Agency, Hamilton, Mont. MEDICAL ENTOMOLOGY.

PHILLIPS, A. J., Amer. Smelting and Refining Co., Barber, N. J. FOUNDRY TECHNOLOGY.

PHILLIPS, Ernest B., Chf. Chemist, Sinclair Refining Co., East Chicago, Ind. PETROLEUM CHEMISTRY.

PHILLIPS, Carroll Davidson, Economist in Agril. Marketing, Agril. Expt. Station, Univ. of Ky., Lexington, Ky. LIVESTOCK MARKETING AND CONSUMER EDUCATION. b. Topeka, Kans., May 4, 1898. s. Earnest Halbert and Gertrude Mary (Gilette) P. Edn.: B.S., Colo. State Coll., 1923; M.S., Purdue Univ., 1928; Ph.D., Univ. of Minn., 1940. m. Elizabeth Dukes, Nov. 29, 1923. c.: David Dukes. Exp.: Smith Hughes Agri. Tchr., Rio Blanco H. S., Meeker, Colo., 1923-25; Prin., Hurley H. S., Hurley, N. Mex., 1925-27; Asst., Purdue Univ., Lafayette, Ind., 1927-28; Rsch. in Livestock Marketing and Vegetable Marketing, Univ. of Ky., 1928—. Mem.: Ky. Rsch. Club; Farm Econ. Assn.; Southern Agril. Workers; A.A. U.P.; Amer. Econ. Assn.; Sigma Xi; Sigma Chi; Lions. Contrb. to: Jour. Farm Econ.; Jour. Amer. Dietetic Assn.; Proc. Assn. of Southern Agri. Works. War Record: U. S. M. Corps, 1917-19. Special Int.: Livestock Marketing; Consumer Preference Studies with Fruit and Vegetables; Vegetable Marketing.



PHILLIPS, George William Macpherson, Chf. Chem. Engrng. Section, Eastern Regional Rsch. Lab., U. S. D. A., Wyndmoor, Philadelphia, Pa.

PHILLIPS, Howard Mitchell, Prof. of Biol. and Chmn., Natural Sci. and Math., Emory University, Ga. CYTOGENETICS.

PHILLIPS, Lyle Winston, Prof. of Physics, Univ. of Buffalo, Buffalo, N. Y. SPECTROSCOPY.

PHILLIPS, Marcella Lindeman, Union Farm, Rt. 1, Alexandria, Va. IONOSPHERIC RADIO PROPAGATION. b. Cumberland, Iowa, Jan. 15, 1901. d. Frank and Maria (Marley) Lindeman. Edn.: B.A., State Univ. of Iowa, 1921; M.S., ibid., 1922. m. Maj. Gen. J. F. Phillips, U.S.A.F., June 27, 1925. c.: Laura Marley; Frederica Lindeman. Exp.: Grad. Asst., Undergrad. Asst., State Univ. of Iowa, 1919-20; Instr., Hunter Coll. of the City of N. Y., 1924-25; Engr., Edison Lamp Works, General Elec. Co., 1924; Physicist, Nela Park Labs. of General Elec. Co., Cleveland, Ohio, 1925-28; Physicist, Thomas and Hachwalt Labs., Dayton, Ohio, 1929-30; Prof. of Physics, Adamson Univ., Manila, Philippines, 1937-38; Physicist, Dept. Terrestrial Magnetism, Carnegie Inst. of Wash., 1940-42; Physicist, C.R.P.L., Natl. Bureau of Standards, 1942-51; Physicist, Rsch. Lab. Electronics, Mass. Inst. Tech., Cambridge, Mass., 1951—. Mem.: Amer. Physical Soc.; Amer. Geophys. Union; Philos. Soc. Wash.; Wash. Acad. Sci.; Sigma Xi. Co-author: Radio Spectrum Conservation, 1952. Contrb. to: Physical Rev.; Jour. Amer. Geophysical Union; Jour. Geophysical Rsch.; Terrestrial Magnetism and Atmospheric Electricity; U.R.S.I. Proc.; etc. Gen. Int.: Development of Prediction Methods of World-wide Useful Radio Frequencies for Operational Use, N.B.S., C.R.P.L. Special Int.: Ionospheric Radio Propagation; Nomography; Atmospheric Electricity; Radiation Properties of Incandescent Solids; Metallography of Tungsten, Molybdenum, and other Metals; Low-frequency Studies of Dielectrics.



1925-28; Physicist, Thomas and Hachwalt Labs., Dayton, Ohio, 1929-30; Prof. of Physics, Adamson Univ., Manila, Philippines, 1937-38; Physicist, Dept. Terrestrial Magnetism, Carnegie Inst. of Wash., 1940-42; Physicist, C.R.P.L., Natl. Bureau of Standards, 1942-51; Physicist, Rsch. Lab. Electronics, Mass. Inst. Tech., Cambridge, Mass., 1951—. Mem.: Amer. Physical Soc.; Amer. Geophys. Union; Philos. Soc. Wash.; Wash. Acad. Sci.; Sigma Xi. Co-author: Radio Spectrum Conservation, 1952. Contrb. to: Physical Rev.; Jour. Amer. Geophysical Union; Jour. Geophysical Rsch.; Terrestrial Magnetism and Atmospheric Electricity; U.R.S.I. Proc.; etc. Gen. Int.: Development of Prediction Methods of World-wide Useful Radio Frequencies for Operational Use, N.B.S., C.R.P.L. Special Int.: Ionospheric Radio Propagation; Nomography; Atmospheric Electricity; Radiation Properties of Incandescent Solids; Metallography of Tungsten, Molybdenum, and other Metals; Low-frequency Studies of Dielectrics.

PHILLIPS, Melba, Asst. Prof. of Physics, Brooklyn Coll., Brooklyn, N. Y. PHYSICS.

PHILLIPS, Philip, Asst. Curator, Peabody Museum, Harvard Univ., Cambridge, Mass. **ARCHAEOLOGY.**

PHILLIPS, Ralph Wesley, Sr. Animal Husbandman in Chg. Genetics Investigations, Bureau Animal Indus., Agri. Rsch. Center, Beltsville, Md. **ANIMAL GENETICS, PHYSIOLOGY, REPRODUCTION.**

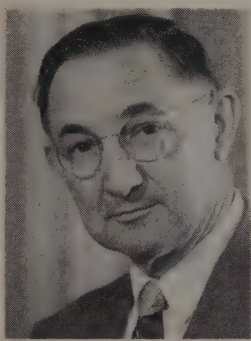
PHILLIPS, T. D., Prof. of Physics, Marietta Coll., Marietta, Ohio. **PHYSICS, HEAT TRANSFER.**

PHILLIPS, Thomas Guthrie, Prof. and Hd., Dept. of Agri. and Biol. Chem. and Chemist, Agri. Expt. Sta., Univ. of N. H., Durham, N. H. **BIOLOGICAL CHEMISTRY.**

PHILLIPS, W. Levi, Mgr., Blue Bird Press, 985 S. Third East St., Salt Lake City 4, Utah. **ENTOMOLOGY (LEPIDOPTERA).** b. Salt Lake City, Utah, Jan. 31, 1901. s. Henry R. and Elizabeth (Sanigar) P. m. Della Weight, June 6, 1924. c.: W. Revell. Exp.: Private Rsch. Mem.: Life Mem., The Lepidopterists' Soc.; Entomol. Soc. Amer.; A.A.A.S. Special Int.: Rhopalocera of Utah.

PHILLIPS, William Jeter, 718 Cargill Lane, Charlottesville, Va. **ENTOMOLOGY.**

PHILPOTT, Charles H., Dir. of Edn., Curr. Rsch. and Development and Curr. Lab., 911 Locust St., St. Louis, Mo. **SCIENCE EDUCATION—HEALTH EDUCATION.**



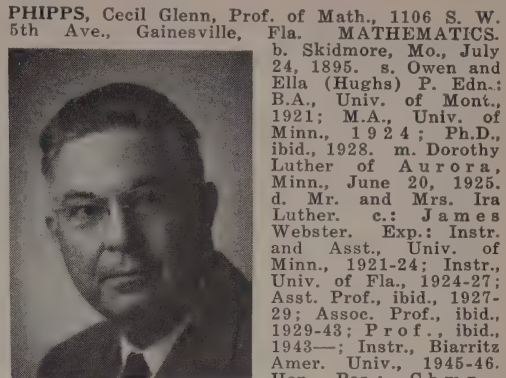
b. Monroe Co., Mo., Dec. 22, 1888. s. Charles and Nancy Elizabeth (Hughes) P. Edn.: A.B., Univ. of Mo., 1914; A.M., ibid., 1915; Ph.D., ibid., 1927. m. Evodia Gentry of Monroe City, Mo., Aug. 25, 1915. c.: Charles; Jane. Exp.: Prof. of Biol., Jr. Coll. of Kan. City, 1915-23; Prof. of Biol. and Dean of Men, Harris Tchr. Coll., 1923; Pres., Harris Tchr. Coll., St. Louis, Mo., 1943-47; Dir. of Edn. in Chg. of Curriculum Rsch. and Development and Curriculum Lab., 1947—; (On Leave of Absence to Serve as Edn. Advisor to High Commissioner of Germany, 1949-50). Hon. Pos.: Dir., Acad. of Sci. of St. Louis. Mem.: Fellow, A.A.A.S.; Amer. Soc. Zoologists; Botanical Soc. of Amer.; St. Louis Acad. of Sci.; Sigma Xi; Kiwanis; Phi Delta Kappa. Contrb. to: Biol. Bull.; Amer. Jour. Morphology; Amer. Jour. Exptl. Zool.; Proc. Soc. Exptl. Biol. and Med.; Sci. Gen. Int.: Served as Edn. Advisor to High Commissioner of Germany, in Chg. of Edn. Service Centers in the German State of Baden, Office of Heidelberg, 1949-50. Special Int.: Protozool.; Med. Protozool.; Effect of Antigenic Poisons on Protozoa.

PHILPOTT, Charles Wescott, Prof. of Physics and Dean of Admin., Nebr. State Tchr. Coll., Chadron, Nebr. **PHYSICS, CHEMISTRY.**

PHILPOTT, Jane, Asst. Prof. of Botany, Duke Univ., Durham, N. C. **PLANT MORPHOLOGY AND ANATOMY.** b. Kansas City, Mo., June 12, 1918. d. Charles H. and Evodia (Gentry) P. Edn.: A.B., Harris Tchr. Coll., 1940; M.S., State Univ. of Iowa, 1941; Ph.D., ibid., 1947. Exp.: Elem. Schl. Tchr., St. Louis Public Schls., 1941-45; Instr. of Biol. Sciences, Univ. of Chicago, 1947-51; Asst. Prof. of Botany, Duke Univ., 1951—. Mem.: Botanical Soc. of Amer.; A.A.A.S.; Sigma Xi. Contrb. to: Botanical Gazette. Special Int.: Comparative Morphology of Mature Foliage Leaves.



PHIPPS, Cecil Glenn, Prof. of Math., 1106 S. W. 5th Ave., Gainesville, Fla. **MATHEMATICS.** b. Skidmore, Mo., July 24, 1895. s. Owen and Ella (Hughes) P. Edn.: B.A., Univ. of Mont., 1921; M.A., Univ. of Minn., 1924; Ph.D., ibid., 1928. m. Dorothy Luther of Aurora, Minn., June 20, 1925. d. Mr. and Mrs. Ira Luther. c.: James Webster. Exp.: Instr. and Asst., Univ. of Minn., 1921-24; Instr., Univ. of Fla., 1924-27; Asst. Prof., ibid., 1927-29; Assoc. Prof., ibid., 1929-43; Prof., ibid., 1943—; Instr., Biarritz Amer. Univ., 1945-46. Hon. Pos.: Chmn., Southeastern Sect. of Math. Assn. of Amer., 1950-51. Mem.: A.A.A.S.; Math. Assn. of Amer.; Amer. Math. Soc.; Econometric Soc.; Fla. Acad. of Sci.; A.A.U.P.; Sigma Nu. Contrb. to: Econometrica and Amer. Math. Monthly. Ph.D. Dissertation: Approximation by Functions of A Certain Continuity. War Record: 2nd Lt., C.A.C., 1917-18; Civilian Duty with U.S.S.-T.A.F., Paris, France, 1945. Travel: Europe; Canada; Mexico; U. S. Hobbies: Travel by Auto; Color Photography. Listed in: Who's Who in Amer.; A.M.S.; Who's Who in the Southeast; Who Knows—and What. Special Int. Mathematical Economics.



PHIPPS, Dorothy Van Pelt, Tchr. of Sci. Methods, Chicago Tchr. Coll., 6800 Stewart Ave., Chicago, Ill. **BIOLOGY.** b. Feb. 23, 1898, Chicago, Ill. Edn.: S.B., M.S., Univ. of Chicago; Additional Grad. Work, Northwestern Univ., and Univ. of Chicago. m. George Carl Phipps, Carmi, Ill., 1928. Exp.: Univ. Schl. for Girls, 1920-22; Chicago Tchr. Coll., 1922—; Sci. Adviser, Chicago Pub. Schls., 1937. Mem.: Natl. Coun. of Elem. Sci.; State Rep., Natl. Coun. Elem. Sci.; State Dir. and Mem. of Professional Relations and Projects Com. and Com. on Evaluation of Sponsored Materials, Natl. Sci. Tchr. Assn.; Central Assn. of Sci. and Math.; Consultant, Natl. Comm. on Sci. Tehng., 1939-41; Adv. Comm., Ill. Jr. Acad. of Sci., 1941-43; Pi Delta Phi; Women's Univ. Club of Chicago; Chicago Acad. of Sci.; Delta Kappa Gamma; Ill. State Acad. of Sci.; Ill. Edn. Assn. Contrb. to: Sci. and Math.; Chicago Schls. Jour.; The Sci. Tchr. Travel: Europe; U. S. Recreation and Hobby: Gardening.

PHIPPS, Lawrence Cowle, Office, 610 Denver Natl. Bldg., Denver, Colo. **INVESTMENTS.**

PICCARD, Jean F., Univ. of Minn., Minneapolis, Minn. **AERODYNAMICS.**

PICKARD, Greenleaf Whittier, Rsch. Assoc., Blue Hill Observatory, Harvard Univ., Cambridge, Mass. **RADIO WAVE PROPAGATION.**

PICKELS, Edward Greydon, Pres., Specialized Instruments Corp., 1660 Laurel St., San Carlos, Calif. **PHYSICS.**

PICKENS, Andrew Lee, Assoc. Prof. of Biol., Queens Coll., Charlotte, N. C. **BIOLOGY.** b. Near Pickensville, S. C., Mar. 6, 1890. s. Robert Wellborn and Kate (Wigginton) P. Edn.: B.S., Furman Univ., 1915; Th.B., Southern Baptist Sem., 1921; M.Sc., Univ. of Va., 1924; Ph.D., Univ. of Calif., 1932. m. Belle Meadows, June 14, 1922. c.: A. L., Jr. Exp.: News Editor and Nature Columnist, Piedmont Publishing Co., 1915-17; Baptist Home Mission worker in S. C., 1916-17; Educational Worker and Postal Aid in Army Camps, 1918-19; Tchr.-Trng. Program of Southern Baptist S. S. Bd., Field Worker and State Secy. for S. C., 1920-23; Lab. Asst., Univ. of Va., 1923-24; Educational and Denominational Work in S. C., 1924-28; Field Worker, Termite Investigations Com., Univ. of Calif., 1928-32; Rsch. and Asst. Suprv. Upper S. C. Archeological Surveys, 1932-35; Prof. of Biol. in several Southern Colleges, 1936-50; Assoc. Prof. of Biol., Queens Coll., Charlotte, N. C., 1950—. Mem.: N. C. Acad. Sci.; Internat. Union for Study of Social Insects; Carolina Bird Club; Termite Investigation Com.; A.A.U.P. Author: Out of Doors in the Southern Piedmont, 1916; Scripture, Sci. and Common Sense, 1926;

PICKENS, Andrew Lee, Assoc. Prof. of Biol., Queens Coll., Charlotte, N. C. **BIOLOGY.** b. Near Pickensville, S. C., Mar. 6, 1890. s. Robert Wellborn and Kate (Wigginton) P. Edn.: B.S., Furman Univ., 1915; Th.B., Southern Baptist Sem., 1921; M.Sc., Univ. of Va., 1924; Ph.D., Univ. of Calif., 1932. m. Belle Meadows, June 14, 1922. c.: A. L., Jr. Exp.: News Editor and Nature Columnist, Piedmont Publishing Co., 1915-17; Baptist Home Mission worker in S. C., 1916-17; Educational Worker and Postal Aid in Army Camps, 1918-19; Tchr.-Trng. Program of Southern Baptist S. S. Bd., Field Worker and State Secy. for S. C., 1920-23; Lab. Asst., Univ. of Va., 1923-24; Educational and Denominational Work in S. C., 1924-28; Field Worker, Termite Investigations Com., Univ. of Calif., 1928-32; Rsch. and Asst. Suprv. Upper S. C. Archeological Surveys, 1932-35; Prof. of Biol. in several Southern Colleges, 1936-50; Assoc. Prof. of Biol., Queens Coll., Charlotte, N. C., 1950—. Mem.: N. C. Acad. Sci.; Internat. Union for Study of Social Insects; Carolina Bird Club; Termite Investigation Com.; A.A.U.P. Author: Out of Doors in the Southern Piedmont, 1916; Scripture, Sci. and Common Sense, 1926;

Wizard Owl of the Southern Highlands, 1933; Skyagusta, 1934; Termites and Termite Control, 1934 (joint author); Bible Atlas Simplified, 1934; Anti-Slavery and Other Memories of Old Richmond, 1943. Contbr. to: Biol. Bull.; Copeia; Jour. Mammalogy; The Auk; Wilson's Bull.; Condor; Science; etc. Gen. Int.: Originated Ectohormonal Explanation of Castes in Social Insects; Studies in Relations of Races and Geography; Pointed out Geographical Color Seniority in Nature. Special Int.: Symbiosis; Caste in Insects; Ornithophily; Botanical and other Features in Border War Tactics at the Battle of Cowpens and other early Amer. Contests; Faunistic Surveys; Relations of Archeology and Biogeography.

PICKENS, Russell Marion, Technical Sales Dir., Rayonier, Inc., 122 E. 42nd St., N. Y., N. Y. CHEMISTRY, CHEMICAL ENGINEERING.

PICKETT, Howell Grady, Prof. of Chem. and Hd., Liberal Arts Div., P. O. Box 263, Paul Smiths Coll., Paul Smiths, N. Y. CHEMISTRY (PHYSICAL AND ANALYTICAL). b. Madison, N. C., Sept. 20, 1899. s. Nathaniel Macon and Cora L. (Johnson) P. Edn.: B.S., Univ. of N. C., 1922; M.S., ibid., 1923; Ph.D., ibid., 1928. m. Mildred Stein, Apr., 1923. 2nd m. Lucile Cardwell, June, 1945. c.: Kathleen Johnson; Alyce Jean; Jack Thompson. Exp.: U. S. Army, 1918; Chemist, U. S. Gypsum Co., 1923; Instr. in Chem., Va. Poly. Inst., Blacksburg, Va., 1923-26; Instr. in Anal. Chem., Univ. of N. C., 1926-27; Instr. in Chem. Engrng., ibid., 1927-28; Hd., Dept. Chem., Madison Coll., Harrisonburg, Va., 1928-43; Instr. U. S. Army, 1943-44; Consulting Chemist, Manhattan Project, Isotopic Lab., Oak Ridge, Tenn., 1945-46; Hd., Chem. Dept., Paul Smiths Coll., Paul Smiths, N. Y., 1946—. Mem.: Amer. Chem. Soc.; Sigma Xi; Federation of Amer. Scientists; Alpha Chi Sigma; Kappa Pi; Paul Smiths Fish and Game Club; Amer. Legion. War Record: Pvt., World War I, 1918. Special Int.: Isotopes of Uranium; Chem. of Uranium; Nitration of Toluene; Sulfur Factor in Methanol Synthesis.

PICKETT, Ralph Edgar, Assoc. Dean and Dir. Schl. of Edn., Summer Sessions, N. Y. Univ., Washington Sq., E., N. Y., N. Y. VOCATIONAL EDUCATION, ADMINISTRATION.

PICKETT, William F., Hd., Dept. of Horticulture, Kans. State Coll., Manhattan, Kans. HORTICULTURE.

PICKFORD, Grace Evelyn, Rsch. Assoc., Bingham Oceanographic Lab., Yale Lab., Yale Univ., New Haven, Conn. OLIZOCHETA, CEPHALAPODA.

PIELEMEIER, Walter Henry, Prof. of Physics, Pa. State Coll., State College, Pa. ULTRASONICS.

PIEMISEL, Robert Louis, Physiologist, U. S. D. A., Sugar Plants Field Lab., Blue Lakes Blvd., Twin Falls, Idaho. ECOLOGY.

PIENKOWSKY, Arthur Thaddeus, retired, 2923 Tilden St., N. W., Washington, D. C. WEIGHTS AND BALANCES.

PIEPER, Charles John, 220 Drake Ave., New Rochelle, N. Y. EDUCATION.

PIERCE, Abby Nies, Chemist, Lit. Sect. of Chem. Rsch. Dept., Calco Chem. Div., Amer. Cyanamid Co., Bound Brook, N. J. ORGANIC CHEMISTRY, LITERATURE AND PATENT RESEARCH.



Patent Rsch.

b. Brooklyn, N. Y., Aug. 16, 1913. d. Frederick H. and Abby (Huntington) Ware Nies. Edn.: A.B., Vassar Coll., 1935; M.A., Columbia Univ., 1937. m. William Voorhees Pierce, Dec. 30, 1950. Exp.: Lab. and Staff, Calco Chem. Div., Amer. Cyanamid Co., Bound Brook, N. J., 1939—. Mem.: A.A.A.S.; Amer. Chem. Soc.; F. A. I. C.; A. A. U. W. Special Int.: Dyes and Intermediates; Lit. and

PIERCE, George Washington, Cruft Lab., Harvard Univ., Cambridge 38, Mass.

PIERCE, Harold Barnard, Prof. and Chmn., Dept. of Biochem., Coll. of Med., Univ. of Vt., Burlington, Vt. CHEMISTRY.

PIERCE, John Alvin, Rsch. Fellow, Cruft Lab., Harvard Univ., Cambridge, Mass. RADIO WAVE PROPAGATION.

PIERCE, John R., Bell Telephone Labs., Murray Hill, N. J. ELECTRONICS.

PIERCE, Joseph Alphonso, Prof. of Math., Chmn. of Div. of Natural Sci. and Math., Chmn. Grad. Schl. Administration, Tex. Sou. Univ., Houston, Tex. MATHEMATICAL STATISTICS. b. Aug. 10, 1902, Waycross, Ga. s. Rev. Wm. Arthur and Fannie Luvicia (McGraw) P. Edn.: A.B., Atlanta Univ., 1925; M.S., Univ. of Mich., 1930; Ph.D., ibid., 1938. m. Juanita George of Ft. Worth, Tex., Oct. 15, 1933. d. Pearl Witherspoon and Cornelius N. George. c.: Joseph A., Jr. Exp.: Asst. Prof. of Math., Tex. Coll., Tyler, Tex., 1921-27; Chmn., Div. of Math., Wash. H. S., Atlanta, Ga., 1927-29; Prof. of Math., Wiley Coll., Marshall, Tex., 1930-38; Prof. of Math., Atlanta Univ., Atlanta, Ga., 1938-48; Prof. of Math., Tex. Southern Univ., Chmn. Graduate Schl. Administration, Houston, Tex., 1948—; Proj. Supervisor, N. Y. A., Part-Time, 1939. Hon. Pos.: Edit. Bd., Jour. of Negro Bus.; Rosenwald Fellow, 1937-38. Mem.: A.M.S.; Inst. of Math. Statistics; Sigma Xi; Sigma Pi Phi; Alpha Phi Alpha. Author: Introductory Coll. Math., with Others; The Atlanta Negro; Negro Bus. and Bus. Edn. Contbr. to: Annals of Math. Statistics; Jour. of Amer. Statistical Assn.; Quart. Rev. of Higher Edn. Among Negroes; Morehouse Jour. of Sci. Ph.D. Dissertation: A Study of a Universe of Finite Populations with Application to Moment-Function Adjustments for Grouped Data. Special Int.: Rsch. in Math. Statistics; Mathematical Statistics, Surveys. Hobby: Athletics.

PIERCE, Leslie, 92 S. Duncan St., Fayetteville, Ark. BOTANICAL SCIENCES.

PIERCE, Norval Harvey, 15th St. and Zuni Dr., Del Mar, Calif. MEDICAL SCIENCES.

PIERCE, William G., Sr. Geologist, U. S. Geologic Survey, Washington, D. C. GEOLOGY OF FUELS.

PIERRE, William Henry, Prof. of Soils and Hd. Dept. of Agron., Iowa State Coll., Ames, Iowa. SOIL SCIENCE.

PIERSOL, George Morris, Prof. of Med., Univ. of Pa., Philadelphia, Pa. INTERNAL MEDICINE.

PIERSOL, Robert James, Physicist and Hd., Physics Div., State Geol. Survey, Urbana, Ill. PHYSICS.

PIETENPOL, William Brasser, Hd., Dept. of Physics, Univ. of Colo., Boulder, Colo. EXPERIMENTAL PHYSICS.

PIGGOT, Charles Snowden, The Cosmos Club, Washington 5, D. C.

PILLEMER, Louis, Inst. of Pathol., Western Reserve Univ., Cleveland 6, Ohio. IMMUNOCHEMISTRY.

PILLSBURY, Walter Bowers, Prof. of Psychol. Emeritus, Univ. of Mich., Ann Arbor, Mich. PSYCHOLOGY. b. Burlington, Iowa, July 21, 1872. s. William H. H. and Eliza (Bowers) P. Edn.: A.B., Univ. of Nebr., 1892; Ph.D., Cornell Univ., 1896. Hon. Deg.: LL.D., Univ. of Nebr. m. Margaret M. Milbank, June 16, 1905. c.: Margaret Elizabeth; Walter Milbank. Exp.: Asst. in Psychol., Cornell Univ., 1895-97; Instr., Univ. of Mich., Ann Arbor, Mich., 1897-1900; Asst. Prof. Philos., ibid., 1900-05; Jr. Prof., Dir. of Psychol., ibid., 1905-10; Prof., ibid., 1910, 29; Chmn., Psychol. Dept., ibid., 1929-42; Emer., ibid., 1942—; Lectr. in Psychol. Columbia Univ. 1908-09; Lectr. in Psychol., Sorbonne, 1923. Mem.: Amer. Psychol. Assn.; Natl. Acad. Sci.; Phi Beta Kappa; Sigma Xi. Author: L'Attention, 1906; Attention, 1908; An

Elem. Psychol. of the Abnormal, 1932; History of Psychol., 1929, 1934; Chinese Translation, Handbook of Psychol., with Pennington, 1942; etc. Contr. to: Amer. Jour. Psychol.; Psychol. Rev.; Jour. Social Psychol.; Philos. Rev.; Jour de Psychologie; Scientia; etc. Special Int.: Attention; Memory; Reading.

PILSBY, Henry A., Curator, Dept. of Mollusks, Acad. Natural Sciences, Logan Sq., Philadelphia, Pa. ZOOLOGY.

PINCUS, Gregory, Dir. of Labs., Worcester Foundation Exptl. Bol., 222 Maple Ave., Shrewsbury, Mass. PHYSIOLOGY.

PINCUS, Sol, Sr. Sanitary Engr., Dept. of Health, 11 Park Pl., N. Y., N. Y. SANITARY ENGINEERING.

PINNEY, Mary Edith, Prof. of Zool., Milwaukee-Downer Coll., Milwaukee, Wis. ZOOLOGY.

PIOTROWSKI, Zygmunt A., Assoc. in Psychiatry, Columbia Univ., Adj. Prof. of Psychol., N. Y. Univ., Prin. Rsch.



Psychol., N. Y. State Dept. of Mental Hygiene, 722 W. 168th St., N. Y. 32, N. Y. EXPERIMENTAL PSYCHOPATHOLOGY. b. Poznan, Poland, Apr. 18, 1904. s. Edmund and Salomea (Jankowska) P. Edn.: Ph.D., Univ. of Poznan, 1927. m. Irena Glebocka, July 28, 1927. Exp.: Sr. Assnt. in Psychol., Univ. of Poznan, Poznan, Poland, 1927-28; Psychol. Assnt., N. Y. State Psychiatric Inst., 1930-31; Instr. in Psychiatry, Columbia Univ. N. Y. C., 1931-43;

Assoc. in Psychiatry, *ibid.*, 1943—; Lectr. in Psychol., N. Y. Univ., 1947-48; Adj. Assnt. Prof. of Psychol., *ibid.*, 1948-49; Adj. Assoc. Prof. of Psychol., *ibid.*, 1949-53; Adj. Prof. Psychol., *ibid.*, 1953; Prin. Rsch. Sci. in Psychol., N. Y. State Dept. of Mental Hygiene, N. Y. C., 1948—; Consultant to Walter Reed Genl. Hosp., Washington, D. C., 1949-50; Attending Consultant to Vet. Admin., 1947—; Consultant, Developmental Schl., N. Y. C., 1953—; Assoc. Editor, Review of Diagnostic Psych. and Personality Exploration, 1954— Hon. Pos.: Past Pres., Rorschach Inst.; Mem. of Coun. and Chmn. of Psychol. Sect., N. Y. Acad. of Sci.; Diplomat of Amer. Bd. of Examiners in Prof. Psychol., 1952— Mem.: Amer. Psychol. Assn., Fellow; N. Y. Acad. of Sci., Fellow; Fellow, Amer. Orthopsychiat. Assn.; Charter Fellow, Soc. for Projective Tech.; Amer. Psychopathol. Assn.; Eastern Psychol. Assn.; N. Y. Metropolitan Psychol. Assn.; N. Y. State Assn. for Clin. Psychol. Contrb. to: The Psychiatric Quarterly; Jour. of Nervous and Mental Disease; Rorschach Rsch. Exchange; British Jour. of Med. Psychol.; Psychoanalytic Rev.; Psychosomatic Med.; Jour. of Consulting Psychol.; Jour. of Psychol.; Amer. Jour. of Psychiatry; Quarterly Jour. of Child Behavior; Jour. of Abnormal and Soc. Psychol.; Nervous Child. Assoc. Editor: Psychiatric Quarterly, 1944—; Rorschach Rsch. Exchange, 1941-48. Gen. Int.: Introduced New Diagnostic Perceptanalytic signs in Intracranial Pathol. and Epilepsy; Pioneer Work in Perceptanalytic Prognosis and Diagnosis in Schizophrenia; Rewrote and Improved Definitions of the Rorschach Method. Special Int.: Personality Tests and Psychopathol., Especially Problems of Diagnosis and Prognosis in Mental Diseases; Study of Sexual Criminals.

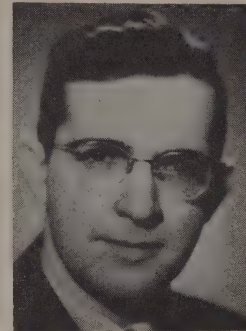
PIPER, Arthur M., Box 3418, 607 P. O. Bldg., Portland, Ore. GROUND-WATER GEOLOGY.

PIRNIE, Malcolm, 25 W. 43rd St., New York 18, N. Y. SANITARY ENGINEERING.

PIRTLE, George William, Consulting Geologist, Hudnall and Pirtle, 115 E. Second St., Tyler, Tex. GEOLOGY.

PISTON, Donald Stover, Physicist, Twining Labs., Fresno, Calif. APPLIED SPECTROGRAPHY.

PITCHER, Robert Walter, Asst. Prof. of Psychol., Baldwin-Wallace Coll., Berea, Ohio. PSYCHOLOGY. b. Grand Rapids, Mich., Oct. 26, 1918. s. Harry Louise and Mabel Louise (Morrison) P. Edn.: A.B., summa cum laude, Alma Coll., 1946; Ph.D., Univ. of Mich., 1953. m. Adretta Katherine Atchinson, August 21, 1943. c.: James Robert; Judith Kay. Exp.: Instr., Mich. State Normal Coll., summer, 1952; Asst. Prof. of Psychol., Baldwin-Wallace Coll., Berea, Ohio, 1952—. Mem.: Amer. Assn. of Univ. Prof.; Phi Delta Kappa. Special Int.: Making Undergraduate Tehng. more



Effective; Psychol. Testing.

PITMAN, Earle Carver, Consulting Chemist and Chem. Engr., "Norumbega," Camden, Maine. LACQUERS AND ADHESIVES. b. West Boylston, Mass., Oct. 10, 1893. s. J. Asbury and Flora Etta (Carver) P. Edn.: A.B., Harvard Univ., 1914; B.S., Mass. Inst. of Tech., 1916. m. Mary Gove, Oct. 10, 1917. c.: Aroline, Barbara, Dorothy. 2nd. m. Mary K. Vincent, Oct. 20, 1934. c.: John Carver. Exp.: Brown Co., Berlin, N. H., 1916-18; Lustron Co., S. Boston, Mass., 1918-19; du Pont Co., Arlington, N. J. and Parlin, N. J., 1919-43; Consultant, Red Bank, N. J. and Camden, Maine, 1943—. Hon. Pos.: Modern Pioneer Award, 1940. Mem.: Amer. Chem. Soc.; Soc. Chem. Ind.; A.A.A.S.; Electrochem. Soc.; Amer. Inst. Chemists; Phi Beta Kappa; Alpha Chi Sigma. War Record: Cons. on Plastics to U. S. A. Ordnance Dept., W. W. II. Gen. Int.: Patents on Motion Picture Film, Low Viscosity Nitrocellulose, Shoe Cementing Processes, Fluorescent Lamp Coatings, High Frequency Lamination. Special Int.: Manufacturer of Low Viscosity Nitrocellulose and Its Use in Finishes and Adhesives.

PITMAN, John Himer, Assoc. Prof. of Math. and Astron., Swarthmore Coll., Swarthmore, Pa.

PITTMAN, Don Warren, Prof. of Soils, Utah State Agri. Coll., Logan, Utah. SOILS, AGRONOMY.

PITTMAN, Margaret, Bacteriologist, Natl. Inst. of Health, Bethesda, Md. BACTERIOLOGY.

PITTMAN, Martha Sophia, 1909 Poyntz Ave., Manhattan, Kans.

PITTS, Frank Patrick, Asst. Prof. of Chem., Med. Coll. of Va., Richmond, Va. ANALYTICAL CHEMISTRY.

PITZER, Kenneth Sanborn, Gilman Hall, Univ. of Calif., Berkeley 4, Calif.

PLAGGE, Herbert John, Assoc. Prof. of Physics, Iowa State Coll., Ames, Iowa. PHYSICS, ACOUSTICS.

PLAKIDAS, Antonios George, Plant Pathologist, and Lectr. in Botany, La. State Univ., Baton Rouge, La. PLANT PATHOLOGY.

PLANK, Isa Ruth, Prof. Chem. and Phys., Wm. Penn. Coll., Oskaloosa, Ia. CHEMISTRY. b. Lyons, Kan., May 29, 1901. d. Charles and Hettie May (Shumway) P. Edn.: A.B., Southwestern Coll., 1925; M.S., Kan. State Coll., 1930. Exp.: Schl. Dist. 5, Rice Co., Kan., 1920-21; Peru H. S., Peru, Kan., 1925-27; Independence Sr. H. S., Independence, Kan., 1928-37; Montreat Coll., Montreat, N. C., 1941-42; Bethany Coll., Lindsborg, Kans.,

1942-43, 1945-47: Washburn Municipal Univ., 1943-45: Wm. Penn. Coll., 1950—. Mem.: Pi Kappa Delta; Pi Gamma Mu; Phi Kappa Phi. Travel: Mexico; Canada. Hobbies: Handicrafts.

PLANT, Louis Clark, retired, 231 Oakhill Ave., East Lansing, Mich. MATHEMATICS.

PLASS, Everett Dudley, Prof. and Hd., Dept. of Obstetrics and Gynecology, Iowa State Univ., Iowa City, Iowa. OBSTETRICS, GYNECOLOGY.

PLATT, Kenneth Bafdorf, Regional Range Examiner, Nevada-Calif. Region, U. S. Grazing Service, P. O. Box 751, Reno, Nev. ANIMAL HUSBANDRY.

PLATT, Robert S., Prof., Dept. of Geography, Univ. of Chicago, Chicago, Ill. GEOGRAPHY.

PLATZ, Gustav A., Prof. of Biol., Graceland Coll., Lamoni, Iowa. PLANT PATHOLOGY.

PLOUGH, Harold Henry, Prof. of Biol., Amherst Coll., Amherst, Mass. ZOOLOGY.

PLUM, William B., Physicist, U. S. Naval Radiological Defense Lab., San Francisco, Calif. PHYSICS. b. Jackson, Minn., July 21, 1907. s. William O. and Margaret Della (Zufall) P. Edn.: A.B., Morningside Coll., 1930; A.M., Univ. of Mo., 1932; Ph.D., ibid., 1935. m. Esther L. Langenberg, May 27, 1936. c.: Charlotte Anne; Margaret Suzanne. Exp.: Prof. of Math. and Dean of Men, Tex. Wesleyan Coll., 1935-36; Assoc. Prof. of Math. and Dean of Men, Southwestern Coll., Winfield, Kans., 1936-38; Prof. of Phys. and Dean of Men, ibid., 1938-42; Active duty as commissioned officer, U. S. Navy, Bureau of Ordnance, 1942-46; Branch Headquarters, Research and Development, and Test Organization, U. S. Naval Ordnance Test Station, China Lake, Calif., 1945-50; Director of Education, ibid., 1950-53; Physicist, U. S. Naval Radiological Defense Lab., San Francisco, Calif., 1953—. Hon. Pos.: Pres., China Lake Branch, Scientific Rsch. Soc. of Amer., 1952; China Lake Elem. Schl. Trustee, 1948-51. Mem.: Sigma Xi; Scientific Rsch. Soc. of Amer.; Gamma Alpha; Amer. Phys. Soc.; A.A.P.T.; Sigma Pi Sigma; Amer. Soc. for Engrng. Edn.; A.A.A.S.; Masonic Lodge. Contrb. to: Jour. Chem. Phys. Special Int.: Infrared Spectroscopy; Terminal Ballistics; Mechanics

PLUMMER, A. Perry, Forest Ecologist, Intermountain Forest and Range Expt. Sta., Great Basin Br. Sta., Ephraim, Utah. ECOLOGY.

PLUMMER, Harry C., Structural Clay Products Inst., 1520 18th St., N. W., Washington 6, D. C. CERAMICS.

PLUMMER, Helen Jeanne, Consulting Geologist, Bureau Econ. Geol., Univ. of Tex., Austin, Tex. GEOLOGY.

PLUNKETT, Orda Allen, Assoc. Prof. of Botany, Univ. of Calif., Los Angeles, Calif. MEDICAL MYCOLOGY.

PLUSCH, H. A., 1014 Oak Lane, Philadelphia, Pa. CERAMICS.

PLYLER, E. K., Natl. Bureau of Standards, Washington, D. C. INFRARED SPECTROSCOPY.

POETKER, Albert Henry, Exec. Dean, Univ. of Detroit, Detroit, Mich. PHYSICS.

POGO, Alexander, Div. Historical Rsch., Carnegie Inst. of Wash., Harvard Lib. 189, Cambridge, Mass. HISTORY SCIENCE.

POHLE, Ernst Albert, Prof. of Radiol., Med. Schl., Univ. of Wis., Madison, Wis. RADIOLOGY.

POHLMAN, Augustus G., Assoc. Prof. of Otolaryngology, 4056 Farnmouth Dr., Los Angeles, Calif. MEDICAL SCIENCES.

POITRAS, Edward Joseph, Dir. of Engrng., Fenwal, Inc., Ashland, Mass. ENGINEERING.

POLAND, Joseph F., U. S. Geol. Survey, Ground Water Br., Sacramento, Calif. HYDROLOGY.

POLAYES, Silik H., Dir. of Path., Cumberland Hospital, 414 Sterling Place, Brooklyn 17, N. Y. PATHOLOGY AND HEMATOLOGY. b. Russia, Jan. 12, 1899. s. Jacob and Bryna (Charin) P. Edn.: Ph.B., Yale Univ., 1921; M.D., ibid., 1924. m. Libbie Shelnitz, April 8, 1925. c.: Saul. Exp.: Internship, N. Y. C. Hosp., N. Y., 1924-27; Instr., Pathology, Long Island Coll. Med., Bklyn., N. Y., 1927-30; Assoc. Dir., Jewish Hosp., Brooklyn, N. Y., 1927-35; Asst. Prof. of Pathol., Long Island Coll., Brooklyn, N. Y., 1930-35; Assoc. Pathol., Jewish Hosp., Brooklyn, N. Y., 1935-53; Lectr. in Pathol., Bacteriol. and Hygiene, Brooklyn Jewish Hosp. Schl. of Nursing, Brooklyn, N. Y., 1926-40; Asst. Physician, ibid., 1927-34; Lectr. in Clinical Pathol., ibid., 1929-34; Chief Pathologist of Cumberland Hosp., Brooklyn, N. Y., 1934—; Lectr. in Pathol., ibid., 1934—; Chief Pathologist, Brooklyn Cancer Inst., Brooklyn, N. Y., 1934-39; Dir. of Pathology, Boro Park Gen. Hosp., ibid., 1928-36; Dir. of Pathol., Prospect Heights Hosp., ibid., 1936—; Lectr. in Bacteriol., ibid., 1936—. Mem.: N. Y. State Soc. of Pathologists; Amer. Assn. of Pathologists and Bacteriologists; Amer. Soc. of Clinical Pathologists; Soc. for the Study of Blood; F.A.M.A.; Founding F.C.A.P.; F.A.C.P.; Internatl. Soc. of Hematology; N. Y. Pathological Soc. Contrb. to: Long Island Med. Jour.; Jour. Lab. and Clin. Med.; Arch. of Int. Med.; J.A.M.A., etc. Gen. Int.: Performed the Rsch., together with Dr. A.S. Wiener and Dr. Max Lederer, which led to the Adoption by the N. Y. Courts of Paternity Blood Tests, The Breitbart-Esquiro Bill, Pioneer Rsch. in Isoimmunization, the Process Responsible for Hemolytic Disease of the New Born, involving the RH Factor as well as original work on the A. and B. Factors in the Blood causing isoimmunization. Special Int.: Tissue Pathology and Hematology.

POLE, Gordon R., 2592 S. Shore Blvd., White Bear Lake 10, Minn. CERAMICS.

POLIVKA, Jaroslav Joseph, Consulting Engr., Lectr., Stanford Univ., 1150 Arch St., Berkeley 8, Calif. EXPERIMENTAL STRESS ANALYSIS, HIGHLY STATISTICALLY DETERMINATE STRUCTURES, BRIDGES IN STEEL AND IN REINFORCED CONCRETE, PRESTRESSED CONCRETE, SHELL STRUCTURES. b. Prague, Czechoslovakia, April 20, 1886. s. Joseph and Francisca (Urbanova) P. Edn.: M.S., Tech. Univ. of Prague, 1909; Dr. Engr., ibid., 1917. m. Marie Irma Polakova, 1913. c.: Jan; Milo; Elizabeth. Exp.: Draftsman and Designer, Austrian Navigation Locks, 1907-09; Concrete Arch Bridge over Ohvre River, Bohemia, 1910-11; Chf. Engr., Soc. Ital. Cemento Armato in Florence and Zurich, Switzerland, 1911-13; Consult. Engr. in Zurich, Switzerland, 1913-16; Chf. Engr. Assoc. with Dr. F. von Emperger, Vienna, Austria, 1916-17; Design Supvr. Factory for Explosives, Ruse, Drava R., 1917-18; Expert of Czechoslovakia Govt. in Chg. Study Public Works in France, 1919; Lab. of Ecole des Ponts et Chaussées, Paris, France with Prof. Manager, 1919; Rsch. Asst., Testing Lab. of Tech. Univ. of Prague; Mem., Masaryk Acad. of Work Com. for Rsch. and Testing Struct. Materials; V. E. Materials Lab. of Czech. Inst. of Tech., Prague, 1919-39; Design Supvr. Glass Concrete Structs. Incl. New Tech. Museum, Prague, Corn Exchange Bldg., Rotterdam, Holland; Olympic Sport Theatre, Berlin, Modern Gallery, Prague, 1934-38; Czechos. Pavilion Paris Internatl. Exposn.; Prix Colombet from French Soc. of Civil Engrng., 1937; Czechos. Pavilion, N. Y. World's Fair, 1938-39; Rsch. Assoc. of Civil Engrng., Univ. of Calif., Berkeley, Calif., 1939-45; Lectr. on C.E., ibid., 1945. Hon. Pos.: Pres., Soil Solidification Engrs., Inc. Mem.: Sigma Xi; A.S.C.E.; A.C.I.; Structural Assn. of Calif.; A.S.-M.E.; A.S.T.M.; Seismolog. Soc. of Amer.; Swiss Soc. of Testing Materials; Internatl. Assn. for Bridge and Struct. Engrng.; French Soc. of Civil



Engrng.; Soc. for Exptl. Stress Analysis; Assn. of Engr. and Arch. of Mex.; Czech. Soc. of Engr. and Arch.; Soc. of Glass Tech., Sheffield; Amer. Ceramic Soc.; Amer. Welding Soc.; Amer. Soc. for Testing Materials; Inst. of Aeronautical Sci.; Structural Engrs. Assn. of N. C.; Amer. Soc. of Mech. Engrs. Author: Analysis of Frame Structures, Prague, 1927; Béton Translucide, Paris-Brussels, 1937; Graphical Methods of Analyzing Statically Indeterminate Structures, Berkeley, 1940; Long-Span Concrete Bridges, Mex. City, 1950; more than 100 Papers on Tech. and Scientific Subjects. Contrb. to: Trans. of A.S.C.E.; Civil Engrng.; Applied Mechanics Revs.; Jour. of Aeronautical Sci.; Proc. of Soc. of Exptl. Stress Analysis; Jour. of Amer. Concrete Inst.; Beton und Eisen; Mémoires de la Société des Ingénieurs Civils de France; Der Brueckenbau; Technicky Obzor; Revue du Béton Armé; Bulletin Technique de la Suisse Romande; Revista Mexicana de Ingenieria y Arquitectura. Gen. Int.: Proposal of the Second Crossing of the San Francisco Bay, with Frank Loyd Wright, Arch., Submitted to the State Legislature Comm. which would save Approx. \$100 Million Public Money. Special Int.: Exptl. Stress Analysis; Shell-Type Structures; Precast and Prestressed Concrete Structures; Chem. Soil Solidification; Concrete Dams.

POLLARD, Ernest C., Sloane Physics Lab., Yale Univ., New Haven, Conn. **BIOPHYSICS.**

POLLARD, H. Marvin, Assoc. Prof. of Internal Med., Univ. Hosp., Ann Arbor, Mich. **INTERNAL MEDICINE.**

POLLEY, J. Crawford, Hd., Dept. of Math., Wabash Coll., Crawfordsville, Ind. **MATHEMATICS.**

POLLISTER, Arthur, **PHOTOMETRIST.**

POLLISTER, Arthur W., Assoc. Prof. of Zool., Columbia Univ., N. Y., N. Y. **CYTOLOGY.**

POLLOCK, Harry Evelyn Dorr, Sr. Archaeologist, Div. Historical Rsch., Carnegie Inst. of Wash., 10 Frisbie Pl., Cambridge, Mass. **ARCHAEOLOGY.**

POLLOCK, Robert Thomas, Owner and Hd., Robert T. Pollock, 570 Lexington Ave., N. Y., N. Y. **ENGINEERING RESEARCH.**

POMERENE, Elizabeth, Biochemist, St. Luke's Hosp., Cleveland, Ohio. **BIOCHEMISTRY.**

POMEROY, Fred Elmer, Prof. and Hd., Dept. of Biol., Bates Coll., Lewiston, Maine.

POMEROY, George A., Instr. in Physics, San Mateo Jr. Coll., San Mateo, Calif. **PHYSICS.**

POMEROY, William Cyrus, Registrar, Univ. of Calif., Los Angeles, Calif. **BAND SPECTRA PHYSICS.**

POMMERENKE, William, **STERILITY.**

POND, Millicent, 275 Central Ave., New Haven, Conn. **PSYCHOLOGY.**

POND, Samuel E., Instrumentation, Pratt and Whitney Aircraft Div., E. Hartford, Conn. **APPLIED PHYSICS.**

POND, Walter Frank, Geologist, Magnet Cove Berium Corp., Box 412, Malvern, Ark. **ECONOMIC GEOLOGY.**

PONTIUS, Hilda Spink Cuniff, Translator, War Dept., Army Map Service, 4020 Arkansas Ave., N. W., Washington, D. C. **BOTANY.**

PONTIUS, Rex Burns, Physicist, Kodak Resch. Lab., Kodak Park, Rochester, N. Y. **PHYSICS.**

POOL, Raymond John, Prof. and Chm., Dept. of Botany, Univ. of Nebr., Lincoln, Nebr. **ECOLOGY, TAXONOMY.**

POOLE, James Plummer, Prof. of Botany, Dartmouth Coll., Hanover, N. H. **BOTANY.**

POOLE, Robert Franklin, Pres., Clemson Coll., Clemson, S. C. **PLANT PATHOLOGY.**

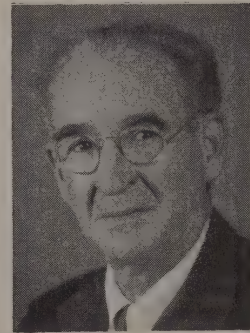
POOR, Charles Lane, Prof. Emer. Celestial Mechanics, Columbia Univ., 35 E. 69th St., N. Y., N. Y. **CELESTIAL MECHANICS.**

POORMAN, Alfred Peter, (Died Feb. 12, 1952), Prof. Emer. of Engrng. Mech., Purdue Univ., 329 Russell St., W. Lafayette, Ind. **ENGINEERING.** b. Altamont, Ill., February 13, 1877. s. George and Eliza Jane (Watson) P. Edn.: B.S., Univ. of Ill., 1907; A.B., Univ. of Colo., 1909; C.E., ibid., 1909. m. Sarah Elizabeth Ellmaker of Boulder, Colo., June 22, 1910 (dec., Jan. 30, 1935). d. Mr. and Mrs. Cyrus E. m. 2nd: Genevieve Lippoldt of Boulder, Colo., June 29, 1936. d. Mr. and Mrs. Henry L. c.: Mrs. Mary Esther Jensen, George Ellmaker. Exp.: Engr., Weber Concrete Chimney Co., 1907; Instr., Univ. of Colo., 1907-09; Hydrographer, Wind River Indian Reserv., 1909; Asst. Prof. of Applied Mech., Purdue, 1909-17; 1919-20; Assoc. Prof., ibid., 1920-22; Prof. of Applied Mech., ibid., 1922-47; Prof. Emer., ibid., since 1947. Mem.: Amer. Soc. of C. E.; Amer. Soc. for Testing Mat.; Amer. Soc. for Engrng. Edn.; Amer. Concrete Inst.; A.A.U.P.; A.A.A.S.; Tau Beta Pi; Sigma Xi; Chi Epsilon; Scabbard and Blade. Author: Applied Mechanics, 1917; Strength of Materials, 1925. War Record: Capt. of Engrs., U. S. Army, 1917-19. Travel: France, 1917-19. Listed in: Who's Who in Amer.; A.M.S.; Who's Who in Ind.

POPE, Clifford Hillhouse, Curator Reptiles and Amphibians, Chicago Natural History Museum, Chicago, Ill. **HERPETOLOGY.**

POPE, Gustavus, **BOTANY.**

POPE, Merritt Nichol, Agronomist, retired, Philabeg Farm, Aldie, Va. **STRUCTURE AND DEVELOPMENT PHYSIOLOGY OF THE BARLEY SEED.** b. Odell, Ill., May 2, 1883. s. Chester Andrew and Mariamne Amanda (Nichol) P. Edn.: B.S., Northwestern Univ., 1905; A.M., Harvard Univ., 1911; B.S. in Agri., N. Dak. Agri. Coll., 1913; Ph.D., Univ. of Md., 1929. m. Mary Pearl Brooks, July 13, 1907. c.: Loren; Seth; Sarah; Merritt, Jr. Exp.: Instructor, Secondary and Normal Schls., 1905-16; Tchrr., Biol. and Agri. State Normal Schl., Eau Claire, Wis., 1916-18;



Asst., Barley Investigations, Bureau of Plant Indus., U. S. Dept. of Agri., 1918-20; Asst. Agronomist and Assoc. Agronomist, ibid., 1920-30; Agronomist, ibid., 1930-46; retired, 1946—. Mem.: Fellow, A.A.A.S.; Botanical Soc. of Wash.; Wash. Acad. Sci.; Delta Tau Delta; Alpha Zeta; Phi Kappa Phi; Sigma Xi. Contrb. to: Sciences; Jour. Botanical Soc. Amer.; Jour. Amer. Soc. Agron.; Jour. Heredity; Jour. Agril. Rsch.; etc. Special Int.: Catalase; Growth Curve; Immature Seeds; Vivipary; Physiol. of Fertilization and of Growth of Barley Embryo; Viability of Ovules and Pollen after Cold Storage; Development of Seminal Roots; Path Taken in Ovule by Pollen Tube.

POPE, Philip H., Retired, Prof. of Biology, Curator, Museum of Natural History, Whitman Coll., Walla Walla, Washington. **BIOLOGY.** b. Manchester, Maine, October 24, 1887. s. Charles and Mary Elizabeth (Carpenter) P. Edn.: A.B., Bowdoin, 1914; M.A., Harvard, 1917; Ph.D., Univ. of Pittsburgh, 1921. m. Louise Smith of Northampton, Mass., July 12, 1922. d. Mr. and Mrs. Frank E. Smith. c.: Edith Pope Patten. Exp.: Reed Coll., Instr., 1921-23; Whitman Coll., Instr., 1930—; Asst. Prof., 1932; Prof. of Bio., 1936—; Curator of Museum of Natural History, 1948-53; Retired, 1953—. Mem.: A.A.A.S.; Amer. Soc. Tchrrs. and Herpetologists; Natl. Assn. Biology Tchrrs.; Amer. Assn. Univ. Prof.; Beta Theta Pi; Kiwanis Club of Walla Walla. Contrb. to: Science; Nature Maga-

zine: Amer. Bio. Tchr. Ph.D. Dissertation: Life History of Eastern Water Newt with Observations on the Sense of Smell. War Record: Med. Corps, Hosp. work at Camp Logan, Tex. and Ft. Sheridan, Ill., 1917-19. Travel: Bermuda; Europe; Mex.; Hawaiian Islands. Gen. Int.: Ranger-Naturalist. Yellowstone Park, 1931. Hobbies: Photography; Gardening; Fishing; Hunting. Listed in: A.M.S. Naturalists' Dir.

POPE, Willard, 1705 Seminole Ave., Detroit, Mich. ENGINEERING.

POPENOE, Paul, Gen. Dir., Amer. Inst. Family Relations, 607 S. Hill St., Los Angeles, Calif. SOCIAL BIOLOGY.

POPPER, Hans, Cook County Hosp., Chicago 12, Ill. PATHOLOGY.

POPHAM, Richard Allen, Asst. Prof. of Botany, Ohio State Univ., Columbus, Ohio. PLANT ANATOMY.

POPP, Henry William, Prof. of Botany, Pa. State Coll., State College, Pa. PLANT PHYSIOLOGY, BOTANY.

PORGES, Nandor, Technical Dir. and Lab. Supvr., Chase Chemical Co., 280 Chestnut St., Newark, N. J. INDUSTRIAL FERMENTATIONS.

PORSILD, Erling A., Chf. Botanist, Natl. Museum of Can., Ottawa, Ont., Can. TAXONOMY, PHYTOGEOGRAPHY.

PORTE, William Solomon, Pathologist, Breeding Disease Resistant Vegetable Crops, Horticultural Field Sta., Bureau Plant Indus., U. S. D. A., Beltsville, Md. PLANT PATHOLOGY, PLANT BREEDING.

PORTENIER, Lilliam G., Univ. of Wyo., Laramie, Wyo. PSYCHOLOGY.

PORTER, Cedric Lambert, Assoc. Prof. of Botany, Univ. of Wyo., Laramie, Wyo. BOTANICAL SCIENCES.

PORTER, Charles L., 924 N. Main St., W. Lafayette, Ind. BOTANICAL SCIENCES.

PORTER, Donald R., Div., Mgr., Agri. Dept., Campbell Soup Co., P. O. Box 1406, Sacramento, Calif. GENETICS.

PORTER, Eugene L., Prof. of Physiol. and Consulting Physiologist, John Sealy Hosp., Galveston, Tex. PHYSIOLOGY.

PORTER, Frank R., 318 E. Clark St., Crown Point, Ind. CERAMICS.

PORTER, Homer Clifford, Assoc. Prof. of Biol., Wash. and Jefferson Coll., Washington, Pa. PLANT ANATOMY.

PORTER, Keith R., Rockefeller Inst. for Med. Rsch., New York, N. Y. CANCER RESEARCH.

PORTER, Lyman Edwards, Assoc. Prof. of Chem., Univ. of Ark., Fayetteville, Ark. ANALYTICAL CHEMISTRY.

PORTER, Philip Kelsey, Hd., Materials Dept., Cornell Aeronautical Lab., Buffalo, N. Y. CHEMISTRY.

PORTER, Royal Arthur, Prof. of Physics, Syracuse Univ., Syracuse, N. Y. PHYSICS.

PORTER, Rupert Howard, Rsch. Assoc. Prof. and Assoc. Prof. of Botany, Agron. and Hd., Seed Lab., Iowa State Coll., Ames, Iowa. BOTANICAL SCIENCES.

PORTER, Ward F., Jr., Asst. Prof. and Asst. Rural Sociologist, Dept. of Agric. Econ. and Rural Sociol., W. Va. Univ., Morgantown, W. Va. SOCIOLOGY. b. Malden, Mass., June 11, 1917. s. Ward F. and Alberta French (Hall) P. Edn.: A.B., Dartmouth Coll., 1939; M.A., Harvard Univ., 1951; Ph.D. ibid., 1951. m. Jane Martin, Dec. 26, 1942. c.: Mary Jane; Susan Hall. Exp.: Jr. Professional Asst., Civilian Programs Br., Food Distribution Admin., U.S.D.A., 1942-43; Asst. Prof., Asst. Rural Sociologist, W. Va. Univ., Morgantown, W. Va., 1947—. Mem.: Rural Sociol. Soc.; Amer. Sociol. Soc. Special Int.: Rural Sociol. and Social Organization.

POSEY, Chesley Justin, Prof. of Geography, Univ. of Kans., Lawrence, Kans.

POSSONY, Stefan T., Prof. of Internatl Politics, Georgetown Univ., 402 E. Westmoreland Rd., Falls Church, Va. INTERNATIONAL RELATIONS AND MILITARY SCIENCE. b. Vienna, Austria, March 15, 1913. s. Ernst and Hermine (Siller) P. Edn.: Ph.D., Univ. of Vienna, 1935. m. Vally T., May 17, 1938. c.: Andrea Michelle. Exp.: Inst. for Advanced Study, Princeton, N. J., 1941-43; U. S. Dept. of the Navy, Washington, D. C., 1943-46; Prof. of International Politics, Georgetown Univ., Graduate Schl., Wash., D. C., 1946—; Faculty Natl. War Coll., Wash., D. C. Mem.: Gold Key Soc. Author: Tomorrow's War, 1938; Strategic Air Power, The Pattern of Dynamic Security, 1949; International Relations, (co-author), 1950; A Century of Conflict, Communist Techniques of World Revolution, 1953. Contrb. to: Review of Politics; Public Opinion Quarterly; U. S. Naval Institute Proceedings; Yale Law Jour.; Social Rsch.; The Annals. Special Int.: Air Power; Communism; Non-Military Means of Warfare, War Economics; International Relations in the 20th Century.



POST, Emil Leon, Assoc. Prof. of Math. Dept., City Coll. of N. Y., N. Y., N. Y. MATHEMATICS.

POST, Howard William, Prof. of Chem., Univ. of Buffalo, Buffalo 14, N. Y. ORGANIC CHEMISTRY, PARTICULARLY THE ORGANIC CHEMISTRY OF SILICON RUBBER AND RUBBER SUBSTITUTES. b. Syracuse, N. Y., Sept. 18, 1896. s. William A. and Edith (Van Wagenen) P. Edn.: B.S., Syracuse Univ., 1919; M.S., ibid., 1921; Ph.D., Johns Hopkins Univ., 1927. m. Clara Kanappenberger, Dec. 20, 1928. c.: Martha Ann. Expr.: Instr., Syracuse Univ., Syracuse, N. Y., 1920-22; Instr. to Prof., Univ. of Buffalo, Buffalo, N. Y., 1923—. Mem.: Amer. Chemical Soc.; Acacia; Alpha Chi Sigma; Gamma Alpha; Sigma Chi; Beta Phi; Pi Mu Epsilon. Author: The Chemistry of Aliphatic Orthoesters, 1943; Silicones and Other Organic Silicon Compounds, 1949. Contrb. to: Jour. of the Amer. Chem. Soc.; Jour. of Organic Chem. Special Int.: Organic Chem. of Silicon; Rubber and Rubber Substitutes.

POST, Kenneth, Cornell Univ., Ithaca, N. Y. HORTICULTURE-FLORICULTURE.

POSTE, Emerson P., 309 McCallie Ave., Chattanooga 3, Tenn. CERAMICS.

POTTENGER, Francis Marion, Med. Dir., The Pottenger Sanatorium and Clinic for Diseases of the Chest, Monrovia, Calif. MEDICINE (DISEASES OF THE CHEST). b. Sater, Ohio, Sept. 27, 1869. s. Thomas and Hannah Ellen (Sater) P. Edn.: Ph.B., Otterbein Coll., 1892; Ph.M., ibid., 1897; A.M., ibid., 1905; M.D., Cincinnati Coll. of Med. and Surgery, 1894. Hon. Deg.: LL.D., Otterbein Coll., 1909; M.A.C.P., Amer. Coll. of Physicians, 1952. m. Carrie Burtner, 1894; 2nd. m. Adelaide Gertrude Babbitt, Aug. 29, 1900. c.: Francis Marion; Robert Thomas; Adelaide Marie.



3rd m. Caroline Lacy, Sept. 15, 1917. c.: Caroline L. Exp.: Asst., Chair of Surgery, Cincinnati Coll. of Med. and Surgery, 1894; Med. Dir., Pottenger

Sanatorium and Clinic for Diseases of the Chest, 1903—; Lectr. on Diseases of the Chest and Climatology, Univ. of Southern Calif., 1903-04; Prof. of Clinical Med., *ibid.*, 1905-09, 1914-20, 1931-42; Prof. of Med., Emeritus, 1942—; Consultant, Collis P. and Howard Huntington Memorial Hosp., Pasadena, Calif., 1936—; Hon. Pos.: Founder and Pres., Southern Calif. Antituberculosis League, 1902-06; Corresponding Mem., First Internatl. Central Com. to Combat Tuberculosis, Berlin, 1902; Delegate, Vth Internatl. Tuberculosis Congress in Paris, 1905; Pres., Los Angeles County Med. Assn., 1906-07; Pres., Amer. Therapeutic Soc., 1914-15; Councilor, *ibid.*, 1906-50; Delegate, VIth Internatl. Tuberculosis Congress, Washington, 1908; Delegate XVIIth Internatl. Med. Congress, Budapest, 1909; Pres., Los Angeles Clinical and Pathol. Soc., 1912-13; Pres., Miss. Valley Med. Assn., 1917-19; Regent, Amer. Coll. of Physicians, 1917-39; Pres., *ibid.*, 1932-33; Chmn., Tuberculosis Advisory Com., Dept. of Charities, Los Angeles County, 1934—; Chmn., Pacific Interurban Clinical Club, 1931-32; Vice-Pres., Calif. State Bd. of Public Health, 1940-43; Consultant in Tuberculosis, *ibid.*, 1943—; Mem.: Fellow, A.M.A.; Amer. Public Health Assn.; Amer. Soc. for Rsch. in Psychosomatic Problems; The Gerontological Soc.; Calif. Med. Assn.; Los Angeles Acad. of Sci.; Amer. Acad. of Political and Social Sci.; Amer. Eugenics Soc.; Amer. Assn. for the United Nations; A.A.A.S.; Founding Fellow, Internatl. Psychosomatic Soc.; World Med. Assn.; New Century Foundation; Inst. of Pacific Relations; Iowa Clinical Med. Soc.; St. Louis Med. Soc.; Pan. Amer. Med. Assn. Author: Pulmonary Tuberculosis, 1908; Muscle Spasm and Degeneration in Intrathoracic Inflammation and Light Touch Palpation, 1913; Tuberculin in Diagnosis and Treatment, 1913; Clinical Tuberculosis, 1917; Symptoms of Visceral Disease, 1919; Tuberculosis and How to Combat It, 1921; Tuberculosis in the Child and Adult, 1934; Tuberculosis, 1948; The Fight Against Tuberculosis, 1952. Gen.: Int.: In Clinical Rsch., Discovered (1909) that the Pulmonary Reflexes Through the Sympathetic System Take Place in the Central Cervical Segments of the Cord, Particularly the III, IVth and Vth, Causing Spasm of the Muscles of the Shoulder Girdle and the Crus and Central Tendon of the Diaphragm When the Disease in the Lung is Active, and Causing Degeneration of these Muscles When the Disease is Chronic; Also Degeneration of the Superficial Tissues in the Areas Supplied by these Same Cervical Segments, including the Soft Tissues of the Neck and Chest Above the Second Rib Anteriorly and the Spine of the Scapula Posteriorly; and Sensory Changes in these Areas; Also Showed that Parasympathetic Reflexes Take Place Through the Various Branches of the Vagus, and in the Vth, VIth and IXth Cranial Nerves; In 1909 Described the Ability to Delimit Organs Such as the Heart and Structures of Different Density Within the Chest by Light Touch Palpation, A Touch so Light that it Barely Indents the Skin; Described the Pleural Reflexes which Take Place Through the Intercostal Nerves; They Show as Tension in the Intercostal Muscles When the Disease is Active, and Degeneration of These Muscles and Other Intercostal Tissues, and Also of the Soft Tissues Covering the Area Involved in a Short Time After the Disease Has Been Present and Remains So Thereafter; The Threshold for Pain in These Nerves Is Lowered and They May Show Pain Any Time Thereafter Under Conditions of Stress Such as Overwork, Tiring, Worry, Menstruation, Weather Changes, or Anything That Lowers the Resistance of the Patient and Calls Upon Him for Special Response; These Reflexes are Especially Valuable Because the X-Rays May Not Give Any Indication of Former Pleurisy; in 1913, Described the Motor and Trophic Reflexes from the Kidney as shown in the Lumbar Muscles; in 1913, Offered a Classification of Symptoms of Tuberculosis According to Their Etiology; in 1946, Suggested a New Conception of the Respiratory Murmur, Namely, that it is caused by the Entire Respiratory Mechanism (Muscles, Bony Cage, Pulmonary Tissue, Bronchi, Air Cells, and the Air Current) Rather Than by the Air Current Passing Through the Larynx and into the Lower Respiratory Tract, Dilating the Bronchi and Air Cells as Suggested by Laennec and Beau. Special Int.: Pulmonary Tuberculosis; Its Immunological, Pathol. and Clinical Aspects; Also the Vegetative Nervous System.

POTAPENKO, Gennady W., Assoc. Prof. of Physics, Calif. Inst. of Tech., Pasadena, Calif. PHYSICS.

POTGIETER, Martha, Assoc. Prof. of Foods and Nutrition, Schl. of Home Econ., Univ. of Conn., Storrs, Conn. FOODS AND NUTRITION.

POTTER, Alden Archibald, Box 181, Rt. 3, Bethesda, Md. ECONOMIC THEORY.

POTTER, Andrey Abraham, Dean of Engrng. and Dir. Engrng. Expt. Sta., Purdue Univ., Lafayette, Ind. POWER ENGINEERING.

POTTER, David, Chmn., Dept. of Biol., Clark Univ., Worcester, Mass. SYSTEMATIC BOTANY.

POTTER, Frederick Clyde, Consultation and Diagnosis, 826 Chestnut Blvd., Cuyahoga Falls, Ohio. PATHOLOGY, NEUROPSYCHIATRY.

POTTER, George Edwin, Prof. of Zool. and Pre-medical Adviser, Tex. A. and M. Coll., P. O. Box 4817, College Station, Tex. ZOOLOGY.

POTTER, George Frederick, Prin. Physiologist Chf. Tung Investigations, Bureau Plant Indus., Soils and Agri. Engrng., Beltsville, Md. PLANT PHYSIOLOGY.

POTTER, George Frederick, Principal Physiologist, U. S. Field Lab. for Tung Investigations, P. O.



Box 812, Bogalusa, La. HORTICULTURE, PLANT PHYSIOLOGY AND GENETICS. b. Madison, Wis., Aug. 7, 1891. a. George Frederick and Jane Leslie (Findlay) P. Edn.: B. S., Univ. of Wis., 1913; M.S., *ibid.*, 1916; Ph.D., Cornell, 1930. m. Pearl A. da Schnackenberg, Sept. 20, 1917. c.: Frances; George; Ada; Clarence. Exp.: Instr. in Horticulture, Univ. of Wis., 1913-18; Asst. Prof., *ibid.*, 1918-20; Prof. of Horticulture and Horticulturist of Expt. Sta., Univ. of N. H., 1920-38; Prin. Physiologist, Bur. of Plant Industry, Soils and Agri. Engrng., U. S. Dept. of Agri., Bogalusa, La., 1938—; Mem.: Fellow, A.A.A.S.; La. Acad. of Sci.; N. H. Acad. of Sci.; Amer. Soc. Hort. Sci.; Amer. Soc. Plant Physiologists; A.A.U.P.; Alpha Zeta; Sigma Xi; Phi Kappa Phi. Gen. Int.: Awarded the Wilder Medal of the Amer. Pomological Soc. for Rsch. in Tung, 1952. Special Int.: Physiol. and Genetics of Tung, Aleurites Fordii; Culture of Tung Orchards; Improvement of Tung Trees.

POTTER, James Gregor, Prof. and Hd., Dept. of Physics, Tex. A. and M. Coll., College Station, Tex. PHYSICS, ELECTRONICS.

POTTER, Mary Athena, Consultant in Mathematics, 1533 College Avenue, Racine, Wis. MATHEMATICS. b. Bristol, Wis., January 4, 1889. d. E. C. and Emma (Huntley) P. Edn.: B.A., Lawrence Coll., 1913; Harvard Summer Schl., 1921; M.A., Univ. of Wis., 1930. Exp.: Tch., Elem. Schl., Waupun, Wis., 1908-09; Lockland, Cincinnati, Ohio, 1909-11; Math., H. S., Marshfield, Wis., 1913-14; Racine, 1914-18; Hd. Dept., 1918-22; Supvr., 1922—; Math. Inst. at Duke, 1948, 49, 50, 51, at Wellesley, 1949; at Wis., 1948, 49, 51; at La. State Univ., 1950, 51. Mem.: Phi Beta Kappa; Pi Lambda Theta; Delta Gamma; Amer. Ednl. Rsch. Assn.; Natl. Coun. Tchrs. of Math. (2nd Vice-Pres., 1932-33; 1st Vice-Pres., 1933-34; Pres., 1940-42); Central Assn. Sci. and Math Tchrs. (Sec., Math. Sec., 1930-31); Dir., 1944-47, 1949—; Vice-Pres., 1948, 50. Author: Instl. Tests in Arith. for Grades 5, 6, 7, 8, (with Schorling-Clark), 1928; Arith. Test (with Schorling-Clark), 1927; Useful Math. (with Dunn-Allen-Goldthwaite), 1937; Useful Math. Workbook, 1939; Learning to Compute (with Schorling-Clark-Deady), 1940; Math. for Everyone (with Beck), 1945; Math. Everyday (with Beck), 1945;

Math. to Use (with Dunn-Allen-Goldthwaite), 1950. Math. for Success (with Neitzel, Root, Enright), 1951; Mag. Articles in Prof. Jours. Rsch.; Errors in Computational Arith. Made by Pupils of High and Low Intelligence. Spec. Int.: Math. for Slow Learners and Ednl. Supvn. Special Int.: Specific Mathematical abilities, skills and knowledge which can be mastered by normal children of low intelligence.

POTTER, Ralph Kimball, Dir. of Transmission Rsch., Bell Telephone Labs., N. Y., N. Y. TELEPHONY.

POTTHOFF, Carl John, Assoc. Med. Dir., Amer. Red Cross, Washington, D. C. PUBLIC HEALTH.

POTTS, Amos P., 359 E. Main St., Logan, Ohio. CERAMICS.

POTTS, Robert William Latelle, Systematic Entomologist, III, Agri. Bldg., Embarcadero at Mission, San Francisco 5, Calif. QUARANTINE AND SYSTEMATIC ENTOMOLOGY. b. Denver, Colo., June 22, 1911. s. Harry Latelle and Agnes (Richardson) P. Edn.: B.A., Univ. of Denver, 1934; M.Sc., Univ. of Calif., 1943. m. Geraldine Ratliff, May 20, 1937. c.: Michael Robert. Exp.: Acting Curator of Entomol., Denver Museum of Natural Hist., Denver, Colo., 1936-38; Head Curator, Cheyenne Mountain Museum, Colo. Springs, Colo., 1938-41; Entomological Expedition to Mexico, 1941; Teaching Asst. in Entomol., Univ. of Calif., Berkeley, Calif., 1943-45; Systematic Entomol., Calif. State Depart. of Agri., Plant Quarantine, 1945—. Mem.: Entomological Soc. of Amer.; Soc. of Systematic Zool.; Western Soc. of Naturalists; Pacific Coast Entomological Soc.; Photographic Soc. of Amer.; Alpha Tau Omega; Beta Beta Beta; Gamma Alpha; Phi Sigma; Sigma Xi; Berkeley Camera Club; Chicago Color Camera Club. Author: A Lab. Manual of Medical Entomol., with Dr. M. A. Stewart, 1943. Contrb. to: Pan Pacific Entomologist; Bull. Brooklyn Ent. Soc.; Bull. Zoological Nomenclature; Bull. Sou. Calif. Acad. Sci.; Jour. of Mammology. Gen. Int.: Two Star Exhibitor, Color, P.S.A. Special Int.: Coleoptera, Coprophagous Scarabaeidae; Lepidoptera, Acraeinae; Hymenoptera; Formicidae; Nature Photography; Biological Dioramas and Small Scale Models.

POTTS, William McDaniel, Prof. of Chemistry, 306 Lee Street, College Station, Tex. CHEMISTRY.



b. Colony, Kans., Apr. 26, 1892. s. Jacob and Nancy Catherine (Potts) P. Edn.: S.B., Univ. of Chicago, 1921; S.M., ibid., 1927; Ph.D., ibid., 1937. m. Eris Gustavus of Dallas, Texas, November 26, 1929. d. C. E. and Nora Gustavus. c.: William Eugene; Robert Charles. Exp.: Lectr. Asst., Univ. of Chicago, 1921; Tchr. of H. S. Chem., Hannibal, Mo., 1922-24; Tchr. of H. S. Chem., Butte, Mont., 1924-26; Instr. of Chem., A. and M. Coll. of Tex., 1926-35; Asst. Prof., ibid., 1937.

Prof., ibid., 1937; Assoc. Prof., ibid., 1937-38; Prof., 1938—. Rsch. Prof., Tex. Engrng. Station, 1940-41; Consultant, Tex. A. and M. Rsch. Foundation, 1947-50. Mem.: A.C.S.; Amer. Oil Chemists Soc.; Sigma Xi; A.A.A.S.; A.A.U.P.; Amer. Inst. of Chemists; Mason; Kiwanis; College Station Development Assn. Contrb. to: Jour. Amer. Chem. Soc.; Jour. Amer. Oil Chemists Soc.; Abstractor for Chem. Abstracts. Ph.D. Dissertation: The Addition of Hydrogen Bromide to Unsaturated Compounds. The Solvent Effect in the Addition of Hydrogen Bromide to Unsaturated Compounds. Gen. Int.: Articles in Journ. on Alkylation, Drying Oils, Phenolic Compound from Petroleum. Hobbies: Music; Growing Roses. Listed in: A.M.S.: Who's Who in the South and Southwest. Special Int.: Chemistry, Oils and Fats, Paints, Chromatography.

POULSON, Donald Frederick, Assoc. Prof. of Biol., Osborn Zool. Lab., Yale Univ., New Haven, Conn. PHYSIOLOGICAL GENETICS.

POULTER, Thomas Charles, Assoc. Dir. and Dir. of Rsch., Armour Rsch. Foundation, 35 W. 33rd St., Chicago, Ill. EXTREME PRESSURE RESEARCH.

POUND, Roscoe, Prof. of Law, Harvard Univ., Cambridge, Mass. BOTANICAL SCIENCE.

POVAH, Alfred H., Sci. Tchr., Denby H. S., 12800 Kelly Rd., Detroit, Mich. MYCOLOGY.

POVITZKY, Olga R., Bacteriologist, Bureau of Labs., N. Y. City Health Dept., 235 E. 22nd St., N. Y., N. Y. BACTERIOLOGY AND IMMUNOLOGY

POWELL, Horace Mann, Bacteriologist, Eli Lilly and Co., Indianapolis, Ind. BACTERIOLOGY.

POWELL, Scott Anthony, Chemist, Intra Products Co., Box 572, Denver, Colo. PHARMACEUTICAL CHEMISTRY.

POWELL, Thomas Edward, Jr., Pres., Carolina Biol. Supply Co., Elon College, N. C. ECOLOGY.

POWER, Carleton E., retired, 272 S. Main Ave., Albany, N. Y. PHYSICS.

POWER, Marsehelle H., Assoc. Prof., Physiol. and Chem., Mayo Foundation, Rochester, Minn. CHEMISTRY.

POWERS, Edwin B., Prof. and Hd., Dept. of Zool. and Entomol., Univ. of Tenn., Knoxville, Tenn. ZOOLOGY.

POWERS, Francis Fountain, Dean, Coll. of Edn. and Prof. of Ednl. Psychol., Univ. of Wash., Seattle, Wash. PSYCHOLOGY.

POWERS, Grover Francis, Prof. of Pediatrics, Yale Univ., New Haven, Conn. PEDIATRICS.

POWERS, Justin Lawrence, Chmn., Natl. Formulary Comm. and Editor, Jour. Amer. Pharmaceutical Assn., 2215 Constitution Ave., N. W., Washington, D. C. PHARMACEUTICAL CHEMISTRY.

POWERS, LeRoy, Sr. Geneticist, Horticultural Field Sta., U. S. D. A., Box 1250, Cheyenne, Wyo. APPLIED GENETICS.

POWERS, Margaret Hall, SPEECH AND HEARING.

POWERS, Samuel Ralph, Emeritus Prof. of Sci., Tchr. Coll., Columbia Univ., New York City. SCIENCE EDUCATION. b. Petersburg, Ill., May 16, 1887. s. John W. and Nancy T. (Erwin) P. m. Eda M. Olds of Petersburg, Ill., October 10, 1910. c.: Philip N., Merrill, Samuel Ralph, Jr. Edn.: A.B., Univ. of Ill., 1912; M.A., Univ. of Minn., 1921; Ph.D., Univ. of Minn., 1923. Exp.: H. S. Tchr., Terre Haute, Ind., 1912-16; Instr. Univ. H. S., Univ. of Minn., 1916-20; Univ. of Ark., Prof. of Edn., 1920-21; Univ. of Minn., Instr. in Edn., 1921-23; Tchr. Coll., Columbia Univ., Prof. of Nat. Sci., 1923-52; Prof. Emer., Sci., 1952; Expert Industrial Personnel Division, Army Service Forces War Dept., 1942-44; Consultant, Bureau of Medicine, U.S.N., 1952—. Mem.: Chmn., 1932, Yearbook Com. on the Tchng. of Sci. of the Natl. Soc. for Study of Edn.; Natl. Assoc. for Rsch. in Sci. Tchng. (one of founders), Sec. and Treas., 1928-37; Pres., 1938-39; Chmn., 1941, of Subcom. on Tch. Edn. of Sci. Com. of Natl. Edn. Assn.; Administrative Officer, Bur. of Ednl. Rsch. in Sci., Tchr. Coll., 1934-42 (funds from Gen. Edn. Bd.); Chmn. (1939-42 and 1942-45) Comm. on Rsch. in the Tchng. of Nat. Scis. and Math., Amer. Ednl. Rsch. Assn., N.E.A.; Editorial Advisory Bd., World Book Encyc.; Dir., Nat. Sci. Tchr. Assn., 1949-52; Vice-Pres., A.A.A.S. (Fellow), and Chmn., Sect. Q (Edn.), 1951; Granted Outstanding Achievement Award by Univ. of Minn., 1951. Ph.D. Dissertation: A Diagnostic Study of the Subject Matter of High Schl. Chemistry. Author: Textbooks in Science for use in High Schl. and Coll. (co-author).

POWERS, Treval C., 33 W. Grand Ave., Chicago, Ill. CONCRETE RESEARCH.

POWERS, Wilbur Lewis, Soil Scientist in Chg. Soil Dept., Ore. State Coll., Corvallis, Ore. **SOILS AND SOIL WATERS.**

POWERS, William Herman, Dir., Arts and Sci. Extension, Pa. State Coll., Assoc. Prof. of Chem., *ibid.*, 102 Sparks Bldg., Pa. State Coll., State Coll., Pa. **COLLOIDAL AND SOIL CHEMISTRY.** b. Aug. 24, 1900, Titusville, Pa. s. Wm. Joseph and Helen L. (Jordan) P. Edn.: B.S.A., Notre Dame Univ., 1922; M.S., Ohio State Univ., 1927; Study, Columbia Univ., Allegheny Coll., Pa. State Coll. m. Louise Fink of Cambridge Springs, Pa., Apr., 1927. d. Charles and Fanchon Fink. c.: William; Elouise; Sylvia; Edward; David. Exp.: Tehr., S. Oil City Pub. Schls., 1922-23; Instr., Prof., Dean, Act. Pres., Alliance Coll., 1923-41; Consultant, City Chem., 1929-41; Supvr., Asst. Prof., Assoc. Prof., Dir., Arts and Sci. Extension, Pa. State Coll., 1940—. Hon. Pos.: 1952, Secy., Pa. Conference of Coll. Chem. Tchrs.; 1951-53, Mem. Natl. Electronics Comm. Adult Edn. Assn. of U. S. A.; 1952-53, Chmn. Pub. Relations, Pa. Assn. for Adult Edn. Mem.: Sigma Xi; A.C.S.; Studebaker-Oliver Scholar, Past Chmn., Erie Sect., A.C.S.; Past Natl. Councilor, A.C.S.; Exec. Com., Pa. Conf. Coll.; Phys. Tchrs.; N. W. Pa. Coll. Phys. Tchrs. Assn.; Natl. Cath. Round Table of Sci.; Boy Scout Coun.; Past Pres., Lib. Assn.; U. S. Army, S.A.T.C.; Crawford Co. Bd. of Health. Contr. to: Demonstration Experiments in Phys.; Organic Chem. (Asst. Ed.); Organic Manual; Pneumatic Trough for Chem. Lab.; Tchng. of Coll. Algebra.

POWERS, Williams Edwards, Prof. of Geomorphology, Northwestern Univ., Evanston, Ill. **GEO-MORPHOLOGY.**

POYNTER, Charles W. M., Prof. of Anatomy and Dean, Coll. of Med., Univ. of Nebr., Omaha, Nebr. **MEDICAL SCIENCES.**

PRAGER, William Louis, Prof., Dept. of Chem., City Coll. of N. Y., N. Y., N. Y. **CHEMISTRY.**

PRAT, Henri, Dir. of Inst. of Biol., Univ. of Montreal, Box 6128, Montreal, P. Q., Can. **PLANT PHYSIOLOGY, HISTOLOGY AND ECOLOGY.**



b. St. Germain-en-Laye, France, Aug. 20, 1902. s. Maurice and Marthe (Himmelsbach) P. Edn.: B.S., Université de Paris, 1920; Ecole Normale Supérieure, Lic. Phys. Chem. Sc., *ibid.*, 1922; Lic. Natl. Sc., *ibid.*, 1924; Agreg. Natl. Sc., *ibid.*, 1926; D.Sc., *ibid.*, 1931. Hon. Deg.: D.Sc., Univ. of Montreal, 1945. m. Germaine Bertrand, Sept. 30, 1930. c.: Annie; Alain; Olivier. Exp.: Prof., Lycée d'Oran, 1927-28; Asst., Ecole Normale Supérieure, Paris, 1928-31; Prof., Univ. of Montreal, Montreal, Can., 1931-35, and 1945-53; Prof., Faculté des Sci. de Marseille, France, 1936-46; Dir. of Inst. of Biol., Univ. of Montreal, Can., 1949—. Hon. Pos.: Pres., Soc. Can. d'Hist. Naturelle, 1947-48; Pres., Soc. de Biol., Montreal, 1950-51. Mem.: Bot. Soc. of Amer.; Soc. Bot. de France. Author: L'Homme et le Sol, 1949. Contr. to: Annals Sc. Nat. Bot.; Bull. Soc. Bot. Fr.; Can. Jour. Rsch.; Compt. Rend. Ac. Sci.; Bull. Inst. Ocean., Monaco; Revue Can. Biol.; Botan. Rev. Special Int.: Physiol. and Histol. Gradients in Plants; Thermogenesis of Seed Germinations and of Bacterial Cultures; Ecol. of Peat Bogs and Shore Formations.

PRATT, Alexander, Saybrook, Conn. **ANTHROPOLOGY.**

PRATT, Dudley James, Prof. of Biol., Tex. A. and M. Coll., College Station, Tex. **PLANT PHYSIOLOGY.**

PRATT, Frederick Haven, Prof. Emer. Physiol., Schl. of Med., Boston Univ., Boston, Mass.; 195

Hundreds Rd., Wellesley Hills, Mass. **PHYSIOLOGY.**

PRATT, Jean Paul, Surgeon-in-Chg., Div. Gynecology and Obstetrics, Henry Ford Hosp., Detroit, Mich. **GYNECOLOGY, OBSTETRICS.**

PRATT, Joseph Hersey, Prof. of Clinical Med., Tufts Med. Schl. and Physician-in-Chf., Joseph H. Pratt Diagnostic Hosp., Boston, Mass. **INTERNAL MEDICINE.**

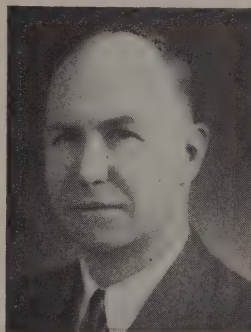
PRATT, Karl Chapman, Prof. of Psychol., Central Mich. Coll. of Edn., Mt. Pleasant, Mich. **CHILD PSYCHOLOGY.**

PRATT, Robertson, Assoc. Prof. of Pharmacognosy and Plant Physiol., Coll. of Pharmacy, Univ. of Calif., San Francisco, Calif. **PLANT PHYSIOLOGY.**

PRATT, Wallace E., retired, P. O. Box 209, Frijole, Tex. **PETROLEUM GEOLOGY.**

PREBLUDA, Harry J., Mgr., Special Products Sales, U. S. Indus. Chemicals, Inc., 60 E. 42nd St., N. Y., N. Y. **BIOCHEMISTRY.**

PREDMORE, Donald Rooke, Instr., Biol., Clarion St. Tchrs. Coll., 703 Liberty St., Clarion, Pa. **BIOLOGICAL SCIENCE.** b. Sept.



29, 1900, Marathon, Ohio. s. U. G. Predmore, M.D., and Clara Maria (Anderson) P. Edn.: Student at Miami Univ., Oxford, Ohio, 1919-22; B.S., Univ. of Pittsburgh, 1925; M.A., Univ. of Pittsburgh, 1930; Ph.D., *ibid.*, 1944. m. Carmen Kahle of Oil City, Pa., July 28, 1927. (dec.) c.: Carolyn Ann. m. 2nd, J. Ruth Thompson, June 30, 1953. Exp.: Tehr. of Sci. in the Donora, Pa. Sr. H. S., 1924-26; Tehr. of Biol. in the Dormont H. S., Dormont, Pittsburgh, Pa., 1926-46; Tehr. of Math. in the Dormont H. S., Summer Sessions from 1928-46; Dir. of Visual Edn. in the Dormont H. S., 1936-46; Tehr. in the Biol. Dept. of the Clarion St. Tchrs. Coll. from 1946—. Mem.: Faculty Program Comm.; Clarion State Tchrs. Coll. Branch of the Pa. State Edn. Assn.; Sponsor of Alpha Phi Alpha Frat.; Advisor for Class of 1950; Faculty Club; Sponsor of the Outdoor Club; Mem. of the Natl. Edn. Assn.; Assn. of State Tchrs. Coll. Faculties in Pa.; Biol. Tchrs. Club of Southwestern Pa.; Natl. Assn. of Biol. Tchrs.; Phi Kappa Tau Frat.; Phi Delta Kappa; Red Cowl Hon. Soc. of Miami Univ.; Univ. of Pittsburgh Doctoral Assn. of Educators; F. and A.M. of Ohio; Carnegie Inst. Soc. of Pittsburgh; Miami Univ. Alumni Assn.; A.A.A.S. Contr. to: Amer. Biol. Tchr. Ph.D. Dissertation: Effects of Objective Testing Upon Certain Aspects of H. S. Pupils' Learning in Biol.

PREISLER, Paul William Otto, Asst. Prof. of Biochem., Med. Schl., Wash. Univ., St. Louis, Mo. **BIOCHEMISTRY.**

PRENTICE, Donald Bishop, Pres., Rose Poly. Inst., Terre Haute, Ind. **MECHANICAL ENGINEERING.**

PRENTISS, Spencer Scott, Inventions Section Chf., Chemicals Div., Phillips Petroleum Co., Bartlesville, Okla. **PETROLEUM CHEMISTRY.**

PRESOTT, Gerald Webber, Assoc. Prof. of Botany, Mich. State Coll., East Lansing, Mich. **PHYCOLOGY, PLANT MORPHOLOGY.**

PRESSEY, Sidney Leavitt, Prof. of Psychol., Ohio State Univ., Columbus, Ohio. **PSYCHOLOGY.**

PRESSMAN, Joel J., **SPEECH AND HEARING.**

PRESSON, John Morris, Dept. of Biol., Girard Coll., Philadelphia, Pa. **ZOOLOGICAL SCIENCES.**

PRESTON, Dudley A., Asst. Prof., San Diego State Coll., San Diego 5, Calif. **PLANT PATHOLOGY AND MYCOLOGY.** b. Spokane, Washington, Jan. 6, 1910. s. Junius W. and Mabel (Stanwood) P. Edn.: B.S., Wash. State Coll., 1933; M.S., Univ. of Minn., 1940; Ph.D., *ibid.*, 1947. m. Evelyn MacManigal of St. Paul, Minn., Aug. 1, 1941. d. Mr. and Mrs. W. A. MacManigal, Jr. Exp.: Rsch. Asst., Univ. of Minn., 1938-42; Instr., Ala. Poly. Inst., 1942-43; Assoc. Mycologist, U.S.D.A., Emergency Plant Disease Prevention, 1943-45; Asst. Prof., Okla. A. and M. Coll., 1945-48; Asst. Prof., San Diego State Coll., 1948—. Mem.: A.A.U.P.; A.A.A.S.; A.I.B.S.; Okla. Acad. of Sci.; N. Amer. Gladiolus Coun.; Mycological Soc. of Amer.; Amer. Phytopathological Soc.; Soc. for the Study of Evolution; Western Soc. of Naturalists; Air Pollution Control Assn.; Theta Chi; Alpha Sigma Eta; Alpha Phi Omega; Lions. Contrb. to: Phytopathology, Plant Disease Reporter. Ph.D. Dissertation: Bacterial Canker of Cowpeas in Okla. Hobbies: Boy Scouts; Sports. Listed in: A.M.S.; Who Knows—and What; Who's Who on the Pacific Coast; Who's Who in the West.

PRESTON, William Munro, Physicist, Clinton Lab., P. O. 1911, Knoxville, Tenn. **NUCLEAR PHYSICS.**

PRESTON, William Samuel, Asst. Prof. of Bacteriol., Univ. of Mich., Ann Arbor, Mich. **MEDICAL BACTERIOLOGY.**

PRETTYMAN, Irven Bernhard, Sr. Physicist, Firestone Tire and Rubber Co., 1200 Firestone Pkwy., Akron, Ohio. **HIGH POLYMER PHYSICS.**

PRETZ, Harold W., Trust Officer, Allentown Natl. Bank, Allentown, Pa.

PRETZ, Paschal Harry, Prof. of Physics, St Benedict's Coll., Atchison, Kans. **ATOMIC PHYSICS.**

PRIBRAM, Karl, Economist retired, Adjunct Prof., Schl. of Soc. Sci. and Public Affairs, Amer. Univ., 3625 16th St., Washington, D. C. **ECONOMICS.** b. Prague, Czechoslovakia, Dec. 2, 1877. s. Otto and Leonore (Popper) P. m. Edith Kornei, 1929. Exp.: Austrian Civil Service, last position, Ministerial Councillor in Chg. of Labor Legislation and Unemployment Ins., 1911-21; Hd., Statistical Section, Internat. Labor Office, Geneva, 1921-28; Prof. of Econ. Sci., Univ. of Frankfurt, Germany, 1928-33; Mem., The Brookings Institution, Washington, D. C., 1934-36; Economist, Social Security Bd., Washington, D. C., 1936-42; Prin. Economist, U. S. Tariff Commn., Washington, D. C., 1942-51; retired, 1951—. Mem.: Internat. Statistical Inst.; Inter-Amer. Statistical Inst.; Amer. Statistical Assn.; Econometric Soc.; Amer. Econ. Assn.; Amer. Acad. Political and Soc. Sci.; etc. Author: *Conflicting Patterns of Thought*, 1949. Co-author: *World Unemployment, 1931*. Contrb. to: *Bull. Internat. Statistical Inst.*; *Econometrica*; *Internat. Labour Rev.*; *Quarterly Jour. Econ.*; *Amer. Econ. Rev.*; etc. Special Int.: *Foreign Trade*; *History of Econ. Thought*; *Hist. of Soc. Philos.*



PRICE, Charles C., Dept. of Chem., Univ. of Notre Dame, South Bend, Ind. **ORGANIC CHEMISTRY.**

PRICE, Don K.

PRICE, Emmett William, Asst. Chief, Zoological Div., Bur. of Animal Industry, U. S. Dept. of Agri., Beltsville, Md. **PARASITOLOGY.** b. Clover Lick, W. Va., Jan. 30, 1896. s. John Calvin and Mary Ann (Williams) P. Edn.: D.V.M., Geo. Wash., 1918; M.S., Amer. Univ., 1931; Ph.D., Geo. Wash., 1935. m. Mary Tutt Freeman, June 3, 1920. c.: Rosemary; Margaret Anne. Exp.: Assoc. Prof.,

Pathol. and Hd. of Dept., A. & M. Coll. of Tex., 1919-26; Assoc. Parasitologist, *ibid.*, 1926-29; Parasitologist, 1929-36; Sr. Parasitologist, *ibid.*, and Asst. Chief, Zool. Dept., *ibid.*, 1936-46; Principal Zoologist and Asst. Chief, Zoological Div., and in charge of Division's Stat., Agri. Rsch. Center, Beltsville, Md., 1946—. Mem.: Amer. Soc. Parasitol.; Amer. Vet. Med. Assn.; Amer. Mic. Soc.; Helminthol. Soc. of Wash.; Wash. Acad. of Sci.; Sigma Xi. Contrb. to: *Jour. Parasitol.*; *Jour. Wash. Acad. of Sci.*; *Proc. of Helminthol. Soc. of Wash.*; *Encyclopedia. War Record*; W.W.I. Special Int.: *Parasites and Parasitoses of Domestic Animals*; *Trematodes, Both Monogenetic and Digenetic.*

PRICE, Griffith Baley, Prof. of Math., 205 Frank Strong Hall, Univ. of Kans., Lawrence, Kans. **ANALYTICAL MATHEMATICS.**

PRICE, Hugh Bruce, Prof. of Agril. Econ., Univ. of Ky., 157 Cherokee Park, Lexington, Ky. **AGRICULTURAL ECONOMICS.** b. Tulare, S. Dak., Oct. 21, 1888. s. Asa John and Esther Amanda (Hoyt) P. Edn.: B. A., Univ. of Wis., 1914; M.A., Univ. of Minn., 1916; Ph.D., Yale Univ., 1921. m. Jennie Mae Swab, Sept. 28, 1918. c.: Hugh Bruce; Glenn Albert; Esther Jane; Dwight Lewis. Exp.: Instr. in Agril. Econ., Conn. State Univ., 1917-19; Instr. in Political Econ., Yale Univ., 1919-21; Prof. of Agril. Econ., Univ. of Minn., 1921-29; Prof. of Agril. Econ., Univ. of Ky., 1929—; Hd., Dept. of Markets and Rural Finance, *ibid.*, 1929-46; Acting Hd., Dept. Agron., *ibid.*, 1952-53. Mem.: Amer. Econ. Assn.; Amer. Farm Econ. Assn.; Alpha Zeta; Gamma Sigma Delta; Alpha Gamma Rho. Contrb. to: *Jour. Farm Econ.*; etc. Gen. Int.: Editor, *Jour. Farm Econ.*, 1942-44. Special Int.: *Marketing Farm Products*; *Agril. Cooperation*; *Agril. Policy.*

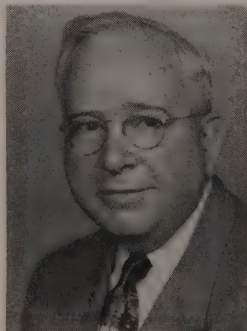


PRICE, John Worthington, Prof. of Zool., Ohio State Univ., Columbus, Ohio. **EMBRYOLOGY, ZOOLOGY.**

PRICE, Leonard Cassell, Prof. of Mech. Engrng., Mich. State Coll., East Lansing, Mich. **MACHINE DESIGN.**

PRICE, Raymond, Dir. of Southwestern Forest and Range Expt. Sta., Tucson, Ariz. **RANGE MANAGEMENT.**

PRICE, Robert Louis, Head of Dept. of Physics and Astronomy, Joliet Township High Schl. and Junior Coll., Joliet, Ill. **PHYSICS: ASTRONOMY.** b. Hastings, Minn., Oct. 19, 1896. s. Courtleoun and Mollie (Theaurer) P. Edn.: B.S., Hamline Univ., 1918; M.A., Univ. of Calif., 1924; Summer Work at Minn., Wis., Case Tech. m. Monica Utley of Cass Lake, Minn., Aug. 20, 1924. d. Mr. and Mrs. John Utley. c.: Roger Wayne; Mollie Jean. Exp.: Physics Asst., Hamline Univ., 1916-18; Grad. Asst., Univ. of Wis., 1919-20; Instr., Acting Hd., Hamline Univ., 1920-23; Tchng. Fellow, Univ. of Calif., 1923-24; Instr., Hd. of Dept., Joliet Twp. H. S. and Jr. Coll., 1924—. Hon. Pos.: Chmn. of Phys. Sci. Sect. of Ill. Jr. Coll. Conf.; Pres., Chicago Chapt. A.A.P.T. Mem.: Central Assn. of Sci. and Math.; Ia. Colloquium of Coll. Physicists; Ill. Assn. of Jr.



Coll. Con.; Mem. of Coun., A.A.P.T.; Sigma Xi; Mason. Contrib. to: Popular Astron.; Schl. Sci. and Math. War Record: U. S. Naval Reserve, 1918-19. Travel: U. S.; Canada. Hobbies: Astron.; Photography; Student of Life and Work of Copernicus. Listed in: A.M.S. Special Int.: Polarized Light Effects Photographed with Kodachrome, Motion Pictures.

PRICE, W. Armstrong, Consulting Geologist, P. O. Box 1860, Corpus Christi, Tex. **PETROLEUM GEOLOGY.**

PRICE, Walter Allen, Prof. of Entomol. and Hd., Dept. of Entomol. and Botany, Ky. Agri. Expt. Sta., Univ. of Ky., Lexington, Ky. **ENTOMOLOGY.**

PRICE, Walter Van Vranken, Prof. of Dairy Indus., Hiram Smith Coll., Univ. of Wis., Madison, Wis. **DAIRY MANUFACTURING.**

PRICE, William Conway, Assoc. Rsch. Prof. Biol., Univ. of Pittsburgh, Pittsburgh, Pa. **PLANT PATHOLOGY.**

PRICKETT, Cavett Oliver, Pathologist, Grasselli Chem. Dept., E. I. du Pont de Nemours and Co., Inc., Wilmington, Del. **PATHOLOGY.**

PRIEM, Lillian Arends, Asst. Prof. of Chem., retired, 125 N. Wright St., Naperville, Ill. **CHEMISTRY.**

PRIGAL, Samuel Jeremiah, Chf. Allergy Clinic, Flower-Fifth Ave. Hosp., N. Y., N. Y. **ALLERGY.**

PRINCE, Arthur Leslie, Assoc. Prof. and Assoc. Rsch. Specialist in Soils, N. J. Agri. Expt. Sta., New Brunswick, N. J. **CHEMISTRY, SOILS.**

PRINE, Charles Wilson, Assoc. Prof. of Physics, Carnegie Inst. of Tech., Pittsburgh, Pa. **TEACHING, PHYSICS.**

PRINZ, Hermann, Emer. Prof. Pharmacol., Evans Dental Schl., Univ. of Pa., Philadelphia, Pa.; 400 S. Lansdowne Ave., Lansdowne, Pa.

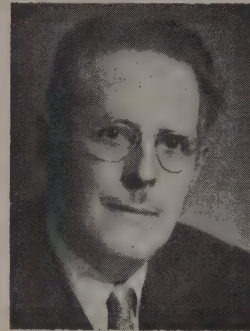
PRITCHARD, Jack A., Tehng. Fellow, Dept. of Pharmacol., Schl. of Med., Western Reserve Univ., Cleveland, Ohio. **PHARMACOLOGY.**

PRITHAM, Gordon Herman, Prof. of Physiol. Chem., 103 Frear Lab., Pa. State Coll., State College, Pa. **BIOLOGICAL CHEMISTRY.** b. Freeport, Maine. Apr. 7, 1907. s. Charles H. and Stella A. (Brewer) P. Edn.: B.S., Pa. State Coll., 1930; M.S., ibid., 1931; Ph.D., ibid., 1936. m. Elaine M. Allen, June 25, 1932. c.: Anita M.; Eleanor C.; Mary E.; Charles G. Exp.: Asst., Pa. State Coll., 1930-33; Prof. of Chem., Univ. of Scranton, Scranton, Pa., 1933-47; Prof. of Physiol. Chem., Pa. State Coll., 1947—. Mem.: Amer. Chem. Soc.; A.A.A.S.; N. Y. Acad. Sci.; Pa. Acad. Sci.; Sigma Xi; Pa. Chem. Soc.; Phi Lambda Upsilon; Gamma Sigma Delta; Alpha Epsilon Delta. Contrib. to: Jour. Lab. and Clinical Med.; Jour. Agri. Rsch.; Proc. Soc. Exptl. Biol. and Med.; Poultry Sci. Special Int.: Physiol. Chem.; Hormones; Proteins; Educational Testing.

PROCTER, William, Pres. and Dir., Biol. Survey, Mt. Desert Region, Bar Harbor, Maine. **ENTOMOLOGY.**

PROCTOR, Bernard Emerson, Prof. and Hd. Dept. of Food Tech., M. I. T., Cambridge, Mass. **FOOD TECHNOLOGY.** b. Malden, Mass., May 5, 1901. s. Arthur and Vina (Doloff) P. Edn.: S.B., Mass. Inst. of Tech., 1923; Ph.D., ibid., 1927. m. Miriam Patten of Cambridge, Mass., Oct. 18, 1924. Exp.: Instr., Chem. Schl. of Med., Boston Univ., 1923-27; Lectr., Boston Schl. P. E., 1926-30; Lectr., Nutrition, Physiol., Asst., Mass. Inst. of Tech., 1927-30; Asst. Prof., ibid., 1930-36; Assoc. Prof., ibid., 1936-43; Prof., ibid., 1943; Dir., ibid., 1945-51; Hd. Dept. of Food Technology, ibid., 1952—. Hon. Pos.: Chmn., Comm. on Chemistry in Foods, Institute of Food Technology; Chmn., Comm. on Awards and Metals, Institute of Food Technology; Dir., Assoc. Food and Container Inst., 1951 and many others. Ph.D. Dissertation: Nitrogen Metabolism. War Record: Dir. of Subsistence and Packaging Rsch., Office of the Quartermaster Gen., Washington, D. C., 1943-44. Listed in: A.M.S.; Who's Who in Amer.

PROCTOR, Carlton Springer, Consulting Engr., Moran Proctor, Mueser and Rutledge, 420 Lexington Ave., N. Y. 17, N. Y. **CONSULTING ENGINEER.** b. Wash., D. C., Sept. 13, 1893. s. J. Martin and Sarah Louise (Springer) P. Edn.: C.E., Princeton Univ., 1915. Hon. Deg.: Dr. Engrng., Princeton Univ., 1947; Dr. Engrng., Drexel Inst., 1951; C. E., Rensselaer Poly. Inst., 1952. m. Isabel Lucey, June 7, 1916. c.: Richard Carlton; Robert Martin (dec.); Carol. Exp.: Supt. of Construction, Wash. Branch Office, McKenzie, Voorhees, and Gmelin, Architects, N. Y., 1916-17;



Mem. of Consulting Engrng. Firm as Follows, Moran, Maurice & Proctor; Moran and Proctor; Moran, Proctor, Freeman & Mueser; Moran, Proctor, Mueser & Rutledge, 1919—. Mem.: Princeton Engrng. Assn., Past Pres.; Amer. Soc. Civil Engrs., Past Pres.; Soc. Amer. Military Engrs. Contrib. to: Civil Engrng.; Engrng. News-Record; Princeton Engr.; Cornell Engr.; Columbia Univ. Bull.; Brazilian Technical Periodicals. War Record: 1st Lieut. and Capt., U. S. Army, World War I; Col., Corps of Engrs., U. S. Army 1942-44; Chmn. Natl. Engrs. Com. for Study and Report to U. S. Depts. of State, War and Navy on "Industrial Disarmament of Germany and Japan." Gen. Int.: Received Legion of Merit and President's Certificate of Merit. Special Int.: Foundation, Sub-structure and Marine Engrng.; Soil Mechanics, Bridge Foundations, Building Foundations, Masonry and Earth Filled Dams; Port and Harbor Development; Tunnels.

PROCTOR, Charles Albert, Prof. Emer. Physics, Dartmouth Coll., Hanover, N. H.

PROESCHER, Frederick, Dir., Pathol. Lab., Santa Clara County Hosp., San Jose, Calif. **PATHOLOGY.**

PROETZ, Arthur Walter, Prof. of Clinical Otolaryngology, Schl. of Med., Wash. Univ., St. Louis, Mo. **OTOLARYNGOLOGY.**

PROSKAUER, Eric Simon, Exec. Vice-Pres., Interscience Publishers, Inc., 215 Fourth Ave., N. Y., N. Y. **PHYSICAL CHEMISTRY.**

PROSSER, C. Ladd, Assoc. Prof. of Zool., 345 Natural History Bldg., Univ. of Ill., Urbana, Ill. **GENERAL PHYSIOLOGY.**

PROUDFOOT, Malcom Jarvis, Assoc. Prof. of Geography, Northwestern Univ., Evanston, Ill. **GEOGRAPHY.**

PROULX, Maurice, Ecole Superieure d'Agriculture, Ste. Anne de Pocatiere, Kamouraska, Que., Can. **AGRICULTURE.**

PROUSE, Ervin Joseph, Asst. Prof., Univ. of Tex., Austin, Tex. **ASTRONOMY, MATHEMATICS.**

PROUTY, W. F., Box 349, Univ. of N. C., Chapel Hill, N. C. **GEOLOGY, GEOGRAPHY.**

PRUETT, James Hugh, Astronomer, Gen. Ext. Div., Univ. of Ore., 1832 Longview Dr., Eugene, Ore. **ASTRONOMY AND ESPECIALLY METEORS AND AURORAS.** b. Weston, Ore., June 20, 1886. s. William and Barbara (Harpole) P. Edn.: A.B., Linfield Coll., 1911; L.H.D., ibid., 1946; Univ. of Ore.; Univ. of Chicago. m. Hope Sully (dec.) of McMinnville, Ore., Aug. 30, 1916. d. Frank and Fidelia S. Exp.: Newberg, Ore., H. S., 1911-14; McMinnville, Ore., H. S., 1914-15; Forest Grove, Ore., H. S., 1916-17; Walla Walla, Wash., H. S., 1919-20; Univ. of Ore., 1920-23; Ext. Div. of Univ. of Ore., 1923—. Mem.: Amer. Meteor. Soc.; Meteoritical Soc.; Amer. Astron. Soc.; Astron. Soc. of the Pacific; Calif. Acad. of Sci.; Ore. Acad. of Sci.; Amer. Legion. Contrib. to: Many Newspapers and to Sky and Telescope. Hobbies: Bird and Flower Study; Photography; Music; Gardening. Listed in: A.M.S. Special Int.: Meteors and Auroras.

PRUITT, Clarence M., 804 Walnut Street, Stillwater Okla. **CHEMISTRY.** b. Jan. 30, 1898. Birds-eye, Ind. s. John L. and Martha Jane (Sanders) P. Edn.: A.B., Ind. Univ., 1919; M.A., *ibid.*, 1925; Ph.D., Columbia Univ., 1935. m. Fredonia Marie Dillard of Birdseye, Ind., June 23, 1920. d. Chas. L. and Emma Dillard. Exp.: Elem. Schl. Tchr., Ind., 1915-17; H. S. Tchr.: Berne, Ind., 1919-20; Fort Madison, Iowa, 1920-21; Great Falls, Mont., 1921-25; Clayton, Mo., 1925-26; Tchr., Summer Session, N. C. State Coll., 1928; Tchr., Ind. S. T. C., 1928; Tchr., Pa. State Coll., 1935; Tchr., Univ. of Ala., 1937-38; Ariz. State Coll., Flagstaff, 1950—; San Jose State, 1950; Instr., *ibid.*, 1928-33; Instr., N. Y. Univ., 1933-35; Instr., Colo. State Coll. of Edn., 1935-36; Instr., Evansville Coll., 1937-38; Instr., Okla. A. and M. Coll., 1938-44; Scholarship, Tchrs. Coll., Columbia Univ., 1926-28; Instr., A.S. T.P. Physics and Geography, Univ. of Ill., Urbana, 1944-46; Assoc. Prof., Okla. A. and M. Coll., Stillwater, Okla., 1946-51; Visiting Prof. Edn., Univ. of Miami, Coral Gables, Fla., 1951-52. Mem.: Fellow, A.A.A.S.; Kappa Delta Pi; Phi Delta Kappa; Natl. Assn. for Rsch. in Sci. Tchng.; Natl. Sci. Tchrs. Assn.; Natl. Assn. of Biol. Tchrs.; Natl. Coun. on Elem. Sci. Contr. to: Sci. Edn.: Ph.D. Dissertation: An Analysis Synthesis and Evaluation of subject Matter Concepts in Chem. War Record: World War I, 1918. Travel: U. S.; Canada. Gen. Int.: Bus. Mgr.: Abstract and Book Rev. Ed.; Sci. Edn., 1933—; Ed., Sci. Edn., 1946—; Sec.-Treas., Natl. Assn. for Rsch. in Sci. Tchng., 1946—. Hobbies: Sports; Sci. Books. Listed in: A.M.S.; Who's Who in South and Southwest; Who's Who in Amer.; Ind. Scientists. Special Int.: Science Education and Secondary Education.

PRYOR, Dean Earl, Dir. of Rsch., Decco Dept., Wallace and Tiernan, 3630 E. Colorado St., Pasadena, Calif. **PLANT PATHOLOGY.**

PRYTHERCH, Herbert Francis, Supt. and Dir., Beaufort Lab., Fish and Wildlife Service, U. S. Dept. of Interior, Beaufort, N. C. **MARINE FISHERY BIOLOGY.**

PUGH, Mrs. Emerson, 4737 Highland Ave., Downers Grove, Ill. **BOTANICAL SCIENCES.**

PUHR, Leo Francis, Assoc. Prof., Dept. of Agron., S. Dak. State Coll., Brookings, S. Dak. **SOILS, CHEMISTRY.**

PULLING, Howard E., Prof. of Botany, Wellesley Coll., Wellesley, Mass. **PLANT PHYSIOLOGY.**

PULTZ, Leon Merle, Prof. and Hd., Dept. of Botany and Range Ecology, Univ. of Ariz., Tucson, Ariz. **PLANT PHYSIOLOGY.**

PURCELL, Edward Mills, Prof. of Physics, Lyman Lab., Harvard Univ., Cambridge, Mass. **EXPERIMENTAL PHYSICS.** b. Taylorville, Ill., Aug. 30, 1912. s. Edward A. and Mary E. (Mills) P. Edn.: B.S.E.E., Purdue Univ., 1933; Ph.D., Harvard Univ., 1938. m. Beth Busser, 1937. c.: Dennis; Frank. Exp.: Instr. in Physics, Harvard Univ., 1938-40; Staff Mem., Radiation Lab., Mass. Inst. of Tech., 1940-46; Assoc. Prof. of Physics, Harvard Univ., 1946-49; Prof. of Physics, *ibid.*, 1949—; Sr. Fellow, Soc. of Fellows, *ibid.*, 1950—. Hon. Pos.: Co-winner, Nobel Prize in Physics, 1952. Mem.:

Amer. Physical Soc.; Natl. Acad. Sci.; Amer. Acad. Arts and Sci.; Phi Kappa Sigma; Tau Beta Pi; Sigma Xi. Co-author: Microwave Circuits, 1948; Physics for Sci. and Engrng. Students, 1952. Contr. to: Physical Rev.; Jour. Chem. Physics. Special Int.: Nuclear Magnetism; Radiofrequency Spectroscopy; Microwaves.

PUTNAM, George Rockwell, 2126 Bancroft Pl., Washington, D. C.

PUTNAM, Mark E., Vice-Pres., Mem., Bd. of Dirs., Dow Chemical Co., 2011 Hill Court, Midland, Mich. **CHEMICAL ENGINEERING.**

PUTNAM, Roger Lowell, Sole Trustee, Lowell Observatory, Flagstaff, Ariz. **ASTRONOMY.**

PUTNAM, Tracy J., 416 N. Bedford Dr., Beverly Hills, Calif. **NEUROLOGY.**

PUTNAM, William James, Prof. of Theoretical and Applied Mechanics, 123 Talbot Lab., Univ. of Ill., Urbana, Ill. **MECHANICS.**

PUTT, Earl B., Treas., Seil, Putt and Rusby, Inc., 16 E. 34th St., N. Y., N. Y. **CHEMISTRY.**

PYKE, Alfred J., 7373 Dewdney Ave., Regina, Sask., Can. **MATHEMATICS.**

PYKE, W. E., Hd., Chem. Dept. and Section, Colo. A. and M. Coll., Fort Collins, Colo. **CHEMISTRY.**

PYENSON, Louis L., Sr. Chmn., Biol. Div., L. I. Agri. and Tech. Inst., Farmingdale, L. I., N. Y. **ENTOMOLOGY.** b. Nov. 30, 1909, Otis, Mass. s. David and Rebecca (Golub) P. Edn.: B.S., Univ. of Mass., 1931; M.S., Rutgers Univ., 1932; Ph.D., Cornell Univ., 1935. d. Estelle L. Pyenson of N. Y., Dec. 24, 1939. d. Mr. and Mrs. Edw. Bernhard. c.: Leslie; Barbara. Exp.: Hd., Dept. of Entomol., Inst. de Pesquisas Argonomicas, Pernambuco, Brazil, 1935-38; L. I. Agri. and Tech. Inst., Farmingdale, L. I., N. Y., 1938—, Chmn. Biol. Div., *ibid.*, 1950. Mem.: President, L. I.

Sci. Tchrs. Assn.; Amer. Entomol. Soc.; A.A.A.S.; Sigma Xi; A.V.A.; N. Y. Sci. Tchrs. Assn.; A.A.E.E.; Alpha Epsilon Pi. Author: Pest Control in the Home Garden, 1944; Elements of Plant Protection, 1951. Ph.D. Dissertation: The Effects of Naphthalene on the Various Stages of Insects. Travel: Brazil; N. Amer. Gen. Int.: Plant Protection Articles. Hobby: Photography. Listed in: Who Knows—and What. Special Int.: Econ. Entomol.; Plant Protection; Control of Plant Pests.

PYLE, Henry Randolph, Prof. of Math., Whittier Coll., Whittier, Calif. **MATHEMATICS.**

PYRTLE, Ralph Nolan, P. O. Box 51, Wilberforce, Ohio. **ZOOLOGICAL SCIENCES.**



QUACKENBUSH, Forest Ward, Hd., Dept. Biochem., Purdue Univ., Lafayette, Ind. **CHEMISTRY**. b. Melrose, Wis., Aug. 18, 1907. s. Ward Wesley and Bessie Valentine (Radcliffe) Q. Edn.: B.S., Univ. of Wis., 1932; Ph.D., *ibid.*, 1937. m. June Evans on Dec. 4, 1937. c. Lynn; Carol. Exp.: Rockefeller Foundation Fellow, Kaiser-Wilhelm Inst., Heidelberg, 1938; Rijk's Univ., Utrecht, 1939; Rsch. Fellow, Wis., 1939-41; Instr. Biochem., *ibid.*, 1941-42; Prof. Agri Chem. and Hd. Dept., Purdue Univ., 1943—. Hon. Pos.: Pres., Amer. Feed Control Officials, 1952. Mem.: Oil Chem. Soc.; Soc. Biol. Chem.; Soc. Animal Production; Amer. Chem. Soc.; Assn. Official Agri. Chem.; Rotary. Contrb. to: Arch. of Biochem. and Biophysics; Jour. Amer. Chem. Soc.; Soil Sci.; Jour. Biol. Chem.; Antibiotics and Chemotherapy; Plant Physiology. Special Int.: Biochem. and nutrition of lipids, essential fatty acids and B-vitamins; components of fungi; chem. of carotenoids, preservation of fat-soluble vitamins; molecular distillation; chem. of fat deterioration, antioxidants.

QUADT, Raymond A., Dir. of Rsch. and Development, Hunter Douglas Corp., 2525 Carlton Place, Riverside, Calif. **PHYSICAL METALLURGY OF ALUMINUM AND MAGNESIUM**. b. Perth Amboy, N. J., Apr. 16, 1916. s. Adolph and Florence (McCracken) Q. Edn.: B.S., Rutgers Univ., 1939; M.S., Stevens Inst. of Tech., 1946. m. Helen Desmarais in Nov., 1940. c.: Brian Travers. Exp.: Asst. Metallurgist through Dir. of Aluminum Developments, Central Research Dept., Amer. Smelting and Refining Co., Barber, N. J., 1942-50; Dir. of Rsch. and Development, Hunter Douglas Corp., Riverside, Calif., 1950—. Mem.: Amer. Soc. for Testing Materials; Amer. Soc. for Metals; Amer. Inst. of Mining and Metallurgical Engrs.; Amer. Foundrymens Assn.; Y.M.C.A. Contrb. to: Bull. Amer. Soc. for Testing Materials; Trans. Amer. Foundrymens Soc. Gen. Int.: Development of New Aluminum Alloys; Development of Methods for Refining Aluminum Scrap. Special Int.: Physical Metallurgy of Light Metals and Development of New Fabrication Methods of Light Alloys.



QUAM, George Norman, Assoc. Prof. of Chem., Villanova Coll., Villanova, Pa. **CHEMISTRY**.

QUARLES, Lawrence Reginald, Prof. of Elec. Engrng., Univ. of Va., Charlottesville, Va. **ELECTRONICS**. b. Charlottesville, Va., Jan. 26, 1908. s. Charles Henry and Carolynn (Payne) Q. Edn.: B.S.E., Univ. of Va., 1929; Ph.D., *ibid.*, 1935. m. Ella Mae LeSueur on July 14, 1929. c.: Margaret LeSueur; Carolynn Mae. Exp.: Rsch. Engr., Westinghouse Electric and Mfg. Co., 1929-32; Service Fellow and Tehng. Asst., Univ. of Va., 1932-35; Instr., Elec. Engrng., *ibid.*, 1935-40; Asst. Prof., *ibid.*, 1940-42; Assoc. Prof., *ibid.*, 1942-47; Acting Dean, Dept. of Engrng., *ibid.*, 1947; Prof. of E. E., *ibid.*, 1947-50; Chf. Dev. Engr., Oak Ridge Natl. Lab., 1950-51; Prof. of E. E., Univ. of Va., 1951—. Hon. Pos.: Chmn., N. C.-Va. Section, Inst. of Radio Engrs., 1947-48. Mem.: Sigma Xi; Tau Beta Pi; Raven; A.I.E.E.; Fellow, I.R.E. Author: Lines, Networks and Filters, with W. M. Breazeale, 1951. Contrb. to: Physical Rev.; Electric Jour.; Communications; I.R.E. Proc.; Elec. Engrng. Special Int.: Electronic Control; V.H.F. Circuits; Nuclear Reactor Control.

QUASTEL, Juda Hirsch, Prof. of Biochem., McGill Univ., Montreal, Can. **BIOCHEMISTRY**. b. Oct. 2, 1899, Sheffield, England. s. Jonas and Flora (S) Q. Edn.: Ph.D., Cambridge Univ., England, 1924; D.Sc., *ibid.*, 1926; F.R.S., *ibid.*, 1940. m. Henrietta Jungman, 1931. c.: Michael; David and Barbara. Exp.: Dir. of Rsch., Cardiff City Mental Hosp., Wales, 1929-41; Dir., Unit of Soil Metabol-

ism, Agric. Rsch. Coun., England, 1941-47; Dir., Rsch. Inst., Montreal Gen. Hosp., 1947—. Mem.: Biochem. and Phys. Soc. of England; Amer. Chem. Soc.; N. Y. Acad. of Sci.; Amer. Soc. Biol. Chem., etc. Contrb. to: Proc. Royal Soc.; Biochem; Proc. Soc. Exp. Biol. and Med.; Arch. Biochem.; Biophysics; Nature, etc. Special Int.: Biochem. of enzymes, microorganisms, mammalian tissues; Biochem. of soil, herbicides, soil conditioners.

QUARTERMAN, Elsie, Assoc. Prof. of Biol., Box 62, Vanderbilt Univ., Nashville 5, Tenn. **PLANT ECOLOGY, BRYOLOGY**.



b. Valdosta, Ga., Nov. 11, 1910. d. David Sinclair and Allah (Peek) Q. Edn.: A.B., Ga. State Coll., 1932; M.A., Duke Univ., 1941; Ph.D., *ibid.*, 1949. Exp.: Tchr., Ga. Public Schls., 1932-43; Staff, Vanderbilt Univ., Nashville, Tenn., 1943—. Mem.: Ecol. Soc. Amer.; Botanical Soc. Amer.; Amer. Bryological Soc.; Sigma Xi; Tenn. Acad. Sci. Contrb. to: Ecology; Torreyia; Bryologist; Amer. Fern Jour. Special Int.: Ecology of Cedar Glades.

QUAYLE, Henry Joseph, Prof. Emer. Entomol. and Entomologist, Univ. of Calif. Citrus Expt. Sta., Riverside, Calif. **ENTOMOLOGY**.

QUICK, Armand J., Prof. and Dir., Dept. of Biochem., Marquette Univ. Schl. of Med., Milwaukee, Wis. **BIOCHEMISTRY**.

QUICK, Bert Edwin, Prof. of Biol., Westminster Coll., New Wilmington, Pa. **PLANT DISTRIBUTION**.

QUICK, Clarence Roy, Assoc. Forest Ecologist, U. S. D. A., 26 Giannini Hall, Univ. of Calif., Berkeley, Calif. **PLANT ECOLOGY**.

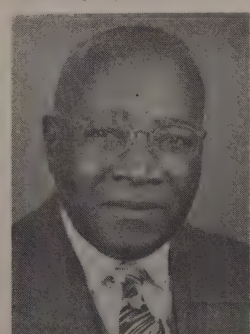
QUILL, Lawrence L., Dept. of Chem., Mich. State Coll., E. Lansing, Mich. **INORGANIC CHEMISTRY**.

QUILLEN, Joe Willard, Chemist in Chg., Baltimore Lab., Bureau Internal Revenue, Treasury Dept., 515 Appraisers Stores, Baltimore, Md. **CHEMISTRY**.

QUINBY, J. R., Tex. Substation No. 12, Chillicothe, Tex. **AGRONOMY—PLANT BREEDING**.

QUINBY, William Carter, Clinical Prof. Emer. Genito-Urinary Surgery, Harvard Med. Schl., Boston, Mass.; 1101 Beacon St., Brookline, Mass. **UROLOGY**.

QUINLAND, William Samuel, (Died Apr. 6, 1953), Pathologist, Chf. of Lab. Service, Vet. Admin.



Hosp., Tuskegee, Ala. **ANATOMICAL AND CLINICAL PATHOLOGY**. b. All Saints Antigua, B.W.I., Oct. 12, 1885. s. William Thomas and Floretta Victoria (Williams) Q. Edn.: M.D., Meharry Med. Coll., 1919. Hon. Deg.: D.Sc., Lincoln Univ., 1946. m. Sadie Lee Watson, June 27, 1923. c.: William Samuel, Jr.; Ellen Quinland Smith. Exp.: Rosenwald Fellow in Bacteriol. and Pathol., Harvard Univ., Med. Schl., 1919-22; Asst. in Pathol., Peter Bent Brigham Hosp., 1921-22; Prof. and Hd. Dept. of Pathol., Meharry Med. Coll., 1922-47; Pathol., George W. Hubbard Hosp., 1922-27; Pathol., Millie E. Hale Hosp., 1922-37; Assoc. Med. Dir., George W.

Hubbard Hosp., 1931-37; Gen. Ednl. Bd. Fellow in Pathol., Univ. of Chicago, Chicago, Ill., 1941; Pathol., Chf. of Lab. Service, Vet. Admin. Hosp., Tuskegee, Ala., 1947—. Mem.: Amer. Med. Assn.; Natl. Med. Assn.; Editorial Bd., J.N.M.A.; Fellow, A.A.A.S.; Ala. State Med. Assn.; Fellow, Coll. of Amer. Pathol.; Amer. Assn. of Bacteriol.; Lone Star State Med. Dent. and Pharm. Assn.; Omega Psi Phi; Kappa Pi; Beta Kappa Chi; Agora Assembly. Contbr. to: Jour. of Natl. Med. Assn.; Boston Med. and Surgical Jour.; Arch. of Pathol.; Southern Med. Jour.; Jour. of Urology. Special Int.: Performance of Autopsies; Gross and Microscopic Studies of Autopsy and Surgical Materials; Exptl. Pathol. Supervision of Clinical Lab.

QUINN, Brother John F.S.C., Asst. Prof. of Physics, La Salle Coll., Philadelphia, Pa. PHYSICS; OPTICS; ATOMIC AND NUCLEAR AND ELECTRONICS. b. Washington, D. C., Jan. 4, 1917. s. John Aloysius and Vivian (Sill) Q. Edn.: A.B., La Salle Coll., 1937; M.S., Catholic Univ. of Amer., 1941;

Ph.D., *ibid.*, 1946; M.A., Notre Dame Univ., 1952. Exp.: Instr. in Physics, De La Salle Coll., Washington, D. C., 1940-45; Asst. Prof. of Physics, La Salle Coll., Philadelphia, Pa., 1946—. Mem.: A.A.A.S.; Sigma Xi; Catholic Roundtable of Sci. Contbr. to: Jour. of Acoustical Soc. Special Int.: Ultrasonics; Optics and Electronics.

QUINN, E. J., Vitamin Specialist, Merck and Co., Rahway, N. J. NUTRITION, CHEMISTRY.

QUIRING, Daniel P., Assoc. Prof. of Biol., Western Reserve Univ., Cleveland, Ohio. ANATOMY, ZOOLOGY.

QUISENBERRY, John Henry, Hd., Dept. of Poultry Husbandry, Tex. A. and M. Coll., College Sta., Tex. GENETICS, POULTRY BREEDING.

QUISENBERRY, Karl Spangler, Hd. Agronomist, Chg. Div. Cereal Crops and Diseases, Bureau Plant Indus., Soil and Agril. Engrng., ARA, U. S. D. A., Plant Indus. Sta., Beltsville, Md. AGRONOMY.

RAABE, Rudolph Henry, Dean of Pharmacy, Coll. of Pharmacy, Ohio Northern Univ., Ada, Ohio. **PHARMACY, PHARMACOLOGY.**

RAASCH, Maynard Stanley, Rsch. Chemist, Chem. Dept., E. I. du Pont de Nemours and Co., 2515



W. 18th St., Wilmington 6, Del. **ORGANIC CHEMISTRY.** b. Castlewood, S. Dak., Feb. 27, 1915. s. John and Jelka (Pommer) R. Edn.: B.S., S. Dak. Schl. of Mines and Technology, 1937; M.S., Ohio State Univ., 1938; Ph.D., ibid., 1941. Exp.: Lab. Tchng. Asst., Ohio State Univ., 1937-39; Wm. S. Merrell Co. Fellow, Ohio State Univ., 1939-41; Rsch. Chemist, Chem. Dept., E. I. du Pont de Nemours and Co., 1941—. Mem.: Amer. Chem. Soc.; Chem. Soc. (London); Scientific Re-

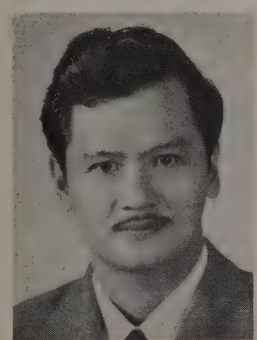
search Soc. of Amer.; Sigma Xi; Phi Lambda Upsilon; Soc. of Natural Hist. of Del. Contrb. to: Jour. of Amer. Chem. Soc.; Jour. of Organic Chem. Special Int.: Organic Synthesis; Synthetic Medicinals; Fluorine Compounds; Color Photography; Vinyl Polymers.

RABAK, Frank, Biochemist, U. S. D. A., Washington, D. C. **BIOCHEMISTRY.**

RABI, Isidor Isaac, Columbia Univ., N. Y. 27, N. Y.

RABINOWITCH, Eugene, Rsch. Prof., Univ. of Ill., Urbana, Ill. **PHYSICAL CHEMISTRY.** b. Apr. 27, 1901, St. Petersburg, Russia. s. Isaak and Zinaida (Weinlud) R. Edn.: Ph.D., Univ. of Berlin, Germany, 1926. m. Anna Majersohn, Mar. 12, 1932. c.: Alexander and Victor. Exp.: Rsch. Assoc., Mass. Inst. of Tech., Cambridge, Mass., 1938-46; Section Chf., Manhattan Project, Metallurgical Lab., Chicago, Ill., 1943-45; Rsch. Prof., Univ. of Ill., Urbana, Ill., 1946—. Mem.: Amer. Chem. Soc.; Amer. Phys. Soc.; Soc. of Gen. Physiol. Author: Rare Gases, 1928; Periodic System, Hist. and Theory (with E. Thilo), 1930. Contrb. to: Berichte deut. Chem. Gesellschaft; Zeits. fur Elektrochemie; Trans. Faraday Soc.; Jour. of Chem. Physics; Rev. Modern Physics; Archives Biochem. and Biophysics. Special Int.: Photochem., Reaction Kinetics; Photosynthesis; Atomic Energy (in Relation to Public Affairs). Editor "Bulletin of Atomic Scientists."

RABOR, Dioscoro S., Prof. of Biology, Silliman Univ., Dumaguete City, Philippines. **ORNITHOLOGY,**



MAMMALOLOGY, HERPETOLOGY. b. Cebu, Cebu, Philippines, May 18, 1911. s. Valeriano and Asuncion (Siarot) R. Edn.: B.S.E., Univ. of the Philippines, 1931; B.S., ibid., 1932; M.S., ibid., 1934. m. Lina Florendo on Apr. 16, 1936. c.: Iole; Valfredo; Alectis; Nectarinia. Exp.: Jr. Ornithologist, Fish and Game Admin., Manila, 1936-38; Asst. Ichthyologist, Div. of Fisheries, Manila, 1939-41; Ornithologist, Philippine Natural Hist. Museum, Manila, 1946-

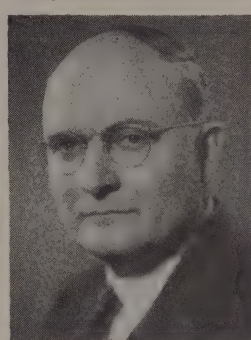
47; Assoc. Prof. of Biology, Silliman Univ., 1947-52; Prof. of Biology, ibid., 1952—. Fulbright Scholar, 1950-51; Guggenheim Fellow in Zoology, 1950-51. Hon. Pos.: Field Assoc. of the Chicago Natural Hist. Museum. Mem.: Amer. Ornithologists' Union; Amer. Soc. of Ichthyologists and Herpetologists; Amer. Soc. of Mammalogists; A.A.A.S. Contrb. to: Philippine Jour. of Sci.; Copeia; The Auk; Miscellanea. Gen. Int.: Life Histories of Common

Philippine Birds. Special Int.: Biology and Ecology of Birds, Mammals, Amphibians and Reptiles of the Philippines; Ranges and Distributions of the Land Vertebrate Fauna of the Philippines.

RACE, Hubert Hawley, Rsch. Engr., General Electric Co., Schenectady, N. Y. **DIELECTRICS.**

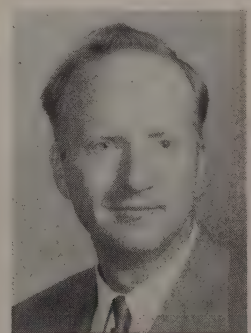
RACKEMANN, Francis M., Physician, Mass. General Hosp., 263 Beacon St., Boston, Mass. **IMMUNOLOGY.**

RADER, Lloyd F., Prof. of Civil Engrng., Univ. of Wis., Madison, Wis. **HIGHWAY ENGINEERING;**



MATERIALS OF CONSTRUCTION. b. October 8, 1902, Lincoln, Nebr. s. Geo. and Lula Edith (Tyler) R. Edn.: B.S.E., with Honors, Univ. of Mich., 1924; M.S.E., ibid., 1925; Ph.D., ibid., 1938; Roy D. Chapin Fellow in Highway Engrng., 1924-25; U. S. Naval Acad., 1919-22; Ind. Univ., Summer, Grad. Schl., 1929-32. m. Helen Waters of Lincoln, Nebr., Sept. 3, 1932. d. Frank and Margaret Waters. Exp.: Resident Engr., St. Construction, Beech Grove, Ind., Summer, 1922; Pa. St. Hwy. Dept., Sr. Inspt., Summers, 1924-27; Nebr. St. Hwy. Dept., Engr., Summers, 1926, 28; Univ. of Nebr., Instr., Civil Engrng., 1925-28; Poly. Inst. of Brooklyn, Asst. Prof. and Assoc. Prof. of C. E., 1928-40; Univ. of Wis., Prof. of Civil Engrng., 1940—; Registered Professional Engr. in N. Y. and Wis. Mem.: A.S.C.E.; A.S.T.M.; Soc. Amer. Milit. Engr.; A.S.E.E.; Inst. of Traffic Engr.; Wis. Soc. of Profes. Engr.; Natl. Soc. of Profes. Engr.; Highway Rsch. Bd.; Sigma Xi; Chi Epsilon; Tech. Club, Madison; Univ. Club; Univ. W. End Club, Madison. Contrb. to: Engr. Proceedings and Publications on Highway and Traffic Engrng. Subjects. Co-author: Materials of Construction, 5th Ed., 1939. Ph.D. Dissertation: Investigations of the Phys. Properties of Asphaltic Mixtures at Low Temperatures (Awarded Prize of Belgium for This Dissertation at Internatl. Rd. Congress at The Hague, Holland, 1938). War Record: Comdr., Civil Engr. Corps, U.S.N.R., World War II, 1941-46; U. S. and Pacific Ocean Areas. Travel: Norway; Portugal; Gibraltar; Morocco; Panama; Cuba; Australia; New Guinea; New Caledonia; New Herbrides; Admiralty and Solomon Islands; Hawaii; Canada. Gen. Int.: Pres., Assn. of Asphalt Paving Technologists, 1943; Chmn., Com. on Civil Defense, Univ. of Wis., 1951. Hobbies: Cocker Spaniels; Motoring. Listed in: Who's Who in Engrng.; Who's Who in the Midwest. Special Int.: Bituminous Pavement Rsch. and Highway Traffic Rsch.

RAE, John, Jr., Sr. Rsch. Chemist, Shell Dev. Co., 4529 Beech St., Bellaire, Tex. **CHEMISTRY.** b.



Glen Ridge, N. J., Feb. 17, 1917. s. John and Helen (Cortleyou) R. Edn.: B.S., Rollins Coll., 1940; M.S., Univ. of Wis., 1941; Ph.D., ibid., 1943. m. Dorothy Swift, June 10, 1942. c.: Sharon; David Stewart; Linda. Exp.: Mem. Staff, Subtropical Fruit Rsch. Station, U. S. Bureau of Agri., Orlando, Fla., 1939-40; Tchng. Asst. in Chem., Univ. of Wis., Madison, Wis., 1940-42; Chem. Consultant Mid-Western States, Spectroscopic Analytical Service, 1940-43; Chemist, Shell Development Co., Emeryville, Calif., 1943-47; Sr. Rsch. Chemist, Shell Oil Co., Houston, Tex., 1947-53; Sr. Rsch. Chemist, Shell Dev. Co., Houston, Tex., 19-

53—. Mem.: Amer. Chem. Soc.; A.A.A.S. Contrb. to: Trans. Wis. Acad. of Sci., Arts, and Letters; Analytical Chem. Special Int.: Spectroscopic and Chem. Methods of Analysis.

RADO, Tibor, Prof. of Math. and Chmn. Dept., Ohio State Univ., Columbus, Ohio. MATHEMATICS.

RAFTON, Harold Robert, Pres., Rafton Labs., Inc., P. O. Box 8, Shawsheen Village Sta., Andover, Mass. ALKALINE EARTH PIGMENTS.

RAFTON, Mrs. Harold R., Assoc. Chem. Dir., Rafton Labs., Inc., P. O. Box 8, Shawsheen Village Sta., Andover, Mass. ALKALINE EARTH PIGMENTS.

RAGAN, George, General Electric Co., Schnecktady, N. Y. PHYSICS.

RAGLAND, Carlton Herbert, Prof. of Horticulture and Pomologist, Agri. Expt. Sta., Miss. State Coll., State Coll., Miss. POMOLOGY.

RAGSDALE, Arthur Chester, Prof. and Chmn., Dept. of Dairy Husbandry, Univ. of Mo., Columbia, Mo. DAIRY HUSBANDRY.

RAHN, Gordon Ellsworth, General Practice, 201 Second Ave., N. Mount Vernon, Iowa. MEDICAL SCIENCES.

RAHN, Otto, Prof., Cornell Univ., Ithaca, N. Y. BACTERIOLOGY.

RAID, E. Emmett, Johns Hopkins Univ., Baltimore, Md. SULPHUR CHEMISTRY.

RAIMY, V. C., Dept. of Psychol., Univ. of Colo., Boulder, Colo. PSYCHOLOGY.

RAINES, Morris Abel, Prof. of Botany, Howard Univ., Washington, D. C. PLANT PHYSIOLOGY.

RAINICH, George Yuri, Prof. of Math., Univ. of Mich., Ann Arbor, Mich. MATHEMATICS.

RAINWATER, James Leo, Instr. in Physics, Columbia Univ., N. Y., N. Y. PHYSICS.

RAISZ, Erwin, Acting Prof., Va. Geog. Inst., Univ. of Va., Charlottesville, Va. CARTOGRAPHER; GEOGRAPHER; PHYSIOGRAPHER. b. Locse, Hungary, Mar. 1, 1893. s. Josephus and Rose (Balla) R. Edn.: A.M., Columbia Univ., 1924; Ph.D., *ibid.*, 1929. m. Marie Georgette Patai on Dec. 24, 1924. c.: Lawrence Gideon. Exp.: Architect, Budapest, 1918-23; Asst. in Physiography, Columbia Univ., 1925; Instr. in Cartography, *ibid.*, 1927-31; Lectr. in Cartography, Inst. of Geog. Exploration, Harvard Univ., 1931-51; Acting Prof., Va. Geog. Inst., Univ. of Va., Charlottesville, Va., 1951—. Hon. Pos.: Chmn., Cartography Section of the Assn. of Amer. Geographers. Mem.: Natl. Rsch. Council; Amer. Geog. Soc.; Natl. Council of Geography Tehrs.; Sigma Xi. Author: The Scenery of Mt. Desert, Maine, 1929; General Cartography, 1939; Atlas of Global Geography, 1944. Contrb. to: Geog. Rev.; Jour. of Geog.; Isis. Special Int.: Cartography.

RAKESTRAW, Norris W., Prof. of Chem., Scripps Inst. of Oceanography, Univ. of Calif., La Jolla, Calif. CHEMISTRY.

RAKOFF, Abraham E., STERILITY.

RALEIGH, George J., Prof. of Vegetable Crops, N. Y. State Coll. of Agri., Cornell Univ., Ithaca, N. Y. HORTICULTURE.

RALEIGH, Stephen Martin, Assoc. Prof., Pa. State Coll., State College, Pa. AGRONOMY.

RALEIGH, Walter P., Clyde, Kans.

RALLI, Elaine Pandia, Assoc. Prof. of Med., N. Y. Univ. Coll. of Med., 477 First Ave., N. Y., N. Y. DISEASES, METABOLISM.

RALSTON, Anderson Wheeler, Asst. Dir. of Rsch., Armour and Co., 8926 S. Hamilton Ave., Chicago, Ill. CHEMISTRY.

RALSTON, O. C., 4333 Clagett Rd., Hyattsville, Md. CERAMICS.

RAMBERG, E. G., Rsch. Physicist, R.C.A. Labs. Div., Radio Corp. of Amer., Princeton, N. J. ELECTRON OPTICS; PHYSICAL ELECTRONICS; OPTICS. b. Florence, Italy, June 14, 1907. s. Walter and Lucy (Dodd) R. Edn.: A.B., Cornell Univ., 1928; Ph.D., Univ. of Munich, 1932. m. Sarah Sargent, Dec. 26, 1936. Exp.: Scientific Aid, Bausch and Lomb Optical Co., Rochester, N. Y., 1925-27; Rsch. Asst., Dept. of Phys., Cornell Univ., Ithaca, N. Y., 1928-30, 1932-35; Rsch. Physicist, R.C.A. Mfg. Co., Camden, N. J., 1935-41; Rsch. Physicist, R.C.A. Labs., Princeton, N. J., 1941-42, 1946—. Mem.: Amer. Phys. Soc.; Electron Microscope Soc. of Amer.; Sigma Xi; A.A.P.T.; A.A.A.S.; Soc. for Soc. Responsibility in Sci. Co-author: Electron Optics and the Electron Microscope, 1945; Photoelectricity and its Application, 1949. Contrb. to: Phys. Rev.; Jour. Applied Phys.; Jour. Optical Soc. of Amer.; Proc. Inst. of Radio Engrs.; Annalen der Physik; Zeitschrift für angewandte Physik; Electronics. War Record: Civilian Public Service, 1943-45. Special Int.: Electron Optics as Applied in Electron Microscopy and Television; Electron Emission Phenomena; Television Optics; X-Ray Spectra.

RAMBO, Susan Miller, Prof. of Math., Smith Coll., Northampton, Mass. MATHEMATICS.

RAMO, Simon, c/o Hughes Aircraft Co., Culver City, Calif. PHYSICS.

RAMSAY, Andrew Jackson, Assoc. Prof. of Histology and Embryol., Jefferson Med. Coll., 1025 Walnut St., Philadelphia, Pa. EMBRYOLOGY, HISTOLOGY.

RAMSAY, James Wilson, Staff Chemist, Technical Dept., Socony-Vacuum Oil Co., Inc., 26 Broadway, N. Y., N. Y. PETROLEUM CHEMISTRY.

RAMSEY, George Garfield, Prof. and Hd., Dept. of Chem., Catawba Coll., Salisbury, N. C. CHEMISTRY.

RAMSEY, Glen Blaine, Sr. Pathologist, U. S. D. A., Univ. of Chicago, 5630 Ingleside Ave., Chicago, Ill. PLANT PATHOLOGY.

RAMSEY, Norman Foster, Jr., Prof. of Physics, Lyman Lab. of Physics, Harvard Univ., Cambridge 38, Massachusetts. NUCLEAR PHYSICS. b. Washington, D. C., Aug. 27, 1915. s. Norman Foster and Minna (Bauer) R. Edn.: A.B., Columbia Univ., 1935; B.A., Cambridge Univ., England, 1937; M.A., *ibid.*, 1941; Ph.D., Columbia Univ., 1940. Hon. Deg.: M.A., Harvard, 1947. m.: Elinor Jameson, June 3, 1940. c.: Margaret; Patricia; Janet; Winifred. Exp.: Kennett Fellow, Columbia Univ., N. Y. C., 1935-37; Tyndall Fellow, *ibid.*, 1938-39; Carnegie Fellow, Carnegie Inst. of Washington, D. C., 1939-40; Assoc., Univ. of Ill., 1940-42; Asst. Prof., Columbia Univ., N. Y. C., 1942-45; Rsch. Assoc., Mass. Inst. of Tech., Radiation Lab., Cambridge, Mass., 1940-43; Consultant to Natl. Defense Rsch. Comm., 1940-45; Expert Consultant to Secy. of War, 1942-45; Group Leader and Assoc. Div. Hd., Los Alamos Lab. of Atomic Energy Project, Los Alamos, N. Mex., 1943-45; Chf. Scientist of Atomic Energy Lab. at Tinian, 1945; Assoc. Prof., Columbia Univ., N. Y., 1945-47; Hd. of Physics Dept., Brookhaven Natl. Lab., 1946-47; Assoc. Prof., Harvard Univ., Cambridge, Mass., 1947-50; Prof. of Physics, *ibid.*, 1950—. Mem.: Amer. Acad. of Arts and Sci.; Natl. Acad. of Sci.; Sigma Xi; Phi Beta Kappa; Amer. Phys. Soc.; Trustee: Assoc. Univ. Inc. and Brookhaven Natl. Lab., 1951—; Bd. of Editors: Revs. Mod. Phys. Author: Nuclear Moments, 1953; Nuclear Two Body Problems, 1953. Contrb. to: Phys. Rev. and Other Scientific Jours. Special Int.: Nuclear Physics; Molecular Beam Experiments; Radar; Nuclear Magnetic Moments; Radiofrequency Spectroscopy; Nucleon Scattering; Magnetic Shielding in Molecules; Nuclear Interactions in Molecules.

RAMSEY, Rolla Roy, Prof. Emer. Physics, Ind. Univ., 615 E. Third St., Bloomington, Ind. PHYSICS.

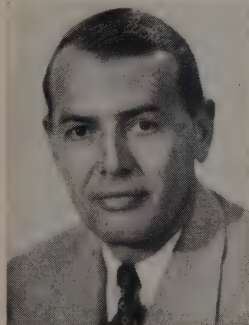
RAND, Frederick Vernon, Sr. Plant Pathologist, U. S. D. A., 1359 Meridian Pl., N. W., Washington, D. C. **PLANT PATHOLOGY.**

RAND, Gertrude, Rsch. Assoc. Instr. Ophthalmology, Coll. of Physicians and Surgeons, 635 W. 165th St., N. Y., N. Y. **PHYSIOLOGICAL OPTICS.**

RAND, Herbert Wilbur, Assoc. Emer. Prof. Zool., Harvard Univ., 7 Siders Pond Rd., Falmouth, Mass. **ZOOLOGY; MORPHOLOGY AND EVOLUTION OF THE CHORDATES.** b. Oil City, Pa., July 2, 1872. Edn.: A.B., Allegheny Coll., 1892; C.E., *ibid.*, 1893; A.B., Harvard Univ., 1897; A.M., *ibid.*, 1898; Ph.D., *ibid.*, 1900. m. 1st, Claire Forbes Hammond (dec.), Dec. 27, 1900. c.: Henry Forbes and Dorothy Garrison. m. 2nd, Marion J. MacCallum, July 2, 1928. Exp.: Inst. in Zool., Harvard Univ., 1900-09; Asst. Prof., *ibid.*, 1909-19; Assoc. Prof., *ibid.*, 1919-38; Assoc. Prof. Emeritus, *ibid.*, 1938; Harvard Exchange Prof. to Grinnell, Beloit and Colo. Coll., 1929; Lectr. in Zool., Wellesley Coll., 3 semesters between 1908 and 1919. Mem.: Amer. Acad. of Arts and Sci.; A.A.A.S.; Amer. Soc. of Zool.; Amer. Soc. of Naturalists; Philosophy of Sci. Assn.; The Chordates, 1950. Co-author with H. V. Neal: Comparative Anatomy, 1936, and Chordates Anatomy, 1939. Contrb. to: Various Biological Jours. Listed in: Who's Who in Amer.; Who's Who in New Eng.; World Biog.; A.M.S. Special Int.: Morphogenesis; Regeneration, wound healing.

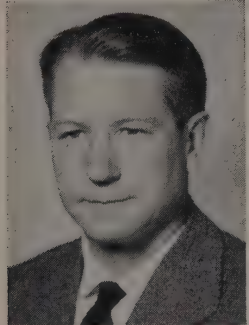
RAND, Thomas Reid, Jr., Pharmacist, Person St., Pharmacy No. 2, Raleigh, N. C. **PHARMACY.**

RAND, William Edward, Asst. Dir., Stanford Rsch. Inst., Stanford Calif. **CHEMICAL ENGINEERING.**



b. Boston, Mass., July 25, 1911. s. LeRoy Melville and Harriet (Delano) R. Edn.: S.B., Mass. Inst. of Tech., 1933. m. Jean Lindsay, Nov. 24, 1935. c.: Lindsay; Peter Delano. Exp.: Chem. Engr., Denison Mfg. Co., Framingham, Mass., 1933-37; Chemist, St. Lawrence Paper Mills, Three Rivers, Quebec, Can., 1937-39; Chem. Engr., Cons. Dyestuff Corp., Montreal, Can., 1939-40; Asst. Factory Mgr., Sun Chem. Corp., N. Y. C., 1940-41; Prod. Mgr., Rsch. Inst. of Amer., N. Y. C., 1941-42; Chem. Engr., Dicalite Co., N. Y. C., 1942-43; Gen. Mgr., Sun Chem. Corp., N. Y. C., 1944-46; Asst. Dir., Stanford Rsch. Inst., Stanford, Calif., 1946—. Mem.: Amer. Chem. Soc.; A.I.Ch.E.; Forest Products Rsch. Soc.; West. Chem. Mkt. Rsch. Group. Contrb. to: Pulp and Paper Mag. of Can.; Jour. of Amer. Vet. Med. Assn.; Scientific Amer.; Air Repair. Special Int.: Air Pollution; Flourine Toxicol.; Lyophilic Colloids; Dyestuffs.

RANDALL, Lowell O., Sr. Pharmacologist, Hoffmann-La Roche, Inc., Roche Park, Nutley 10, N. J. **PHARMACOLOGY.**



b. N. Georgetown, Ohio, Sept. 11, 1910. s. Cornelius H. and Mary C. (Stoffer) R. Edn.: B.S., Mount Union Coll. 1931; Ph.D., Univ. of Rochester, 1935. m. Margaret V. Leary. c.: John C.; Mary M. Exp.: Asst. in Pharm., Univ. of Rochester, 1931-35; Asst. Chem., Mass. Civil Service, 1935-39; Pharmacologist, Burroughs Wellcome & Co., 1939-46; Sr. Pharmacologist, Hoffmann-La Roche, Inc., Nutley, N. J., 1946—. Mem.: Amer. Soc. of Biological Chemists; Amer. Soc. for Pharm. and Exptl. Therapeutics; A.C.S.; A.A.A.S.; N. Y. Acad. of Sci. Contrb. to:

Jour. Pharm. and Exptl. Therapeutics; Jour. of Biol. Chem.; Annals N. Y. Acad. Sci.; Amer. Jour. Cancer; Amer. Jour. Med. Sci.; Amer. Jour. Physiol. Special Int.: Pharm. of Circulatory Agents, Curare Agents, Anticure Agents, Analgesics, Spasmolytics, Anticonvulsants, Anticoagulants, Vitamin P, Lipid Metabolism, Brain Metabolism, Enzymes.

RANDALL, Merle, Consultant and Rsch. Dir., Stuart Oxygen Co., Rsch. Lab., 2295 San Pablo Ave., Berkeley, Calif. **CHEMICAL ENGINEERING.**

RANDOLPH, Lowell Fitz, Prof. of Botany, Dept. of Botany, Coll. of Agri., Cornell Univ., Ithaca, N. Y.



CYTOGENETICS. b. Alfred, N. Y., Oct. 7, 1894. s. Alva F. and Mary Caroline (Hoff) R. Edn.: Ph.B., Alfred Univ., 1916; Ph.D., Cornell Univ., 1921. m. Fannie Coolbaugh Rane, Sept. 13, 1921. c.: Robert Fitz; Elizabeth Jane and Rane Fitz. Exp.: Instr. in Botany, Cornell Univ., Ithaca, N. Y., 1919-23; Assoc. Cytol. U. S. Dept. of Agri., 1924-34; Cytol., *ibid.*, 1934-46; Sr. Cytol., *ibid.*, 1946—; Prof. of Botany, Cornell Univ., Ithaca, N. Y., 1946—. Mem.: Gamma Alpha; Sigma Xi; Phi Kappa Phi. Special Int.: Plant Cytol.; Cytogenetics and Morphol. Chiefly with Maize and Iris.

RANDS, Robert Delafield, Jr., Rsch. Chemist, 53 Greendale Drive, St. Louis 21, Mo. **ORGANIC CHEMISTRY AND FINE CHEMICALS.** b. Buitenzorg, Java, N. E. I., Oct. 17, 1919. s. Robert Delafield and Minnie (Frost) R. Edn.: B.S., Univ. of Md., 1942; Ph.D., Univ. of Ill., 1950. m. Betty Hall, Sept. 17, 1942. c.: Susan Jean; Robert Hall; Janet Elizabeth and Ronald Delafield. Exp.: Rsch. Chemist, Natl. Bur. of Standards, Washington, D. C., 1942-45; Rsch. Chemist, Mallinckrodt Chem. Works, St. Louis, Mo., 1949—. Mem.: Amer. Chem. Soc.; Sigma Xi; Alpha Chi Sigma; Phi Lambda Upsilon. Contrb. to: Jour. of Amer. Chem. Soc.; Jour. of Polymer Sci.; Jour. of Rsch. Natl. Bur. of Standards. War Record: U. S. Army, 1945-46. Special Int.: Mfg. and Preservation of Ether and Chromatography.

RANKAMA, T., Univ. of Chicago, Chicago, Ill., **APPLIED GEOCHEMISTRY—ECONOMIC GEOLOGY.**

RANKIN, John Stewart, Jr., Asst. Prof. of Zool., Univ. of Conn., Storrs, Conn. **INVERTEBRATE ZOOLOGY.**

RANKIN, Joseph Marshall, Prof. of Math., Coll. of Idaho, Caldwell, Idaho. **APPLIED MATHEMATICS.**

RANKIN, Roy, Prof. and Hd., Dept. of Chem., Fort Hays Kans. State Coll., Hays, Kans. **CHEMISTRY, BACTERIOLOGY.**

RANKIN, William Houston, Rsch. Assoc. Prof. of Agron., N. C. State Coll., Raleigh, N. C. **AGRONOMY.**

RANTA, Lawrence Edward, Asst. Prof. of Bacteriol. and Preventive Med., Univ. of B. C., Vancouver, B. C., Can. **BACTERIOLOGY, EPIDEMIOLOGY.**

RAPER, Kenneth Bryan, Prof. of Bacteriology, Dept. of Bact., Univ. of Wis. **MYCOLOGY, MICROBIOLOGY.** Edn.: A.B., Univ. of N. C., 1929; M.A., George Washington Univ., 1931; M.A., Harvard Univ., 1935; Ph.D., *ibid.*, 1936. m. Louise Williams, July 18, 1936. c.: Charles Albert. Exp.: Junior Mycologist, Bur. of Chem. and Soils, U. S. Dept. of Agri., 1929-36; Asst. Mycologist, Bur. Plant Industry, *ibid.*, 1936-40; Microbiologist to Principal Microbiologist, Northern Regional Rsch. Lab., *ibid.*, 1940-52; Visiting Prof. of Botany, Dept. of Botany, Univ. of Ill., 1946-52; Prof. of Bacteriology, Dept. of Bact., Univ. of Wis., 1952—. Hon. Pos.:

Pres. Mycological Soc. of Amer., 1950-51; Pres. Soc. Indust. Microbiology, 1953. Mem.: Amer. Acad. of Arts and Sciences; Natl. Acad. Sci.; Phi Beta Kappa, Sigma Xi. Author: Manual of the Aspergilli, 1945; Manual of the Penicillia, 1949. Gen. Int.: At the Northern Regional Rsch. Lab. Supervised the Building of the World's Largest Collection of Industrially and Agriculturally Important, Microorganisms. Special Int.: Taxonomy of Aspergillus and Penicillium, Morphogenesis in Simple Slime Molds, Study and Preservation of Microorganisms.

RAPPLEYE, Howard Snyder, Retired Chf., Coast and Geodetic Survey, 6712 Fourth St., N. W., Washington, D. C. GEODETIC LEVELING.

RAPPLEYE, Willard Cole, Dean, Faculty of Med., Columbia Univ., N. Y., N. Y. MEDICAL EDUCATION.

RAPPORT, David, Prof. of Physiol., Med. Schl., Tufts Coll., 416 Huntington Ave., Boston, Mass. PHYSIOLOGY.

RASMUSSEN, Andrew Theodore, Prof. of Anatomy, Univ. of Minn., Minneapolis, Minn. ANATOMY.

RASMUSSEN, Theodore Brown, Prof. of Neurol. Surgery, 950 E. 59th St., Chicago, Ill. NEUROLOGICAL SURGERY. b. Provo, Utah, Apr. 28, 1910. s. Andrew and Gertrude (Brown) R. Edn.: B.S., Univ. of Minn., 1934; M.D., ibid., 1935; M.S., ibid., 1939. m. Catherine Archibald of Truro, Nova Scotia, Can., Dec. 18, 1947. d. Mr. and Mrs. Ryland Archibald. c.: Donald Brown; Ruth Anne. Exp.: Chf. of Neurosurgical Section, 14th Evac. Hosp., U.S.A. Med. Corps, 1942-45; Lectr. in Dept. of Neurol. and Neurosurgery, McGill Univ. and Asst. Neurosurgeon, Montreal Neurol. Inst., 1946-47; Prof. of Neurol. Surg., Univ. of Chicago, 1947. Mem.: Alpha Omega Alpha; Sigma Xi; Amer. Acad. of Neurol. Surg.; Harvey Cushing Soc.; Soc. of Neurol. Surgeons; A.A.A.S.; Amer. Neurol. Assn. Author: The Cerebral Cortex of Man, 1950. War Record: 1942-46, 1st Lt., Lt. Col., U. S. Army Med. Corps. Listed in: Dir. of Med. Specialists. Special Int.: Neurosurgery and Neuropsychol. as related to Cortical Localization; Cerebral Circulation and Epilepsy.

RASOR, S. E., Prof. Emer. Math., Ohio State Univ., 1594 Neil Ave., Columbus, Ohio. MATHEMATICS.

RATCHFORD, Benjamin Ulysses, Prof. of Econ., Duke Univ., Durham, N. C. ECONOMICS. b. Gas-tonio, N. C., Sept. 7, 1902. s. Joseph Fisher and Marietta (Hanna) R. Edn.: B.S., Davidson Coll., 1926; A.M., Duke Univ., 1927; Ph.D., ibid., 1932. m. Laura B. Deaton, July 30, 1932. c.: Joseph Benjamin; Julia Ann. Exp.: Instr. in Econ., Cornell Univ., 1927-28; Instr. in Econ., Duke Univ., Durham, N. C., 1928-35; Asst. Prof., ibid., 1935-39; Assoc. Prof., ibid., 1939-43; Prof. of Econ., ibid., 1943—; Visiting Prof. of Commerce and Bus. Admin., Univ. of Va., 1938-39; District Price



Officer, Raleigh, N. C., Office, O.P.A., 1942-43; Instr., Army Finance Schl., Duke Univ., 1943-44; Econ. Advisor for Level of Indus., U. S. Military Govt. for Germany, Berlin, 1945-46; Deputy Chf., Program Rev. Branch, ECA, Paris, France, Summer, 1948; Deputy Chf. of Mission and Chf. Economist, Internat. Bank Mission to Turkey, 1950. Hon. Pos.: Mem., Bd. of Editors, Southern Econ. Jour., 1941-45; Mem., Bd. of Editors, Amer. Econ. Rev., 1946-49; Dir. of Rsch., NPA Com. of the South, 1952—. Mem.: Amer. Econ. Assn.; Southern Econ. Assn.; Royal Econ. Soc.; Natl. Tax Assn.; Tax Inst., Inc.; Alpha Kappa Psi; Phi Beta Kappa. Author: Amer. State Debts, 1941. Co-author: Berlin Reparations Assignment, 1947; The Impact of Federal Policies on the Economy of the South, 1949; The Economy

of Turkey, 1951; Economics Resources and Policies of the South, 1951. Contbr. to: Amer. Econ. Rev. Southern Econ. Jour.; Natl. Tax Jour.; Jour. Politics; Jour. Finance; Public Finance; etc. War Record: Awarded Medal of Freedom by War Dept., 1946. Special Int.: Public Finance—especially Public Debts; Econ. Development of the South.

RATCLIFFE, Herbert Lee, Asst. Prof. of Comparative Pathol., Univ. of Pa., Philadelphia, Pa. COMPARATIVE PATHOLOGY.

RATHER, Howard C., Dean, Basic Coll., Mich. State Coll., East Lansing, Mich. AGRONOMY.

RATHER, James B., Technical Advisor, Mfg., Socony-Vacuum Oil Co., Inc., 26 Broadway, N. Y., N. Y. CHEMISTRY.

RATNER, Bret, Clinical Prof. of Pediatrics, Coll. of Med., N. Y. Univ., N. Y., N. Y. PEDIATRICS.

RAULSTON, Burrell Otto, Prof. of Med. and Dean, Schl. of Med., Univ. of Southern Calif., Los Angeles, Calif. INTERNAL MEDICINE.

RAUTENSTRAUCH, Walter, Prof. Emer., Columbia Univ., N. Y., N. Y.; Palisade, N. J. ENGINEERING.

RAVDIN, I. S., John Rhea Barton Prof. of Surgery and Dir., Harrison Dept. Surgical Rsch., Univ. of Pa., Philadelphia, Pa. SURGERY.

RAWLES, Mary Elbert, Rsch. Assoc. Embryol., Dept. of Biol., Johns Hopkins Univ., Baltimore, Md. EMBRYOLOGY.

RAWLINS, Thomas Ellsworth, Prof. of Plant Pathol. and Plant Pathologist, Expt. Sta., Univ. of Calif., Berkeley, Calif. VIRUSES, HISTOCHEMISTRY.

RAWLINSON, Herbert Edward, Assoc. Prof. of Anatomy, Univ. of Alberta, Edmonton, Alta., Can. ANATOMY.

RAWSON, George William, Chf. Veterinary Clinical Rsch. and Parasitology, Ciba Pharmaceutical Products, Inc., 560 Morris Ave., Summit, N. J. VETERINARY SCIENCE, ENTOMOLOGY.

RAWSON, Rulon W., Sloan-Kettering Inst., New York, N. Y. ENDOCRINOLOGY—CLINICAL RESEARCH.

RAY, Charles, Jr., Geneticist, Plant Rsch. Dept., Calif. Central Fibre Corp., Pisgah Forest, N. C. GENETICS.

RAY, Kenneth W., Dir. of Rsch., General Refineries, Inc., Minneapolis, Minn. CHEMISTRY.

RAY, Louis Lamy, Geologist, U. S. Geol. Survey, Washington, D. C. GEOMORPHOLOGY.

RAY, Millard Lovell, Prof. and Dean of Coll. of Engrng., 3869 Blodgett, Houston, Tex. THERMODYNAMICS AND HEAT POWER. b. Georgetown, Ind., May 12, 1912. s. Charles and Verla Maye (Flynn) R. Edn.: B.S., Fenn Coll., 1940; B.M.E., ibid., 1941. m. Ozena Faye Rochner of Georgetown, Ind., Aug. 7, 1937. d. Mr. and Mrs. Gus Rochner. c.: Don Allen; Sue Ann. Exp.: Purchasing Agent and Distbr. for Telling Belle Vernon Co., Cleveland, Ohio, 1935-37; Rsch. in Oils and Internal Combustion Engines for Warren Refining and Chem. Co., Cleveland, Ohio, 1937-40; Inventory and Appraisal for Cleveland Elec. Illuminating Co., 1940; Rsch. on Worm Drives for Cleveland Worm Gear Co., 1940-41; Metal Rsch., Fenn Coll. for Steel Co., 1939-41; Ind. Testing and Placement, 1939-41; Hd. of Inspection and Machine Tooling at McEvoy Co., Houston, Tex., 1941-42; Asst. Prof. of Mech. Engrng., Univ. of Houston, 1942-44; Organized the Coll. of Engrng. in 1942; Organized the Univ. of Houston Coll. of Technology in 1944; Acting Dean, ibid., 1944-46; On the Houston (City) Electrical Board, 1945-50. Hon. Pos.: Chmn. of Mech. Engrng. Dept. Mem.: A.S.M.E.; T.S.P.E.; N.S.P.E.; A.I.M.E.; A.S.E.E.; Delta Theta. Author: Heat Treatment of Metals, 1943; Measuring Instruments Manual, 1943. Hobbies: Fishing; Working with Motors. Listed in: Who's Who in the South and Southwest; Who's Who among Students in

Amer. Univ. and Coll.; A Registered Professional Engineer. Special Int.: Internal Combustion Engines and Metals.

RAY, Ward Low, Prof. of Chem., Carroll Coll., Waukesha, Wis. **INORGANIC CHEMISTRY**.

RAY, William Winfield, Dept. of Botany, Univ. of Nebr., Lincoln, Nebr. **PLANT PATHOLOGY**.

RAYMOND, Arthur Emmons, Douglas Aircraft Co., Inc., 3000 Ocean Park Blvd., Santa Monica, Calif.

RAYMOND, Harry, Tchr. of Math., Rensselaer Poly. Inst., Troy, N. Y. **ASTROMETRY**.

RAYMOND, Mary L., **SPEECH AND HEARING**.

RAYMOND, Ruth, Prof. Emer. and Hd., Dept. Art Edn., Univ. of Minn., Minneapolis, Minn.; 533 21st St., Santa Monica, Calif. **ART EDUCATION**.

RAYTON, Willis MacNair, Asst. Prof. of Physics, Dartmouth Coll., Hanover, N. H. **ELECTRONIC PHYSICS**.

REA, Paul Marshall, retired, 436 E. Padre St., Santa Barbara, Calif. **FUNGI OF SOUTHERN CALIFORNIA**.

REARDON, Anna Joyce, Hd. of Phys. Dept., Prof. of Phys., Woman's Coll. of the Univ. of N. C., Greensboro, N. C. **PHYSICS**. b. E. St. Louis, Ill., Jan. 22, 1910. d. John Leo and Julia (Galvin) R. Edn.: A.B., Coll. of St. Teresa, 1930; M.S., St. Louis Univ., 1933; Ph.D., ibid., 1937. Exp.: 1930-31, Instr. in Math. and Phys. Edn., Waseca H. S., Minn.; 1932-35, Instr. in Phys., Rosati Kain H. S., St. Louis, Mo.; 1933, Instr. in Math., East St. Louis Pub. H. S.; 1936-37, Instr. in Phys. and Math., Ursuline Coll., New Orleans, La.; 1937-39, Instr. in Phys. and Math., Mt. St. Scholastica Coll.; 1939-40, Instr. in Phys. and Math., Coll. of St. Teresa; 1940-41, Instr. in Phys. and Math., Loretto Heights Coll., Loretto Heights, Colo.; Instr. in Physics, Hunter Coll., Summer Session, 1941; 1941—, Woman's Coll., Instr. in Phys.; 1941, Acting Hd. of Phys. Dept., 1942, Asst. Prof., 1942, Assoc. Prof., 1945, Hd. of Dept., 1947, Prof. of Phys., 1949. Mem.: A.A.A.S.; A.A.P.T.; So. Assn. Sci. and Indus.; N.E.A.; N. C. Acad. of Sci.; Photographic Soc. Amer.; N. C. Edn. Assn.; A.A.U.W.; Amer. Mus. of Natl. Hist.; Natl. Geog. Soc.; Sigma Xi; Delta Kappa Gamma. Contrb. to: Jour. of Optical Soc. of Amer. Author: Numerous Articles in nationally known mag. and periodicals. Ph.D. Dissertation: An Experimental Study of the Influence of Pressure and Development on the Latent Photographic Image with Especial Emphasis on the Region of Reversal. Travel: N. Amer. Hobbies: Amateur Photography. Listed in: A.M.S.; Who's Mo.; 1933, Instr. in Math., E. St. Louis Who in the South and Southwest. Special Int.: Theoretical Photography.

RECHARD, Ottis H., Dean, Coll. of Liberal Arts, Univ. of Wyo., Laramie, Wyo. **MATHEMATICS**. b. York, Pa., Jan. 7, 1896. m. Mary Rebecca Bird, Mellette, S. Dak., June 23, 1921. c.: Ottis William; Paul Albert. Edn.: A.B., Gettysburg Coll., 1916; M.A. Gettysburg Coll., 1918; Ph.D., Wis., 1930. Exp.: Instr. in Math., Gettysburg Coll., 1916-18; Instr. in Math., Univ. of Wis., 1919-23; Lectr. in Math., ibid., 1929-30; Chmn., Rocky Mtn. Sect. of Math. Assn. of Amer., 1931-32; Prof. Math. (since 1928), Hd. of Math. Dept. Univ. of Wyo., 1926-46; Chmn. of Comm. on Grad. Study and Rsch., 1933-46; Dean, Coll. of Lib. Arts, 1945—, Mem.: Fellow, A.A.A.S.; Phi Beta Kappa; Sigma Xi; Phi Kappa Phi; Amer. Math. Soc.; Math. Assn. of Amer. (Bd. of Govs., 1942-44); A.A.U.P., Coun. Mem., 1943-45; Natl. Coun. of Tchrs. of Math. State Rep., 1939-47; No. Central Assn. Comm. on Colls. and Univs., 1947-52; Assn. of Amer. Colls.' Com. on Ins. and Annuities, 1947-52; Exec. Comm. Assn. of Land-Grant Colls. and Univs., 1949-52; Ex. Comm. and Vice-Chmn., Amer. Conf. of Academic Deans, 1951-52; Chmn., 1952. Ph.D. Dissertation: The Expansion Problem Associated with a Class of Irregular Ordinary Differential Boundary Value Problems. Club: Lions. War Record: 2nd Lt. C.A., with 16th Antiaircraft Sector. Recreations

and Hobbies: Music; Ping-Pong; Fishing. Listed in: A.M.S.; Leaders in Edn.; Who's Who in Amer.; Biog. of Amer. Scholars. Special Int.: Analysis, Matric Equations.

RECKZEH, John Karl, Assoc. Prof. of Math., State Tchrs. Coll., Jersey City, N. J. **MATHEMATICAL ANALYSIS**. b. Chicago, Ill., Jan. 6, 1913. s. Karl O. and Linnie (Sutherland) R. Edn.: A.B., Western Ky. State Coll., 1935; M.A., Univ. of Ky., 1939; Ph.D., ibid., 1950. Exp.: Tchr., Rockfield H. S., Rockfield, Ky., 1935-37; Tchr., Mayslick H. S., Mayslick, Ky., 1937-40; Math. Tchr., Lake Forest Acad., Lake Forest, Ill., 1940-41; Instr., W. Va. Inst. of Tech., Montgomery, W. Va., 1941-42; U. S. Navy, 1942-46; Asst. and Assoc. Prof. of Math., State Tchrs. Coll., Jersey City, N. J., 1946—. Mem.: Math. Assn. Amer.; Natl. Council of Math. Tchrs.; N. J. Assn. of Math. Tchrs.; A.A.U.P.; Phi Beta Kappa; Pi Mu Epsilon. Special Int.: Systems of Curves and Their Characteristics; Modification of the First Necessary Condition in the Calculus of Variation for the Parametric Non Homogeneous Case.

RECORD, Paul Riddle, Dir. of Rsch., Security Mills, 116 Herron Dr., Knoxville, Tenn. **POULTRY NUTRITION**. b. Jan. 8, 1899. Kasota, Minn. s. James F. and Margaret E. (Bell) R. Edn.: B.S., Pa. State Coll., 1921; M.S., Univ. of Ky., 1929; Ph.D., Ia. State Coll., 1941. m. Lillian Robinson, Paintsville, Ky., 1926. d. M. L. Robinson. c.: Margaret A. (dec.). Exp.: Sales, 1921-28; Grad. Asst. Poultry Dept., Univ. of Ky., 1928-29; Asst. Poultry Dept., Ohio Agri. Exp. Sta., 1929-42; Grad. Asst., Poultry Dept., Ia. State Coll., 1939-40; Dir. of Nutrition, A. E. Staley Mfg. Co., 1942-46; Dir. of Rsch., Security Mills, 1946—. Hon. Pos.: Past Chmn., Soybean Rsch. Coun.; Past Chmn., Nutrition Coun., Amer. Feed Mfgs. Assn. Mem.: Poultry Sci. Assn.; Soc. of Anml. Production; Dairy Sci. Assn.; A.C.S.; Sigma Xi; Gamma Sigma Delta; Alpha Gamma Rho. Ph.D. Dissertation: A Factor in Oat Hulls Essential for the Growth of Chicks. Hobby: Gardening. Listed in: A.M.S. Special Int.: Animal Nutrition.

RECORDS, Edward, Rsch. Prof. of Veterinary Sci., Univ. of Nev., Reno, Nev. **VETERINARY SCIENCE**.

REDDICK, Donald, Prof. of Plant Pathol., Coll. of Agri., Cornell Univ., Ithaca, N. Y. **PLANT PATHOLOGY**.

REDDING, Charles Summerfield, Pres., Leeds and Northrup Co., Philadelphia, Pa. **ELECTRICAL ENGINEERING**.

REDDISH, George Fuels, Chf. Bacteriologist, Lambert Pharmacal Co., 2117 Franklin Ave., St. Louis



6, Mo. **ANTISEPTICS, DISINFECTANTS, AND FUNGICIDES; ORAL BACTERIOLOGY**. b. Somerset, Ky., June 30, 1894. s. George Marshall and Margaret (Shaw) R. Edn.: B.S., Univ. of Ky., 1919; Ph.D., Yale Univ., 1922. m. Ruth Edmondson, Aug. 9, 1922. c.: Ruth Lee; Virginia Anne. Exp.: Grad. Asst., Yale Univ., 1919-22; Assoc. Prof. Bacteriol., Med. Coll. of Va., 1922-24; Assoc. Bacteriologist, U. S. Food and Drug Admin., 1924-27; Sr. Bacteriologist, ibid., 1928-29; Chf. Bacteriologist, Lambert Pharmacal Co., 1929—; Prof. of Microbiol. and Public Health, St. Louis Coll. of Pharmacy, St. Louis, Mo., 1933—. Hon. Pos.: Referee, Disinfectant Standardization, Amer. Public Health Assn., 1925-29; Chmn., Scientific Section, Proprietary Assn. of Amer., 1932-41. Mem.: Soc. Amer. Bacteriologists; Amer. Public Health Assn.; A.A.A.S.; N. Y. Acad. Sci.; Sigma Xi. Contrb. to: Jour. Infectious Disease; Jour. Dairy Sci.; Jour. Bacteriol. War Record: Civilian Rsch. on War Contracts in Drug Products. Special Int.: Methods of Testing Antiseptics, Disinfectants,

Fungicides; Methods of Study in Oral Bacteriol.; Media for Yeasts and Fungi, etc.

REDDY, Charles Steven, Rsch. Assoc. Prof. of Botany and Plant Pathol., Iowa State Coll., Ames, Iowa. CEREAL DISEASES.

REDFIELD, Alfred Clarence, Sr. Biologist, Woods Hole Oceanographic Inst., Woods Hole, Mass. PHYSIOLOGY, OCEANOGRAPHY.

REDFIELD, Robert, Dean, Div. of Social Sci. and Prof. of Anthropol., Univ. of Chicago, Chicago, Ill. ANTHROPOLOGY.

REDFIELD, Robert Crim, Geologist, U. S. Bureau Reclamation, 2101 Schulle Ave., Austin, Tex. GEOLOGY.

REDMAN, Kenneth, Prof. of Materia Medica, N. Dak. Agri. Coll., Fargo, N. Dak. PHARMACOGNOSY.

REDMAN, Ralph Woodbury, Special Agent Personal Insurance, 15 N. Pleasant St., Amherst, Mass. SOCIOLOGY.

REDMOND, William Brinson, Assoc. Prof. of Biol., Emory Univ., Emory University, Ga. PARASITOLOGY.

REECE, Ralph Parlette, Assoc. Rsch. Specialist and Assoc. Prof. of Dairy Husbandry, N. J. Agri. Expt. Sta., Rutgers Univ., New Brunswick, N. J. PHYSIOLOGY OF REPRODUCTION.

REED, Alfred Cummings, Assoc. Clinical Prof. of Med., Med. Schl., Stanford Univ., San Francisco, Calif. TROPICAL MEDICINE.

REED, Bessie Price, 1853 W. Polk, Chicago, Ill.

REED, Carlos Isaac, Prof. of Physiol., Univ. of Ill., 1853 W. Polk St., Chicago, Ill. PHYSIOLOGY.

REED, Clarence Arthur, Assoc. Pomologist, U. S. Plant Indus. Sta., Beltsville, Md. NUT CULTURE.

REED, Doyle S., Office of Chief of Engrs., Sanitary Engrng. Dept., Washington, D. C., ENTOMOLOGY.

REED, Frank Hynes, Chf. Chemist, Ill. State Geol. Survey, Urbana, Ill. CHEMISTRY.

REED, Frank Walker, Prof. of Math., Ohio Univ., Athens, Ohio. MATHEMATICS.

REED, Freda Doris, Prof. and Chmn., Dept. of Botany, Mt. Holyoke Coll., South Hadley, Mass. PALEOBOTANY.

REED, George Matthew, Curator Emer., Brooklyn Botanic Garden, Brooklyn, N. Y.; 25 S. Linwood Ave., Pittsburgh, Pa. PLANT PATHOLOGY.

REED, Harry James, Dean, Schl. of Agri., Dir., Agri. Expt. Sta. and Dir., Agri. Extension Dept., Purdue Univ., Lafayette, Ind. AGRICULTURE.

REED, Homer B., Prof. of Psychol., Ft. Hays, Kan. State Coll., Hays, Kan. PSYCHOLOGY. b. Youngstown, Ohio, Aug. 16, 1886. s. Elias W. and Mary D. (Blosser) R. Edn.: Goshen Coll., 1905-07; A.B. and A.M., Ind. Univ., 1909; Ph.D., Univ. of Chicago, 1912; Columbia Univ., 1913-14. m. 1st. Anna Dale Cole of Huntington, Ind., Jan. 1, 1912; 2nd. Elma Carey of Council Bluffs, Ia., Nov. 6, 1922. d. James P. and Mary Ryan Carey. c.: Mary Elizabeth; Kathryn Jean; Esther Margaret; Anne Cole; James Carey; Homer Blosser Carey. Exp.: Instr. in Psychol., Univ. of Ill., 1914-16; Asst. Prof. of Psychol., Univ. of Idaho, 1915-21; Asst. Prof. of Psychology, Colo. Coll. of Edn., 1921-24; Asst. Prof. of Psychol., Univ. of Pittsburgh, 1924-28; Prof. of Psychol., Western State Coll., 1928-29; Prof. of Psychol., Fort Hays Kan. State Coll., 1929—. Hon. Pos.: Pres. of Kan. Psychol. Assn. Mem.: A.P.A.; Ednl. Rsch. Assn.; Kan. Acad. of Sci.; Kan. Psychol. Assn.; Phi Delta Kappa. Author: Psychol. of Elem. Schl. Subjects, 1st edition, 1927, 2nd edition, 1938; Psychol. and Pedagogy of Secd. Schl. Subjects,

1939; Morals of Monopoly and Competition, 1917; Psicologia De Las Materias De Ensenanza Primaria, 1942. Contrb. to: Jour. of Ednl. Psychol.; Jour. of Expml. Psychol.; Psychological Rev.; Jour. Ednl. Rsch.; Jour. of Philos.; Jour. of Genetic Psychol. Ph.D. Dissertation: Morals of Monopoly and Competition. War Record: Civilian Psychologist of U. S. Army, 1942. Hobbies: Hunting, Gardening. Listed in: A.M.S.; Who's Who in the Central States. Special Int.: Learning, Thinking, Clinical Psychology.

REED, Howard L., Assoc. Prof. of Pharmacol., Mass. Coll. of Pharmacy, Boston, Mass. PHARMACOLOGY.

REED, James Burbank, Dept. of Chem., Clarkson Coll. of Tech., Potsdam, N. Y.

REED, John Byron, retired, 3000 39th St., N. W., Washington, D. C. CHEMISTRY.

REED, John Clifford, Prof. and Hd. Meeh. Engineering Department, Univ. of Fla., Gainesville, Fla. MECHANICAL ENGINEERING. b. July 12, 1904, Wilmington, Ohio. s. James Clifford and Vern (Frazer) R. Edn.: B.M.E., Ohio State Univ., 1928; M.S., Univ. of Ill., 1931; M.E., Ohio State Univ., 1934. m. Katherine Campbell of Urbana, Ill., Aug. 29, 1929. d. Thomas W. Campbell. c.: Richard Ellsworth. Exp.: Assoc. in Mech. Engrng., Univ. of Ill., 1928-38; Prof. and Hd. Mech. Engrng., Colo. Schl. of Mines, 1938-42; Prof. and Hd. Mech. Engrng., Bucknell Univ., 1942-50; Prof. and Hd. Mech. Engrng., Univ. of Fla., 1950—. Mem.: Amer. Soc. Mech. Engrng.; A.S.E.E.; Sigma Xi; A.A.U.P.; Theta Chi; Omicron Delta Kappa; Pi Mu Epsilon. Author: Refrigerating Engrng.; Heating Piping and Air-Conditioning; Ice and Refrigeration; Ice and Cold Storage; Sci. Monthly; Amer. Ironsmith. Hobbies: Sports; Magician; Coins. Listed in: Who's Who in Engrng.; Who's Who in the East; A.M.S. Special Int.: Mech. Engrng., Air Flow. Heat Transfer; Flow of Fluids.

REED, Lowell Jacob, Prof. Biostatistics, Schl. of Hygiene and Public Health and Vice-Pres., Johns Hopkins Univ., 615 N. Wolfe St., Baltimore, Md. BIOSTATISTICS.

REED, Ollie E., Chf., Bureau Dairy Indus., U. S. D. A., Washington, D. C. AGRICULTURE.

REED, Rufus D., Prof. of Chem., State Tchrs. Coll., Upper Montclair, N. J. CHEMISTRY. b. Sept. 12, 1894, Blanchester, Ohio. s. William B. and Emma J. (Barry) R. Edn.: B.S., Wilmington Coll., 1919; M.A., Ohio State Univ., 1920; Ph.D., ibid., 1928. m. Pearl Vandervort, Blanchester, Ohio, 1920. d. James Vandervort and Lucretia V. c.: Russell Francis Reed. Exp.: Tch. in Rural Schl., Clinton Co., Ohio, 1912-16; Tch. of Sci., Lakewood, Ohio, H. S., 1920-29; Asst. Prof., Montclair State Tchrs. Coll., 1929-37; Assoc. Prof. of Chem., 1937-47; Prof. of Chem., 1947—. Chmn. Sci. Dept., 1952—. Hon. Pos.: Pres. of N. J. Sci. Tchrs. Assn., 1937-39; Mem., Test Comm., Div. Chmn., Edn. Mem.: Am. Inst. of Chem.; A.C.S.; Natl. Sci. Tchrs. Assn.; N. J. Sci. Tchrs. Assn.; A.A.A.S.; Phi Lambda Epsilon; Sigma Xi. Author: Gen. Coll. Chem. for the Lab. Contrb. to: Jour. of Chem. Edn.; Jour. Amer. Chem. Soc. Ph.D. Dissertation: Potassium-zirconium Reactions. Achievements of Gen. Int.: Survey of Sci. Tehng. and Tehng. of Sci. Conditions in N. J. Recreations: Farming, Automobile Touring. Special Int.: Tehng. of Chem.

REED, William Doyle, Prin. Entomologist in Chg. Insect and Rodent Control, War Dept., Washington, D. C. ENTOMOLOGY.

REEDS, Chester Albert, retired, P. O. Box 142, Ghent, N. Y. INVERTEBRATE PALEOLOGY.

REES, Charles William, Sr. Protozoologist, Natl. Inst. of Health, Bethesda, Md. MEDICAL PROTOZOOLOGY.

REES, Mina Spiegel, Hd., Math. Section, Office Naval Rsch., 2718-3 Bldg., Washington, D. C. ALGEBRA.

REES, Orin Wainright, Chemist and Hd., Analytical Div., Ill. State Geol. Survey, Urbana, Ill. **CHEMISTRY.**

REES, Paul Klein, Assoc. Prof. of Math., La. State Univ., Baton Rouge, La. **MATHEMATICAL ANALYSIS.** b. Center Point, Tex., June 10, 1902. s. John and Josephine (Klein) R. Edn.: A.B., Southwestern, 1923; M.A., Tex. Univ., 1925; Ph.D., Rice Inst., 1933. m. Mary Boone of Houston, Tex., June 22, 1935. d. Mr. and Mrs. J. J. Boone. c.: Paul Boone; Charles Sparks. Exp.: Instr., Tex. Tech. Coll., 1926-28, 1934-35; Asst. Prof., Univ. of Miss., 1928-30; Asst. Prof., N. Mex. A. and M. Coll., 1935-39; Asst. and Assoc. Prof., Southern Meth. Univ., 1939-43; Prof., Southwestern La. Inst., 1943-46; Assoc. Prof., La. State Univ., 1946—; Acting Dept. Hd., 1947-48. Hon. Pos.: Chmn., Southwestern Sec. of Math. Assn. of Amer., 1936-37. Mem.: Math. Assn. of Amer.; Amer. Math. Soc. Author: Coll. Algebra, 1939, revised 1946; Plane Trigonometry, 1937, revised 1945, third edition 1952, and many others. Contbr. to: Bull. of Amer. Math. Soc. Ph.D. Dissertation: Transforms of Fuchsian Groups. Hobbies: Floriculture. Listed in: A.M.S.; W.W.A. Special Int.: Automorphic Functions.

REESE, Albert Moore, Prof. Emer. Zool., W. Va. Univ., 216 Lebanon Ave., Morgantown, W. Va. **VERTEBRATES.**

REESE, J. Allen, Dean, Schl. of Pharmacy, Univ. of Kans., Lawrence, Kans. **PHARMACOGNOSY.**

REESIDE, John Bernard, Jr., Box 177, Hyattsville, Md.

REEVE, Roger M., Histologist, Western Regional Rsch. Lab., U. S. D. A., Albany, Calif. **PLANT ANATOMY.**

REEVES, Richard E., So. Regional Lab., 2100 R. E. Lee Blvd., New Orleans, La. **ORGANIC CHEMISTRY.**

REGAN, William Swift, Technical Adv., Calif. Spray Chemical Corp., 1701 Yakima St., Yakima, Wash.

REGER, David Bright, Consulting Geologist, 217 High St., Morgantown, W. Va. **GEOLOGY.**

REHMAN, Irving, Assoc. Prof. of Anat., Assoc. Dir., Otologic Lab. Rsch. Inst., Cedars of Lebanon Hosp., Univ. of Sou. Calif., Schl. of Med., Los Angeles 7, Calif. **OTOLOGIC AND ACOUSTIC-CINERADIOGRAPHY.** b. July 17, 1911, N. Y. City. s. Louis and Elizabeth (Wachs) R. Edn.: B.Sc., N. Y. Univ., 1933; M.Sc., ibid., 1935; Ph.D., ibid., 1940. m. Sophie Sarah Shoer of Brooklyn, N. Y., Nov. 23, 1938. d. Samuel and Etta Shoer. c.: Dorothea; Kenneth Michael. Exp.: Instr. in Anat., N. Y. Univ., 1933-43; Asst. Prof. of Anat., Univ. of Sou. Calif., 1944-47; Assoc.

Prof. 1947—; Dir. of Baruch Rsch. Project, Phys. Med., Univ. of Sou. Calif.; Consultant in Anat., San Diego Naval Hosp., 1948—; and Long Beach Naval Hosp., 1949-50; Consultant on Anat. Problems, Los Angeles Co. Gen. Hosp. Hon. Pos.: Chmn., Visual Edn., Sou. Calif. Acad. of Sci. Mem.: Hon. Fellow, Sou. Calif. Acad. of Sci.; Amer. Assn. of Anatomists; A.A.A.S.; Amer. Assn. Phys. Anthropol.; A.A.U.P.; Biol. Photographic Assn.; Sigma Xi; Sigma Tau Phi; Internat. Coll. of Surgeons; Hon. Mem. Phi Lambda Kappa. Author: A Guide to Human Dissection, 1939; Surgical Anatomy, 1943; Functional Human Anat., 1944. Ph.D. Dissertation: The Closure of the Human Ductus Arteriosus. Travel: N. Amer.; Bikini, Atom Bomb Tests. Developed new method of Cineradiography, New Color Television Tube. Hobbies: Photography;

Woodcarving; Electronics. Special Int.: Otology, Acoustic Cineradiography, Functional Anatomy.

REHN, James Abram Garfield, Curator Insects and Correspond. Secy., Acad. Natural Sciences, 19th and Parkway, Philadelphia, Pa. **ENTOMOLOGY.**

REICH, Herbert Joseph, Prof. of Elec. Engrng.,

REICHARD, Gladys A., Assoc. Prof. of Anthropol., Barnard Coll., N. Y., N. Y. **ANTHROPOLOGY.**

REICHE, Parry, Geologist, 900 California Fruit Bldg., Sacramento, Calif. **GEOLOGY.**

REICHEL, John, 1404 Hillside Rd., Wynnewood, Pa. **MEDICINE, AGRICULTURE.**

REICHELDERFER, Francis Wilton, Rm. 310, U. S. Weather Bureau, Washington, D. C.

REID, Arthur W., Asst. Prof. of Pharmacy, Butler Univ., Indianapolis, Ind. **PHARMACY.**

REID, Charles Frederick, Asst. Prof., City Coll. of N. Y., N. Y., N. Y. **EDUCATION**

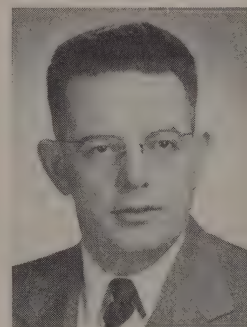
REID, E. Emmet, 203 E. 33rd St., Baltimore, Md. **ORGANIC CHEMISTRY.**

REID, Ernest W., 17 Battery Pl., c/o Corn Prod. Ref. Co., New York 4, N. Y. **CHEMISTRY.**

REID, Mary Elizabeth, Natl. Inst. of Health, Bethesda, Md. **CYTOLOGIST.**

REIF, Edward C., Dean, Schl. of Pharmacy, Univ. of Pittsburgh, Pittsburgh, Pa. **PHARMACOLOGY.**

REIFENSTEIN, Edward C., Jr., Dir., Okla. Med. Rsch. Inst. and Hosp., 825 N. E. 13th St., Oklahoma City 4, Okla. **ENDOCRINOLOGY AND METABOLISM; METABOLIC BONE DISORDERS; RESEARCH ADMINISTRATION.** b. Syracuse, N. Y., Dec. 7, 1903. s. Edward C. and Florence (Kappeser) R. Edn.: A.B., Syracuse Univ., 1930; M.D., Syracuse Univ. Med. Schl., 1934. m. Esther Claire Tilden, June 9, 1934. c.: Edward C., III; Susan T. Exp.: Rotating Internship, Syracuse Univ. Hosp., 1934-35; Med. Resident, ibid., 1935-36; Psychiatric Resi-



dent, Syracuse State Psychopathic Hosp., 1935-37; Med. Resident, Syracuse Univ. Free Dispensary, 1937-40; Practice with Dr. E. C. Reifenstein, Sr., Syracuse, N. Y., 1937-40; Ward Asst., Syracuse Univ. Hosp., 1937-40; Consultant in Med. and Psychiatry, Syracuse State Psychopathic Hosp., 1937-40; Instr. in Med. and Psychiatry, Syracuse Univ. Coll. of Med., 1937-40; Practice with Dr. Fuller Albright, Mass. General Hosp., Boston, 1940-46; Grad. Asst. in Med., ibid., 1940-46; Rsch. Fellow in Med., Harvard Med. Schl., 1940-46; Consultant, Sloan-Kettering Inst., N. Y., 1946-49; Rsch. Assoc., ibid., 1949-50; Clinical Rsch. Consultant, Ayerst, McKenna and Harrison, Ltd., N. Y., 1946-49; Exec. Dir., Med. and Rsch. Div., ibid., 1949-50; Dir. Okla. Med. Rsch. Inst. and Hosp., 1950—; Prof. of Rsch. Med., Univ. of Okla. Schl. of Med., 1950—. Hon. Pos.: Mem. of Council, The Endocrine Soc., 1952—; Chmn., Fifth Annual Assembly in Endocrinology and Metabolism, 1952; Mem., Comm. on Arrangements Annual Laurentian Hormone Conference, 1947—; Mem., Metabolism and Nutrition Study Section of the Natl. Inst. of Health, 1951—; Mem., Study Group on Metabolic Diseases, Subcommittee on Steroids and Hormones, Comm. on Rsch. of the Council on Pharm. and Chem. of the A.M.A., 1952—; Comm. on Therapeutic Nutrition, Food and Nutrition Bd., Natl. Rsch. Council, 1950—; Comm. on Diag. and Therapy of Cancer, Natl. Rsch. Council 1951—. Mem.: Amer. Geriatrics Soc.; Fellow, Amer. Coll. of Physicians; Fellow, Amer. Psychi-

atric Assn.; Amer. Federation for Clin. Rsch.; Amer. Soc. for Clinical Investigation; A.A.A.S.; Amer. Therapeutic Soc.; Syracuse Acad. of Med.; Amer. Soc. for Study of Sterility; The Endocrine Soc.; Amer. Assn. for Cancer Rsch.; N. Y. Acad. of Med.; Southern Med. Assn.; Southern Soc. Clin. Rsch.; Psi Upsilon; Alpha Kappa Kappa; Alpha Omega Alpha; Sigma Xi; Phi Kappa Phi; Pi Delta Epsilon; Rotary. Editor: Trans. Conf. on Bone and Wound Healing, 1942-43; The Protein-Anabolic Activity of Steroid Compounds in Man, 1942; Trans. Conf. on Metabolic Aspects of Convalescence including Bone and Wound Healing, 1943-49; Trans. Conf. on Metabolic Interrelations, 1949-53. Author: The Parathyroid Glands and Metabolic Bone Disease (with Dr. Fuller Albright), 1948; Mem. Editorial Advisory Bd., G. P., 1951—, Postgraduate Med., 1951—. Contrb. to: Jour. A.M.A.; Proc. Soc. of Exptl. Biol. and Med.; Jour. Lab. and Clinical Med.; N. Y. State Jour. Med.; Psychiatry Quarterly; Amer. Jour. Psychol.; Amer. Jour. Psychiatry; Jour. Pharmacol. and Exptl. Therap.; Trans. Assn. Amer. Phys.; Proc. Amer. Federation Clinical Rsch.; Med. Clin. N. A.; Endocrinology; Jour. Clin. Endocrinol.; G. P.; New England Jour. Med.; Jour. Clinical Investigation; Med.; Amer. Jour. Med.; Cancer Rsch.; Gastroenterology; Okla. State Med. Jour. War Record; Assoc. Responsible Investigator, Office of Scientific Rsch. and Development; Comm. on Scientific Rsch. Personnel, War Manpower Comm. Gen. Int.: Responsible for Organizing the Scientific Staff and Program of the new Okla. Med. Rsch. Foundation. Special Int.: Metabolic Bone Diseases; Parathyroid Function; Steroid Metabolites; Gonadal Dysfunctions in Male and Female and Their Diagnosis or Treatment; The Use of Drugs in Psychiatric Conditions; The Treatment of Intoxication with Barbiturates and Alcohol.

REILLY, Samuel Austin, Pharmacist, Petty's Pharmacy, 833 Broad St., Newark, N. J. PHARMACY.

REIMANN, Hobart Ansteth, Prof. of Med., Jefferson Med. Coll. and Hosp., Philadelphia, Pa. INTERNAL MEDICINE.

REIMANN, Stanley Philip, Dir. Inst. and Consulting Pathologist, Lankenau Hosp. Rsch. Inst., 703 W. Phil-Elena St., Philadelphia, Pa. PATHOLOGY.

REIMER, Marie, Prof. Emer., Barnard Coll., Columbia Univ., 606 W. 116th St., N. Y., N. Y. ORGANIC CHEMISTRY.

REIN, Charles Robert, Assoc. Prof. of Clinical Dermatology and Syphilology, N. Y. Univ., Bellevue Med. Center, 580 Fifth Ave., N. Y. 19, N. Y. DERMATOLOGY AND SYPHILOLOGY. b. Toledo, Ohio, Sept. 18, 1904. s. Max and Esther (Zucker) R. Edn.: B.S., Univ. of Toledo, 1924; M.D., Univ. of Mich., 1928. m. Norman Spitalny, May 17, 1933. c.: Michael F.; James R. Exp.: Lectr. in Dermatology, Syphilology and Serology, Hosp. of Correction, N. Y., N. Y., 1934; Lectr. in Serology, N. Y. Post-Grad. Med. Schl. and Hosp., 1935; Lectr. in Serology, N. J. State Dept. of Health, 1938; Attending Dermatologist and Syphilologist, Skin and Cancer Unit of the N. Y. Post-Grad. Med. Schl. and Hosp. Dispensary, 1938; Lectr. in Serology, Amer. Acad. Dermatology and Syphilology, 1938; Instr. in Dermatology and Syphilology, Columbia Univ., 1938; Assoc. Visiting Dermatologist, Hosp. of Correction, N. Y., N. Y., 1939; Asst. Visiting Dermatologist and Consultant Serologist, French Hosp., N. Y., N. Y., 1939; Chf., Div. of Serology, Army Med. Schl., Army Med. Center, Wash., D. C., 1942; Instr., Schl. of Tropical Med., Army Med. Center, Wash., D. C., 1942; Lectr. in Serology, Georgetown Med. Schl., Wash., D. C., 1942; Lectr. in Serology, Geo. Wash. Med. Schl., Wash., D. C., 1943; Lectr. in Serology, Howard Univ. Med. Schl., Wash., D. C., 1945; Assoc. Attending Dermatologist and Syphilologist, N. Y. Post-Grad. Schl. and Hosp., 1948; Assoc. Visiting Dermatologist and Syphilologist, Bellevue Hosp., 1949; Attending Dermatologist and Syphilologist, N. Y. Univ., Bellevue Med. Center and Mem. of the Med. Bd., 1950; Assoc. Prof. of Clinical Dermatology and Syphilology, *ibid.*, 1951—; Attending Dermatologist, Hosp. of Correction, N. Y., N. Y., 1952—. Hon. Pos.: Special Consulting Serologist, U. S. Public Health Service, 1933; Consultant Serologist, Metropolitan Life Ins. Co., 1935; Mem., Advisory Edi-

torial Bd. of Jour. Investigative Dermatology, 1942; Consultant Serologist, Sydenham Hosp., 1946; Special Consultant, U. S. Public Health Service, 1946; Special Consultant, Natl. Inst. of Health, 1946; Hon. Consultant, Inst. of Health and Tropical Diseases of Mex., 1949; Special Consultant, World Health Organization Expert Advisory Panel on Venereal Infections and Treponematoses, 1951; Hon. Consultant in Serology, The Clinical Lab. of the Cancer Hosp. for Children, Hon. Cuban Decree No. 44, 1952. Mem.: A.M.A.; Med. Soc. of the Co. of N. Y.; Med. Soc. of the State of N. Y.; Diplomate, Amer. Bd. of Dermatology and Syphilology; Public Health Assn. of N. Y. City; Assn. of Dermatosyphilologists of Greater N. Y.; Amer. Acad. Dermatol. and Syphilology; Soc. for Investigative Dermatol.; Bronx Dermatol. Soc.; Amer. Soc. of Tropical Med. and Hygiene; Amer. Soc. Pathologists and Bacteriologists; Hon. Fellow, A. F. King Obstetrical Soc.; Fellow, Amer. Soc. for the Advancement of General Anesthesia in Dentistry; Amer. Soc. Parasitologists; Assn. Military Surgeons; Amer. Dermatological Assn.; Fellow, Amer. Acad. Compensation Med.; Amer. Jewish Physicians Com.; Amer. Venereal Disease Assn.; Fellow, Amer. Public Health Assn.; Hon. Mem., Fla. Soc. Med. Technologists; N. Y. Acad. Sci.; Mem. on Com. on Internatl. Activities, Amer. Social Hygiene Assn.; N. Y. State Soc. for Med. Rsch., Inc.; Corresponding Mem., Sociedade Brasileira de Dermatologia e Sifilografia; Corresponding Mem., Cuban Soc. of Dermatol. and Syphilology; Corresponding Mem., Sociedad Cubana de Medical Laboratoristas Clinicos; Mem., U. S.-Mexican Border Public Health Assn.; Med. Assn. of Israel; Corresponding Mem., La Societe Francaise de Dermatologie et de Syphilographie; Corresponding Mem., Swedish Dermatol. Soc.; Corresponding Mem., Portuguese Dermatol. Assn.; Hon. Mem., Greek Dermatol. Union; Phi Delta Epsilon; City Athletic Club; Natl. Geographic Soc.; Museum of Natl. History. Contrb. to: Jour. Lab. and Clinical Med.; Jour. Amer. Dental Assn.; N. Y. State Jour. Med.; Arch. Dermatol. and Syph.; Jour. Social Hygiene; etc. War Record: Lt. Col., M. C., U. S. A. Gen. Int.: Legion of Merit, U. S. Army, 1945; Medal of Honor and Merit, Grade of Commander of the Republic of Haiti, 1947; Medal of Honor and Merit, Grade of Grand Officer of the Republic of Haiti, 1950. Special Int.: Treponematoses and Serology.

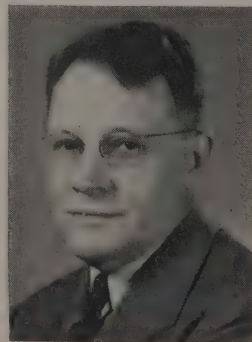
REINDOLLAR, William F., Chf., Bureau Chem., State Med. Dept. of Health, 2411 N. Charles St., Baltimore, Md. CHEMISTRY.

REINER, L. Laszlo, Chf. Rsch. Pharmaceutical Div., Wallace and Tiernan Products, Inc., Belleville, N. J. BIOCHEMISTRY, EXPERIMENTAL THERAPEUTICS.

REINER-DEUTSCH, William, Hd., Dept. of Biol., Microbiologist, Industrial Testing Labs., 315 Fourth Ave., N. Y., N. Y. BACTERIOLOGY.

REINKING, Otto August, Prof. and Hd., Dept. of Plant Pathol., N. Y. State Agri. Expt. Sta., Geneva, N. Y. PLANT PATHOLOGY.

REINSCH, Bernhard Paul, Prof. of Math., Fla. Sou. Coll. Lakeland, Fla. MATHEMATICS. b. Nov.

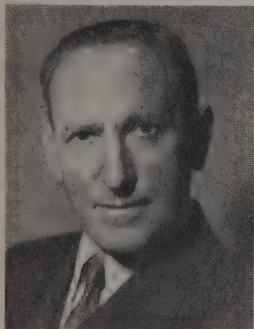


22, 1892, Malcom, Ia. s. John F. and Anna M. (Hulsebus) R. Edn.: State Univ. of Iowa, 1912-13; Mass. Inst. of Tech., Summers, 1915, 1916; Harvard, Summer, 1920; A.B., Univ. of Ill., 1918; M.S., *ibid.*, 1920; B.S. in Arch., *ibid.*, 1921; Ph.D., *ibid.*, 1924. m. Elizabeth C. Wanderer of Oak Park, Ill., June 10, 1920. d. Thomas A. and Marie T. W. c.: Herbert; Marianne and Arthur, twins; Robert. Exp.: Instr., U. S. Schl. Milit. Aero., Urbana, 1918; Archt. Designer, West-ern Elect. Co., Chicago, 1920; Asst. in Math., Univ. of Ill., 1918-22; Fellow in Math., *ibid.*,

1922-24; Instr., *ibid.*, 1924-27; Assoc. Prof. in Chg. of Math., Schl. of Engrng., Sou. Meth. Univ., 1927-29; Prof. of Math., Head, Dept., *ibid.*, 1929-33; Prof., Hd. of Dept. of Math., Fla. Sou. Coll., 1933—; On Leave, Tchng. Math. to G. I.'s, Biarritz Amer. Univ., France, 1945-46. Hon. Pos.: Chmn., Div. of Sci., Fla. Sou. Coll., 1938-44, 1950—; Pres., Fla. Acad. of Sci., 1938-39; On State Defense Coun. of Fla., 1941-44; Pres., Lakeland H. S. P.-T.A., 1941-43. Mem.: Amer. Math. Soc.; Math. Assn. of Amer.; Natl. Coun. of Tchrs. of Math.; Fla. Acad. of Sci.; Amer. Soc. for Engrng. Edn.; Fla. Ednl. Assn.; Sigma Xi; Gamma Alpha; Beta Sigma Psi. Contrb. to: Amer. Jour. of Math.; Jour. of Engrng. Edn.; Tex. Math. Tch. Bull. Ph.D. Dissertation: Expansion Problems in Connection with the Hypergeometric Differential Equation. War Record: Air Service, Cadet in Aviation Ground Schl., 1918. Special Int.: Differential Equations; Teaching of Math.

REISER, Oliver Leslie, Prof. of Philos., Univ. of Pittsburgh, Pittsburgh, Pa. **PHILOSOPHY OF SCIENCE.**

REISS, Frederick, Assoc. Clinical Prof. of Dermatology and Syphilology, N. Y. Univ., 870 5th Ave., N. Y., N. Y. **DERMATOLOGY; SYPHILOLOGY; MYCOLOGY AND TROPICAL DERMATOLOGY.** b. Edelsthal, Austria, Oct. 12, 1891. s. Sigismund and Helena (Knopfmacher) R. Edn.: M.D., Royal Hungarian Univ., 1914. m. Clara Zimmerman, Aug., 1935. Exp.: Lectr. in Dermatology and Syphilology, Tung Dai Med. Coll., Shanghai, 1923-28; Hd. of the Dept. and Clinical Prof. of Dermatology of the Natl. Med. Coll., Shanghai, 1936—; Prof. of Dermatology at St. John's Univ., Shanghai,



1929-41; Consulting Dermatologist, Lester Chinese Hosp., St. Elizabeth Hosp., Amer. Red Cross Hosp., Shanghai Public Hosp. for Children, 1929-41; Instr. in Dermatology, Cornell Univ. Coll. of Med., 1942-46; Acting Chf. of Dermatology Service, Montefiore Hosp., 1944—; Consultant to the Surgeon General, U. S. Army, 1946—; Assoc. Prof. of Clinical Dermatology and Syphilology, N. Y. Univ. Post-Grad. Med. Schl., 1946—; Assoc. Attending Dermatologist, Bellevue Hosp., 1946-51; Assoc. Attending Dermatologist, Univ. Hosp., 1950-51; Chf. Dermatology Skin Clinic, Manhattan Eye, Ear and Throat Hosp., 1950—. Hon. Pos.: Pres., Div. of Mycology, N. Y. Acad. Sci., 1949-50; Corr. Mem. French, Austrian, and Hungarian Dermatological Soc.; Past Pres., Shanghai Med. Soc.; Past Vice-Pres., Chinese Dermatol. Assn. Mem.: Sigma Xi; Fellow, N. Y. Acad. Sci. Contrb. to: Chinese Med. Jour.; Trans. Far East Assn. of Tropical Med.; Jour. Invest. Dermatology; Archives of Dermatology. War Record: Consultant to the Surgeon General, U. S. Army, 1946—. Special Int.: Dermatology, Mycology and Biochem. Rsch. in Dermatology and Mycology.

REITH, Allan Funder, Chf. Bacteriologist, Jos. Schlitz Brewing Co., Milwaukee, Wis. **BACTERIOLOGY.**

REITZ, Louis Powers, Prof. of Agron., Kans. State Coll., Manhattan, Kans. **PLANT BREEDING.**

REJALL, Alfred Ernst, Asst. Prof., Hunter Coll., Park Ave. and 68th St., N. Y., N. Y. **PSYCHOLOGY, EDUCATION.**

REMICK, Arthur Edward, Prof. of Chem., Wayne Univ., Detroit, Mich. **CHEMISTRY.** b. June 5, 1899, Chicago, Ill. s. Andrew Edward Remick and Maude (Coe) R. Edn.: B.Chem., Cornell, 1922; Ph.D., Univ. of Chicago, 1929. m. Marie Louise Whiddit, 1928. d. W. W. Whiddit, St. Petersburg, Fla. c.: Sylvia Louise. Exp.: Analytical Chemist, Kirkman and Sons, Brooklyn; Analytical Chem., Natl. Aniline and Chem. Co., Buffalo; Res. Chem., E. R. Squibb

and Sons, Brooklyn; Res. Chem., Todd Co., Rochester, N. Y.; Wayne Univ., Detroit, Instr. of Chem., 1929-36; Asst. Prof., 1936-43; Assoc. Prof., 1943-49; Prof., 1949—. Mem.: Amer. Chem. Soc.; The Electrochem. Soc.; Sigma Xi; Gamma Alpha. Contrb. to: Jour. Amer. Chem. Soc.; Jour. Org. Chem.; Jour. Chem. Physics; Jour. Electrochem. Soc. Author: Electronic Interpretations of Organic Chem. Ph.D. Dissertation: The Velocity of Saponification of Formates. Hobbies: Music; Golf; Photography.

REMMERS, Hermann Henry, Prof. of Edn. and Psychol., Purdue Univ., Lafayette, Ind. **PSYCHOLOGY.**

REMMEY, G. Bickley, Richard C. Remmey Son Co., Hedley St. and Delaware River, Philadelphia 37, Pa. **CERAMICS.**

RENN, Charles Easterclay, Asst. Prof. of Sanitary Engrng., Johns Hopkins Univ., Baltimore, Md. **SANITARY BIOLOGY, STREAM POLLUTION.**

RENSHAW, Samuel, Prof. Exptl. Psychol., Ohio State Univ., Columbus, Ohio. **EXPERIMENTAL PSYCHOLOGY.**

RENTSCHLER, Harvey Clayton, retired, 15 Monroe Ave., East Orange, N. J. **PHYSICS.**

RENTSCHLER, Mahlon Jacob, Gen. Mgr., Barium and Chemicals, Inc., 105 Euclid Ave., Willoughby, Ohio. **CHEMISTRY.**

RENZETTI, Nicholas Augustus, Physicist Supvr. Exterior and Terminal Ballistics Rsch., Development and Test, U. S. Naval Ordnance Test Sta., Inyokern, Calif. **PHYSICS.**

RETZER, Robert, retired, 1735 O'Sullivan Bldg., Baltimore, Md. **SOCIAL AND ECONOMIC SCIENCES.**

REUSZER, Herbert William, Dept. of Botany and Plant Pathol., Purdue Univ., Lafayette, Ind. **SOIL MICROBIOLOGY.**

REVELL, Daniel Graisbury, Prof. Emer. Anatomy, Univ. of Alberta, 9105 112th St., S., Edmonton, Alberta, Can. **ANATOMY.**

REVELLE, Roger R., Assoc. Prof. of Oceanography, Scripps Inst. of Oceanography, La Jolla, Calif. **OCEANOGRAPHY.**

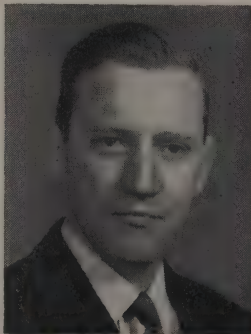
REVES, George Everett, Assoc. Prof. of Math., The Citadel, Charleston, S. C. **MATHEMATICS.** b. Oct. 24, 1908, Sweatman, Miss. s. John Joseph and Pinkie Elizabeth (Tyndall) R. Edn.: B.S., Millsaps Coll., 1929; A.M., Vanderbilt University, 1930; Ph.D., University of Cincinnati, 1941. m. Mattie Frances Masterson of Decatur, Ala., Dec. 26, 1937. d. T. G. and Ellen Masterson. c.: Joseph Gerald. Exp.: Math. Tchng. Fellow, Vanderbilt Univ., Nashville, Tenn., 1929-30; Math. Instr., Ga. Tech., Atlanta, Ga., 1930-34; Part-time Instr., Brown Univ., Providence, R. I., 1934-37; Math. Lectr., Univ. of Cincinnati, Ohio, 1940-41; Asst. Prof. Math., 1937-48, The Citadel, Milit. Coll. of S. C., Charleston, S. C., 1937-48; Assoc. Prof. Math., *ibid.*, 1948—. Mem.: M.A.A.; Sigma Xi; Omicron Delta Kappa; Lambda Chi Alpha; Bethel Methodist Men's Club. Contrb. to: Duke Math. Jour. Ph.D. Dissertation: On the Absolute Convergence of Double Fourier Series. War Record: Milit. and Academic Training to Cadets at The Citadel. Travel: England; Europe. Hobbies: Tennis; Classical Music Records. Listed in: A.M.S.

REX, Edgar George, Supvr., Plant Pest Control, N. J. State Dept. of Agri., Trenton, N. J. **PLANT PATHOLOGY.**

REYERSON, Lloyd Hilton, Prof. and Asst. Dean Univ. of Minn., Minneapolis, Minn. **COLLOID CHEMISTRY.**

REYNARD, George Bergin, Plant Geneticist, Campbell Soup Co., Rsch. Dept., Farm No. 1, Riverton, N. J. **BOTANY.**

- REYNDERS, Arthur Bernard**, retired, c/o A. W. Wood, 60 Churchill Rd., West Springfield, Mass. **ELECTRICAL ENGINEERING.**
- REYNOLDS, Bruce Dodson**, Prof. of Zool., Univ. of Va., Charlottesville, Va. **PROTOZOOLOGY.**
- REYNOLDS, Clarence Newton**, Prof. of Math., W. Va. Univ., Morgantown, W. Va. **MATHEMATICS.**
- REYNOLDS, Howard**, Bacteriologist, Bureau Human Nutrition and Home Econ., Beltsville Rsch. Center, Beltsville, Md. **BACTERIOLOGY.**
- REYNOLDS, Joshua Paul**, Prof. of Biol., Birmingham-Southern Coll., Birmingham, Ala. **CYTOGENETICS.**
- REYNOLDS, Lawrence**, Prof. of Roentgenology, Coll. of Med., Wayne Univ., 1512 St. Antoine, Detroit, Mich. **RADIOLOGY.**
- REYNOLDS, Ora Edgar**, 430 E. Main St., Annville, Pa. **EDUCATION, PSYCHOLOGY.**
- RHOADES, Marcus Morton**, Univ. of Ill., Urbana, Ill.
- RHOADES, Roger**, Chf. Geologist, U. S. Bureau Recalculation, Denver, Colo. **GEOLOGY.**
- RHOADS, Cornelius**, 68th and 1st Ave., New York, N. Y. **CANCER RESEARCH.**
- RHODEHAMEL, Harley Wesley**, Dir. Rsch. Development, Eli Lilly and Co., 5320 N. Meridian St., Indianapolis, Ind. **CHEMISTRY.**
- RHODES, Peyton Nalle**, Vice-Pres. and Prof. of Physics, Southwestern Coll., Memphis, Tenn. **SPECTROSCOPY.**
- RHODES, Robert Clinton**, Prof. and Chmn., Dept. of Biol., Emory University, Ga. **PROTOZOOLOGY.**
- RHODES, William Warren**, Sales Dir., Kinetic Chemicals Inc., Wilmington, Del. **CHEMISTRY.**
- RICCI, J. E.**, Dept. of Chemistry, New York Univ., New York, N. Y. **PHASE RULE (Heterogeneous Equilibria).**
- RICE, Alexander Hamilton**, Prof. of Geographical Exploration, and Dir., Inst. Geographical Exploration, Harvard Univ., Cambridge, Mass. **GEOGRAPHY.**
- RICE, Chester Williams**, Consulting Engr., General Electric Co., 1161 Lowell Rd., Schenectady, N. Y. **RESEARCH.**
- RICE, Christine Elizabeth**, Scientist Grade IV, Div. Animal Pathol., Dominion Dept. of Agri., Hull, Que., Can. **IMMUNOLOGY.**
- RICE, Edward Loran**, Prof. Emer. Zool., Ohio Wesleyan Univ., 265 N. Sandusky St., Delaware, Ohio. **VERTEBRATE EMBRYOLOGY.**
- RICE, Francis Owen**, Prof. and Hd., Dept. of Chem., Catholic Univ. of Amer., Washington, D. C. **CHEMISTRY.**
- RICE, George S.**, retired, Wellington Villa, Rt. 1, Box 135, Alexandria, Va. **MINING ENGINEERING.**
- RICE, Harris**, Prof. of Math., Worcester Poly. Inst., Worcester, Mass.
- RICE, Hugh Smith**, Rsch. Assoc., Dept. of Astron., Hayden Planetarium, Amer. Museum Natural History, N. Y., N. Y. **ASTRONOMY.**
- RICE, John Winter**, Prof. of Bacteriol., Bucknell Univ., Lewisburg, Pa. **BACTERIOLOGY.**
- RICE, Lucile Addie**, Hd. Sci., Mangum Jr. Coll., Mangum, Okla. **ANIMAL ECOLOGY, ENTOMOLOGY.**
- RICE, Martin Everett**, retired, 630 Ohio St., Lawrence, Kans. **PHYSICS, ENGINEERING.**
- RICE, Oscar Knefler**, Prof. of Chem., Univ. of N. C., Chapel Hill, N. C. **PHYSICAL CHEMISTRY.**
- RICE, Paul LaVerne**, Dean of Faculty and Prof. of Biol., Alma Coll., Alma, Mich. **ENTOMOLOGY.**
- RICE, Stuart Arthur**, Asst. Dir. Budget Chg. Statistical Standards, Exec. Office of Pres., Washington, D. C. **STATISTICS, SOCIOLOGY.**
- RICH, Arnold Rice**, Prof. of Pathol., Med. Schl., Johns Hopkins Univ., Baltimore, Md. **PATHOLOGY.**
- RICH, Celia**, 1112 Bennie-Dillon Bldg., Nashville, Tenn. **PERIODONTOLOGY.**
- RICH, Gilbert Joseph**, Dir., Milwaukee County Guidance Clinic, 515 Public Safety Bldg., Milwaukee, Wis. **PSYCHIATRY.**
- RICH, John Lyon**, Prof. of Econ. Geol. and Hd. Dept., Univ. of Cincinnati, Cincinnati, Ohio. **PETROLOGY, STRUCTURAL GEOLOGY.**
- RICH, Willis Horton**, Prof. of Biol., Natural History Museum, Stanford Univ., Stanford University, Calif. **FISHERIES, BIOLOGY.**
- RICHARDS, Alfred Newton**, Univ. of Pa., Schl. of Med., Philadelphia 4, Pa.
- RICHARDS, Alice Bessie Adams**, Asst. Pharmacologist, Rsch. Dept., Pitman-Moore Co., 1200 Madison Ave., Indianapolis 6, Ind. **PHARMACOLOGY.** b. Greenwood, Ind., July 20, 1907. d. Thomas and Ida (Brown) Adams. m. William R. Richards, June 28, 1930. c.: William R., Jr.; Thomas E.; Anne M. Exp.: Med. Lab. Technologist, Hatcher Hosp., Wellington, Kans., 1925-26; Med. Lab. Technologist, Kenosha Clinic, Kenosha, Wis., 1926-28; Instr. and Rsch. Assoc. in Pharmacol., Boston Univ. Schl. of Med. and Evans Memorial Hosp., 1928-35; not active in rsch., 1935-50; Asst. Pharmacologist, Rsch. Dept., Pitman-Moore Co., Indianapolis, Ind., 1950—. Hon. Pos.: Pres., Glenn's Valley Parent-Techr. Assn.; Lt.-in-Chg., Amer. Red Cross, Southern Indianapolis Section. Assoc. Mem.: Soc. for Exptl. Biol. and Med.; N. Y. Acad. of Sci. Contrb. to: Proc. Soc. for Exptl. Biol. and Med.; Proc. Internat. Anesthesia Rsch. Soc.; Proc. Amer. Soc. for Pharmacol. and Exptl. Therapeutics; Federation Proc. Special Int.: Pharmacol. of Tremor-rigidity Diseases; Pharmacodynamics of Local Anesthesia; Cardiovascular Pharmacol.; Pharmacol. of the Central and Autonomic Nervous Systems.
- RICHARDS, Aute**, Prof. of Zool., Dir. Biol. Survey, Univ. of Okla., Norman, Okla. **EMBRYOLOGY, CYTOLOGY.**
- RICHARDS, Bert Lorin, Sr.**, Dean, Grad. Schl. and Hd., Dept. of Botany, Utah State Agri. Coll., Logan, Utah. **PLANT PATHOLOGY.**
- RICHARDS, Clarice Audrey**, Pathologist, Chf. Div. Forest Pathol., U. S. D. A., Forest Products Lab., Madison, Wis. **PLANT PATHOLOGY.**
- RICHARDS, Clyde Rich**, Asst. Prof., Agri. Hall, Univ. of Del., Newark, Del. **DAIRY HUSBANDRY.** b. Paris, Idaho, June 9, 1921. s. Clyde Randall and Myrtle (Rich) R. Edn.: B.S., Utah State Agri. Coll., 1943; M.S., Cornell Univ., 1949; Ph.D., ibid., 1950. m. Carrol Maughan, July 18, 1946. c.: Russell Clyde; Keith Maughan. Exp.: Grad. Asst., Animal Husbandry Dept., Cornell Univ., 1946-50; Fulbright Lectr. in Animal Breeding, Superior Schl. of Agri., Athens, Greece, 1950-51; Asst. Prof. of Animal and Poultry Industry, Univ. of Del., Newark, Del., 1951—. Mem.: Amer. Dairy Sci. Assn.; Sigma Xi; Alpha Zeta; Blue Key. Contrb. to: Jour. Dairy Sci. War Record: U. S.



Navy, 1943-46. Special Int.: Roughage Digestibility and Pasture Evaluation Techniques.

RICHARDS, Esther Loring, Assoc. Prof. of Psychiatry, Johns Hopkins Univ., Baltimore, Md. **PSYCHIATRY**.

RICHARDS, James Austin, Jr., Rsch. Physicist, Amer. Viscose Corp., Marcus Hook, Pa. **ELECTRONICS**. b. Apr. 15, 1916, Boston, Mass. s. Rev. James A. and Hazel (Temple) R. Edn.: B.A., Oberlin Coll., 1938; Ph.D., Duke Univ., 1942. m. Marion Forbes of Cleveland, Ohio, Aug. 9, 1939. d. Mr. and Mrs. B. P. Forbes. c.: Barbara Forbes; Ann Elizabeth; James A., III; Clark Read. Exp.: Bucknell Univ., 1942-46; Olivet Coll., 1946-49; Asst. Prof. of Physics, Univ. of Minn., Duluth Branch, 1949-51; Rsch. Physicist, Amer. Viscose Corp., Marcus Hook, Pa., 1951—. Mem.: Sigma Xi; Sigma Pi Sigma; Amer. Phys. Soc. Ph.D. Dissertation: Energy Distribution in Cosmic Ray Showers. War Record: Tehng. V-12.

RICHARDS, L. A., U. S. Salinity Lab., Riverside, Calif. **SOIL PHYSICS**.

RICHARDS, Marion E., Lectr. in Botany, Barnard Coll., 370 Riverside Dr., N. Y., N. Y. **BOTANICAL PHYSIOLOGY**.

RICHARDS, Mildred Hoge, 434 Chautauqua St., Norman, Okla. **GENETICS, ZOOLOGY**.

RICHARDS, Oscar White, Chf. Biologist, Rsch. Div., Amer. Optical Co., P. O. Box A, Buffalo, N. Y. **BIOLOGY**.

RICHARDS, Ralph Webster, Geologist, U. S. Geol. Survey, Washington, D. C. **PETROLEUM GEOLOGY**.

RICHARDS, (Rebekah) Ruth, 3935 Graceland Ave., Indianapolis, Ind. **BOTANY AND BACTERIOLOGY**. b. January 6, 1907, Indianapolis, Ind. d. Charles W. and May Marie (Souder) R. Edn.: A.B., DePauw Univ., 1927; M.A., Univ. of Mich., 1931; Ph.D., Univ. of Chicago, 1949. Exp.: Instructor of Biology, Miss. State Coll. for Women, Columbus, Miss., 1927-32; Instructor, Bacteriology and Zoology, Milwaukee-Downer Coll., Mil. Coll. for Women, Columbus, Miss., 1927-32; Instr. Bacteriol. and Zool., Milwaukee-Downer Coll., Milwaukee, Wis., 1938-43; Sr. Rsch. Bacteriol., Natl. Rsch. Coun. Project, Wayne Univ., Detroit, Mich., 1943, summer; Instr. and Asst. Prof., Ohio Wesleyan Univ., Delaware, Ohio, 1943-45; Tehng. Asst., Univ. of Chicago, Chicago, Ill., 1945-47; Asst. Prof. Biol., Wells Coll., Aurora, N. Y., 1947-48; Asst. Prof., 1948; Assoc. Prof., Ill. State Normal Univ., Normal, Ill., 1949-52; Mem.: A.A.A.S.; A.A.U.P.; Ind. Acad. of Sci.; Ill. Acad. of Sci.; Sigma Xi; Sigma Delta Epsilon; Beta Beta Beta; Kappa Kappa Gamma; A.A.U.W. Contrb. to: Bot. Gazette; Butler Univ. Studies. Ph.D. Dissertation: Responses of Representative Fungi to Certain Growth Regulating Substances. Listed in: Who's Who in Chicago and Ill.; Who's Who in the Midwest; A.M.S.; Ind. Scientists. Special Int.: Plant Growth Regulators; Bacteriology; Pollen Analysis.

RICHARDSON, Lavon Preston, Supvr., X-Ray and Clinical Lab., Minneola Community Clinic, Minneola, Kans. **BACTERIOLOGY**. b. July 6, 1925, Ranger, Tex. s. Lloyd Henry and Clifford Katharyn (Herbert) R. Edn.: B.A., T. C. U., 1948; M.A., N. Tex. State Coll., 1949. m. Susan Rowland of Ft. Worth, Tex., Aug. 26, 1950. d. Mr. and Mrs. Robert M. Rowland. c.: Kathryn Belle. Exp.: Instr., Cent. State Coll., Edmond, Okla., 1949; Asst. Prof., ibid., 1950; Instr. and Supvr., Bacteriol., Chem. and Radiol. Safety, U. S. N. Hosp. Corps Schl., Great Lakes, Ill., 1951-52; Supvr. of X-Ray and Clinical Lab., Minneola Com-

munity Clinic, Minneola, Kans., 1952—. Mem.: Okla. Acad. of Sci.; N.E.A.; O.E.A.; Phi Delta Kappa; Natl. Assn. of Biol. Tehrs; Assn. of Military Surgeons of the U. S. Author: Antibioticity of the Oleoresins of One-Hundred Tex. Spermatophytes Against Twenty Gram-Positive Bacterial Organisms; The Antibacterial Effects of the Spermatophyte Oleoresins Upon *Escherichia coli* and *Staphylococcus aureus* Compared with Penicillin "G". War Record: U. S. Marine Corps, 1943-46; U. S. Navy, 1951-52. Travel: Hawaii; Guam; China; Canada. Hobbies: Fishing; Hunting; Photography. Special Int.: Antibacterial Spectrum of Oleoresins.

RICHARDSON, Albert Starnes, Assoc. Dir., Chem. Div., Procter and Gamble Co., Ivorydale, Ohio. **CHEMISTRY**.

RICHARDSON, Charles Howard, Prof. of Entomol., Iowa State Coll., Ames, Iowa. **ENTOMOLOGY**.

RICHARDSON, H. K., 41 Yantecaw Ave., Bloomfield, N. J. **CERAMICS**.

RICHARDSON, Maurice L., Roentgenologist, Edward W. Sparrow Hosp., Lansing, Mich.

RICHARDSON, Roland George Dwight, Dean, Grad. Schl. and Prof. of Math., Brown Univ., Providence, R. I. **MATHEMATICS**.

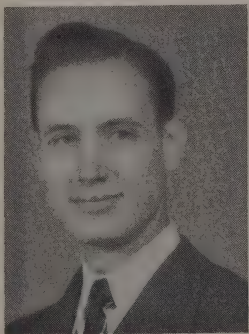
RICHART, Frank Edwin, Jr., Assoc. Prof. of Civil Engrng. Univ. of Fla., Gainesville, Fla. **APPLIED MECHANICS**. b. Urbana, Ill., Dec. 6, 1918. s. Frank Erwin and Fern (Johnson) R. Edn.: B.S., Univ. of Ill., 1940; M.S., ibid., 1946; Ph.D., ibid., 1948. m. Elizabeth Norma Goldthorp of Haddonfield, N. J., Feb. 21, 1945. d. J. W. Goldthorp. c.: John Douglas. Exp.: Rsch. Grad. Asst., Univ. of Ill., 1946-47; Rsch. Assoc., ibid., 1947-48; Asst. Prof., Harvard Univ., 1948-52; Assoc. Prof. Civil Engrng., Univ. of Fla., Gainesville, Fla., 1952—. Mem.: Sigma Xi; Assoc. M. A.S.C.E.; A.S.T.M.; A.E.S.A. Contrb. to: A.S.T.M.; Geotechnique. Ph.D. Dissertation: A Procedure for Evaluating Cumulative Damage in Fatigue. War Record: U. S. N. R., 1941-46. Hobbies: Golf; Sports. Listed in: A.M.S. Special Int.: Fatigue of Metals, Theoretical and Experimental Stress Analysis.

RICHTER, Dan Arnold, Assoc. Prof. of Biochem., State Univ. of N. Y., Med. Center, Syracuse, N. Y. **BIOCHEMISTRY**. b. Goessel, Kans., Nov. 6, 1915. s. Henry and Mary Richter. Edn.: B.S. in Indus. Chem., Kans. State Coll., 1938; A.B., Bethel Coll., 1939; M.S., Kans. State Coll., 1939; Ph.D., St. Louis Univ., 1944. m. Esther Irene Beamer of Columbus, Kans., 1943. d. Mr. and Mrs. D. I. Beamer. c.: John Rolin; Evan David; Eric Daniel; Mary Christine. Exp.: Rsch. Assoc., Dept. of Phys. Chem., Harvard Med. Schl. Boston, 1944-45; Instr., Syracuse Univ., Coll. of Med., 1946-47; Asst. Prof., State Univ. of N. Y., Med. Center at Syracuse, 1948-51; Assoc. Prof., ibid., 1951—. Mem.: Sigma Xi; Phi Lambda Upsilon; Amer. Soc. of Biological Chemists; Soc. for Expt. Biol. and Med.; Amer. Chem. Soc. Contrb. to: Jour. of Biol. Chem.; Proc. Soc. Expt. Biol. and Med. Ph.D. Dissertation: The Antihemorrhagic Factors. Listed in: A.M.S. Special Int.: Proteins, Enzymes and Nutrition.

RICHEY, Frederick David, Prin. Agronomist, U. S. D. A., Agri. Expt. Sta., Knoxville, Tenn. **PLANT SCIENCE**.

RICHMOND, Carl A., retired, Tyngsboro, Mass. **MATHEMATICS**.

RICHMOND, Donald Everett, Prof. of Math., 11 Park St., Williamstown, Mass. **MATHEMATICS**. b. May 23, 1898, Meriden, Conn. Edn.: A.B., Cornell, 1920; M.S. ibid., 1922; Ph.D., ibid., 1926. m. Frances Porterfield, Twin Falls, Idaho, June 26, 1926; died, Dec., 1943. m. Mary L. Hurt, June 18, 1946. Exp.: Asst., Cornell, 1918-20; Instr., Engr., Amer. Tel. and Tel. Co., N. Y., 1920-22; Instr., Cornell, 1923-26; Natl. Rsch. Fellow, 1926-27; Asst. Prof. of Math., Williams Coll., 1927-36; Assoc. Prof., 1936-40; Prof., 1940—. Mem.: Sigma Xi; Phi Kappa Phi; Amer. Phys. Soc.; A.M.S.; Assn. Symbolic Logic; Gamma Alpha. Author: Dilemma of Mod. Phys., 1935; Fundamentals of the Calculus, 1950. Ph.D.



Supvr. of X-Ray and Clinical Lab., Minneola Com-

Dissertation: Geodesics on Surfaces of Genus Zero with Knobs. Listed in: A.M.S.; Amer. Young Men.

RICHMOND, Henry Hugh, Asst. Rsch. Supvr., Pittsburgh Coke and Chem. Co., 256 Catalpa Pl., Pittsburgh 34, Pa. **ORGANIC CHEMISTRY**. b. Toronto, Ont., Can., Apr. 7, 1916. s. Jacob and Gertrude (Teachman) R. Edn.: B.A., Univ. of Toronto, 1939; M.A., ibid., 1941. m. Norma Gordon, Dec. 25, 1942. c.: John K. D.; Barbara Lynne. Exp.: Rsch. Chemist, Univ. of Toronto, 1941-43; Co-inventor of a process for the manufacture of R. D. X.; Rsch. Chemist, Dominion Rubber Co., Guelph, Ont., Can., 1943-48; Asst. Rsch. Supvr., Pittsburgh Coke and Chem., Pittsburgh, Pa., 1948—.



Hon. Pos.: Chmn., Organic Group, Pittsburgh Section, Amer. Chem. Soc., 1952-53. Mem.: Amer. Chem. Soc.; Soc. of Dyers and Colourists. Contrb. to: Jour. Amer. Chem. Soc.; Canadian Jour. Rsch. Special Int.: Vat Dyes; Intermediates; Sulfa Drugs; Coal-tar Chemicals and their Derivatives.

RICHTER, Charles Francis, Asst. Prof. of Seismology, Seismological Lab., 220 N. San Rafael Ave., Calif. Inst. of Tech., Pasadena, Calif. **SEISMOLOGY**.

RICHTER, Curt Paul, Assoc. Prof. of Psychobiol., Johns Hopkins Hosp., Baltimore 5, Md. **PSYCHOLOGY AND PHYSIOLOGY**. b. Denver, Colo., Feb. 20, 1894. s. Paul Ernst and Martha (Dressler) R. Edn.: B.S., Harvard Univ., 1917; Ph.D., Johns Hopkins Univ., 1921. m. Leslie Bidwell, Apr. 11, 1937. c.: Ann; Peter; Martha. Exp.: Dir. of Psychobiol. Lab., Phipps Clinic, Johns Hopkins Hosp., Baltimore, Md., 1921—. Mem.: Natl. Acad. Sci.; Amer. Physiol. Soc.; Amer. Psychol. Soc.; Amer. Neurol. Soc.; Soc. for Exptl. Biol. and Med. Contrb. to: Amer. Jour. Physiol.; Brain; Arch. Neurol. and Psychiatry; Proc. Soc. Exptl. Biol. and Med. War Record: 1st Lt., Heavy Artillery, World War I. Special Int.: Self-regulatory Functions of Animals and Man; Effects of Domestication on Animals and Man; Autonomic Nervous System.

RICHTMEYER, Cleon C., Hd., Dept. of Math. and Dir. of Instruction, Central Mich. Coll., Mt. Pleasant, Mich. **MATHEMATICS**. b. Prairieville, Mich., May 14, 1903. s. L. P. and Nora E. (Morford) R. Edn.: A.B., Albion Coll., 1924; M.A., Geo. Peabody Coll. for Tchrs., 1931; Ph.D., Colo. State Coll. of Edn., 1938. m. Jane Taylor, Aug. 5, 1927. Exp.: Instr., Dept. of Math., Central Mich. Coll. of Edn., 1924-27; Asst. Prof., Dept. of Math., ibid., 1927-31; Prof. of Math., ibid., 1931-38; Hd., Dept. of Math., ibid., 1938—; Dir. of Summer Session, ibid., 1940-41; Dir. of Instruction, ibid., 1941—. Mem.: Math. Assn. of Amer.; Natl. Council of Tchrs. of Math.; Kappa Delta Pi; Kappa Mu Epsilon; Phi Delta Kappa; N.E.A.; M.E.A.; Mich. Council Tchrs. of Math.; Lions Internatl. Co-author: Business Math., 1936, 1943, 1950; First Year Coll. Math., 1942. Contrb. to: The Math. Tchr.; Amer. Math. Monthly; The Math. Mag.; The Pentagon; etc. Special Int.: Tchng. of Math. and Curriculum.

RICKER, Norman Hurd, Sr. Rsch. Physicist, Carter Oil Co., Box 801, Tulsa, Okla. **PHYSICS**.

RICKER, Percy Leroy, Asst. Botanist, U. S. Plant Indus. Sta., Beltsville, Md. **BOTANY**.

RICKETT, Harold William, Bibliographer, N. Y. Botanical Garden, N. Y., N. Y. **BOTANY**.

RICKETTS, Henry T., Assoc. Prof. of Med., Univ. of Chicago, 5607 Kenwood Ave., Chicago, Ill. **INTERNAL MEDICINE**.

RIDDELL, William Andrew, Dir., Div. Lab., Dept. of Public Health, Government of Saskatchewan, 170 Angus Crescent, Regina, Sask., Can. **CHEMISTRY**.

RIDDLE, Ethel M., Psychologist, John Burroughs Schl., St. Louis, Mo. **ADOLESCENT AND VOCATIONAL PSYCHOLOGY**.

RIDDLE, Frank H., Champion Spark Plug Co., Ceramic Div., Butler Ave. and Grand Truck R. R., Detroit 11, Mich. **CERAMICS**.

RIDDLE, Oscar, Route 4, Plant City, Fla. **BIOLOGY**. b. Sept. 27, 1877, Cincinnati, Ind. s. Jonathan and Amanda



Emiline (Carmichael) R. Edn.: A.B., Ind. Univ., 1902; Ph.D., Univ. of Chicago, 1907; Hon. LL.D., Ind. Univ., 1933; D.H.C., Cath. Univ. of Chile, 1946. m. Leona Lewis of Elwood, Ind., June 3, 1937. d. Mr. and Mrs. Wm. Lewis. Exp.: Tchr. of Biol. and Chem., Model and Trng. Schl., San Juan, P. R., 1899-1901; Nat. Hist. Expedition to Orinoco River, 1901; to Cuba, 1902; Tchr. of Physiol., Central H. S., St. Louis, Mo., 1903-05; Instr., Zool. and Expt. Therapeutics, Univ. of Chicago, 1908-11; Travel and Study in Europe, 1910-11; Staff Mem., Dept. of Genetics, Carnegie Inst. of Wash., 1912-45; Lectr., Grad. Schl. of Agri., Lansing, Mich., Summer, 1912; Schl. of Tropical Med., San Juan, P. R., Winter, 1927; Visiting Lectr., U. S. Dept. of State, in S. Amer., Mexico, and Guatemala, 1945-47; Guest, Indian Govt., Winter, 1947; Chmn., Comm. on Tchng. of Biol., 1936-44; Amer. Delegates to Congress for Sex Rsch., Berlin, 1926, London, 1930; Mem., Coop. Comm. on Sci. Tchng., 1940-44. Mem.: N.A.S.; Amer. Phil. Soc.; Amer. Acad. Arts and Sci.; N.A.B.T. (Organizer, 1938); Amer. Inst. of City of N. Y. (Trustee, 1920-44; Gold Medal, 1934); Natl. Inst. of Social Sci.; A.A.A.S.; Fellow, ibid., and Vice-Pres., 1935; Euthanasia Soc. of Amer. (Bd. of Gov., 1940-48); Phi Delta Theta; Sigma Xi; Gamma Alpha. Author: Tech. Studies in Biol.; Articles on Place of Biol. in Edn.; The Tchng. of Biol. in the Second. Schls. of the U. S., 1942; Evolution's Fight for Life, 1952. Contrb. to: Schl. and Soc.; Sci. Edn.; Amer. Biol. Tchr.; Sci. Monthly. War Record: Capt., U. S. Army, 1918-19. Travel: Europe; S. Amer.; Africa; India. Listed in: A.M.S.; Internatl. Who's Who; etc.

RIDENOUR, Louis Nicot, Jr., 508 S. Ridge Way St., Champaign, Ill. **NUCLEAR PHYSICS**.

RIDER, Theodore Harold, 6 Hosmer Rd., Concord, Mass. **CHEMISTRY**.

RIDGE, John Drew, Lamont Centre County, Pa. **ECONOMIC GEOLOGY**.

RIEBETH, Anne Benton, 2421 Sheridan Ave., S., Minneapolis, Minn. **BACTERIOLOGY**.

RIECKEN, William Emil, Dean and Prof. of Biol., Millsaps Coll., Jackson, Miss. **BOTANY**.

RIEKE, Foster F., Assoc. Prof. of Physics, Purdue Univ., Lafayette, Ind. **PHYSICS**.

RIEMAN, Gustav Herman, Assoc. Prof. of Genetics, Plant Pathol. and Horticulture, Univ. of Wis., Madison, Wis. **GENETICS, PLANT PATHOLOGY**.

RIENHOFF, William Francis, Jr., Assoc. Prof. of Surgery, Johns Hopkins Univ., 1201 N. Calvert St., Baltimore, Md. **GENERAL SURGERY**.

RIES, Donald Timmerman, Asst. Prof. of Biol. Sci., Ill. State Normal Univ., Normal, Ill. **ENTOMOLOGY**.

RIES, Emil Durbin, Dir. of Sales, Ammonia Dept., E. I. du Pont de Nemours and Co., Inc., Wilmington, Del. **CHEMICAL ENGINEERING**.

RIES, Heinrich, Prof. Emer. Geol., Cornell Univ., 401 Thurston Ave., Ithaca, N. Y. **ECONOMIC GEOLOGY**.

RIESER, Leonard M., Jr., Asst. Prof. Physics, Dartmouth Coll., Hanover, N. H., PHYSICS. b. Chicago, Ill., May 18, 1922. s. Leonard M. and Margaret (Wallerstein) R. Edn.: S.B., Univ. of Chicago, 1943; Ph.D., Stanford Univ., 1952. m. Rosemary Little-dale, 1944. c.: Leonard, III; Timothy. Exp.: Rsch. Asst., Metallurgical Lab., Univ. of Chicago; Rsch. Asst., Los Alamos, 1945-46; Tchng. Asst., Stanford Univ., 1946-49; Rsch. Asst., ibid., 1950-51; Rsch. Assoc., ibid., 1951-52; Instr. in Physics, Dartmouth Coll., Hanover, N. H., 1952-53. Mem.: Amer. Physical Soc.; Sigma Xi. Contbr. to: Physical Rev. Special Int.: X-Ray Microscopy; Proportional Counters; Nuclear Physics.

RIESS, Bernard F., Hunter Coll., 695 Park Ave., N. Y., N. Y. ANIMAL PSYCHOLOGY.

RIFENBURGH, Sumner Adam, Assoc. Prof. of Zool., Purdue Univ., 246 Marsteller St., W. Lafayette, Ind. ZOOLOGY. b. Rome, Pa., Mar. 13, 1896. s. Frank and Emma Claire (Vought) R. Edn.: B.S., Valparaiso Univ., 1915; A.B., Chicago, 1922; Ph.D., Purdue Univ., 1935. m. Alma Peters of Cutler, Ind., May 8, 1917. d. H. S. and Mary Peters. c.: A. Woodrow; T. Eileen. Exp.: Asst. in Botany, Valparaiso Univ., 1914-16; Instr. and Prin. of H. S. in Ind. and Mich., 1915-19; Asst. Prof., Valparaiso Univ., 1919-21; Prof. and Hd. of Dept., ibid., 1922-23; Instr., Purdue Univ., 1923-37; Asst. Prof., ibid., 1937-45; Assoc. Prof., Univ. of Louisville, 1945; Assoc. Prof., Purdue Univ., 1946—. Mem.: A.A.U.P.; Natl. Assn. Biol. Tchrs.; Amer. Gen. Assn.; Amer. Soc. of Human Gen.; Ind. Acad. of Sci.; A.A.A.S.; Sigma Xi; Kappa Delta Pi. Author: Four Pages of Parliamentary Law, 1916; Manual for H. S. Biol. Lab., 1922; Manual on Dissection of the Frog, 1948; Laboratory Exercises in Cat Anatomy, 1953. Contbr. to: Proc. of Ind. Acad. of Sci.; Jour. of Expt. Zool.; Lloydia; Jour. of Morph. and Physiol. Ph.D. Dissertation: Certain Genetic Effects of Short-Wave Ultra-Violet Radiation on *Drosophila melanogaster*. War Record: Air-Raid Warden in World War II. Hobbies: Music; Watch Collection. Listed in: A.M.S.: Who's Who in the Midwest; Who Knows—What. Special Int.: Radiation Genetics, Comparative Vertebrate Anatomy.

RIFFOLT, Nils A. M., Prin. Physicist, Naval Proving Ground, Dahlgren, Va. BALLISTICS.

RIGDON, Raymond Harrison, Prof. of Pathol., Schl. of Med., Univ. of Ark., Little Rock, Ark. PATHOLOGY.

RIGG, George Burton, Prof. Emer. Botany, Univ. of Wash., 4719 Ninth Ave., N. E., Seattle, Wash. PLANT PHYSIOLOGY, ECOLOGY.

RIGGS, Lloyd Kendrick, Dir. of Rsch., Natl. Dairy Rsch. Labs., Oakdale, L. I., N. Y. PHYSIOLOGICAL CHEMISTRY.

RIGGS, Lorrin Andrews Asst. Prof., Brown Univ., Providence, R. I. EXPERIMENTAL PSYCHOLOGY.

RIGGS, Philip Shaefer, Prof. of Astr., Drake Univ., Des Moines, Ia. ASTRONOMY. b. Chicago, Ill., May 30, 1906. s. Norman C. and Jean (Shaefer) R. Edn.: B.S., Carnegie Inst. of Tech., 1927; Ph.D., Univ. of Calif., 1944. m. Helen Johnson of Emmett, Kan., Oct. 20, 1939. d. Emery and Pauline Johnson. c.: Norman Philip; Arthur Johnson. Exp.: Asst., Harvard Coll. Obs., 1931-32; Asst. Prof. of Astr., Washburn Coll., 1937-38; Instr. in Astr., Univ. of Ill., 1938-39; Asst. Prof., Assoc. Prof., Prof. of Physics and Astr., Washburn Municipal Univ. of Topeka, Kan., 1939-47; Assoc. Prof., Prof. of Astr., Drake Univ., 1947—. Mem.: Amer. Astron. Soc.; Amer. Phys. Soc.; Astron. Soc. of the Pacific; Sigma Xi; Kan. Acad. of Sci.; Federation of Amer. Scientists; A.A.A.S.; Ia. Acad. of Sci. Contbr. to: Pub. Astron. Soc. Pacific; Leaflets Astron. Soc. Pacific. Ph.D. Dissertation: A Photometric Study of the Galactic Cluster NGC 6871 in Five Wavelength Regions. War Record: No Milit. Service; Taught Navy V-12 classes, Physics and Astr., and V-5 Ground Schl., Washburn Univ. Listed in: A.M.S.

RIGGS, Robert Jennings, Consulting and Rsch. Geologist, Stanolind Oil and Gas Co., Tulsa, Okla. PETROLEUM GEOLOGY.

RIGLER, Leo G., Prof. and Chf., Dept. of Radiology and Physical Therapy, Univ. of Minn., Minneapolis, Minn. RADIOLOGY.

RIGTERINK, Merle D., Bell Telephone Labs., Murray Hill, N. J. CERAMICS.

RIKER, Albert Joyce, Prof. of Plant Pathol., Univ. of Wis., Madison 6, Wis. BOTANY; PLANT PATHOLOGY. b. Wheeling, W. Va., Apr. 3, 1894. s. Albert Birdsall and Mary Edith (Davis) R. Edn.: B.A., Oberlin Coll., 1917; M.S., Univ. of Cincinnati, 1920; Ph.D., Univ. of Wis., 1922. m. Regina Emma Stockhausen (dec.), Dec. 26, 1922. m. 2nd, Helen H. Burgoyne, Apr. 18, 1953. Exp.: Asst. and Instr. in Botany, Univ. of Cincinnati, 1917-20; Bacteriologist, U. S. Base Hosp., No. 25, A. E. F., 1918-19; Fellow in Plant Pathol., Univ. of Wis., 1920-22; Instr., ibid.,



1922-25; Asst. Prof., ibid., 1925-29; Special Investigations at Imperial Coll. Sci. and Tech., London, 1926, and Inst. Pasteur, Paris, 1927; Assoc. Prof., Univ. of Wis., 1929-31; Prof., ibid., 1931—. Hon. Pos.: Vice-Pres. and Pres., Amer. Phytopathol. Soc.; Pres., Wis. Chapter of Sigma Xi, 1948; Dir., Forest Genetics Rsch. Inst.; etc. Mem.: A.A.A.S., (Fellow); Amer. Assn. Cancer Rsch.; A.A.U.P.; Amer. Phytopathol. Soc.; Amer. Soc. Naturalists; Amer. Soc. Plant Physiologists; Botanical Soc. Amer.; Natl. Acad. Sci.; Soc. Amer. Bacteriologists; Soc. Amer. Foresters; Soc. Development and Growth; Wis. Edn. Assn.; Gamma Alpha; Phi Sigma; Sigma Xi. Co-author: Introduction to Rsch. on Plant Diseases, 1936. Contbr. to: Phytopathol.; Plant Physiol.; Amer. Jour. Botany; Jour. Agril. Rsch.; Science; Jour. Bacteriol.; etc. Special Int.: Pathological Growth, Bacterial Diseases, Diseases of Forest Trees, Rsch. Methods, Tissue Culture, Publication Problems.

RIKER, Regina Stockhausen, Horticultural Bldg., Univ. of Wis., Madison, Wis. PLANT PATHOLOGY.

RILEY, Herbert Parkes, Prof. and Hd., Dept. of Botany, Univ. of Ky., Lexington, Ky. CYTOGENETICS.

RINDE, Charles Anderson, Engrng. Consultant, 1020 Miller Ave., Berkeley, Calif. PHYSICS.

RINE, Toivo Elmer, Assoc. Prof. of Math., Ill. State Normal Univ., Normal, Ill. MATHEMATICS. b. Cloquet, Minn., Oct. 5, 1910. s. Andrew and Katherine (Korkela) R. Edn.: B.S., State Tchrs. Coll., LaCrosse, Wis., 1933; M.S., Univ. of Iowa, 1940; Ph.D., Geo. Peabody Coll. for Tchrs., 1952. m. Lola Margaret Mades, Dec. 28, 1937. c.: David Craig; Janis Margaret. Exp.: Lab., Northwest Paper Co., Cloquet, Minn., 1933-35; Math. and Sci. Tchr., H. S., Zealring, Iowa, 1935-37; Math. Tchr., H. S., Colfax, Iowa, 1937-40; Math. Tchr., Jr. Coll., Chariton, Iowa, 1940-41; Math. Tchr., Ill. State Normal Univ., Normal, Ill., 1941—. Hon. Pos.: Mem., Com. on Committees of Ill. State Normal Univ.; Chmn., Ill. State Normal Univ. Math. Conf. Mem.: N.E.A.; Ill. Edn. Assn.; Natl. Council of Tchrs. of Math.; Ill. Council of Tchrs. of Math.; Amer. Math. Assn.; Central Assn. of Tchrs. of Math. and Sci.; A.A.U.P.; Kappa Mu Epsilon; Phi Delta Kappa. Contbr. to: Schl. Sci. and Math.; The Math. Tchr. Special Int.: Math. Edn.; Criteria for Self-evaluation of Programs of Student Tchng. in Secondary Schl. Math.

RINEHART, James Fleece, Prof. of Pathol., Med. Schl., Univ. of Calif., San Francisco, Calif. PATHOLOGY.

RINES, David, Lawyer, 739 First Natl. Bank Bldg., 1 Federal St., Boston, Mass. LAW.

RINGOEN, Adolph R., Prof. of Zool., Univ. of Minn., Minneapolis, Minn. HISTOLOGY, EMBRYOLOGY.

RINKENBACH, William Henry, Chf., Rsch. Section and Hd. Chemist, Picatinny Arsenal, War Dept., Dover, N. J. CHEMISTRY.

RIOCH, David McKenzie, Dir. of Rsch., Chestnut Lodge Sanitarium, Rockville, Md. NEUROLOGY.

RIORDAN, John, Mem. Technical Staff, Bell Telephone Labs., Inc., 463 West St., N. Y., N. Y. TELEPHONE TRANSMISSION.

RIPLEY, Kenneth Clay, Sr. Physicist, Bureau of Ships, Navy Dept., 3058 Harrison St., N. W., Washington, D. C. PHYSICS (FLUID MECHANICS). b. Winchester, Ind., Apr. 17, 1904. s. Giles Emmett and Harriet L. (Marsh) R. Edn.: B.M.E., Univ. of Ark., 1927; M.Sc., Univ. of Pittsburgh, 1932. m. Ellen Kearns, Dec. 28, 1949. Exp.: Asst. Engr., Rsch. Labs., Westinghouse Elec. and Mfg. Co., 1927-31; Instr. of Machine Design, Purdue Univ., 1935; Asst. Physicist, Naval Rsch. Lab., 1936-39; Physicist, Operation Crossroads (Bikini Atoll), 1946; Various Grades to Sr. Physicist, Rsch. Design, Navy Dept., Wash., D. C., 1939—. Mem.: Amer. Phys. Soc.; A.A.A.S.; Tau Beta Pi. Contrb. to: Trans. Amer. Soc. Mech. Engrs. Special Int.: Naval Architecture.

RISLEY, Paul Lemuel, Prof. and Hd., Dept. of Biol., Univ. of Ore., Eugene, Ore. CYTOLOGY, EMBRYOLOGY.

RITCHESON, Charles Ray, Assoc. Prof. of Hist., Kenyon Coll., Gambier, Ohio. ANGLO-AMERICAN HISTORY OF THE EIGHTEENTH CENTURY, AND MODERN BRITISH POLITICAL HISTORY. b. Maysville, Okla., Feb. 26, 1925. s. Charles Frederick and Jewell (Vaughn) R. Edn.: B.A., Univ. of Okla., 1946; Ph.D., Oxford Univ., England, 1951. m. Shirley Marie Spackman, June 13, 1953. Exp.: Asst. Prof. of Hist., Okla. Coll. for Women, 1951; Assoc. Prof. of Hist., ibid., 1952-53; Assoc. Prof. of Hist., Kenyon Coll., 1953—. Hon. Pos.: Secy., Okla. Assn. of Coll. Hist. Professors; Reviewer for Library of Congress. Mem.: Amer. Historical Assn.; Pi Gamma Mu; Okla. Assn. of Coll. Hist. Prof.; Royal Historical Soc.; Delta Chi; Phi Eta Sigma; Carlton Club of Oxford; Oxford and Cambridge Univ. Club of London; Masons. Contrb. to: Amer. Historical Rev.; Parliamentary Affairs; Wm. and Mary Quarterly Rev. War Record: Lt. (jg) U. S. N. R. Gen. Int.: Fulbright Scholar at Oxford Univ. Special Int.: Eighteenth Century Anglo-Amer. History; Naval Hist. of World War II; Modern British Political Hist.; Renaissance and Reformation Hist.

RITCHIE, Earland, Hd., Dept. of Physics, Centre Coll., Danville, Ky. ACOUSTICS.

RITTER, Sara Margaret, retired, 205 Buckingham Circle, Norfolk, Va. PSYCHOLOGY.

RIVERS, Thomas Milton, Dir., Hosp. of the Rockefeller Inst. of Med. Rsch.,



York Ave. and 66th St., N. Y. 21, N. Y. BACTERIOLOGY AND VIROLOGY. b. Jonesboro, Ga., Sept. 3, 1888. s. Alonzo Burrell and Mary Martha (Coleman) R. Edn.: A.B., Emory Coll., 1909; M.D., Johns Hopkins Univ., Baltimore, Md., 1915. Hon. Deg.: Sc.D., Emory Univ., 1936; Sc.D., Rochester Univ., 1938; Sc.D., Univ. of Chicago, 1941. m. Teresa J. Riedle, Aug. 5, 1922. Exp.: Intern in Med., then as Asst. Resident Physician in Pediatrics, and finally as Resident Pediatrician and instr. in Pediatrics, Johns Hopkins Hosp., Baltimore, Md., 1915-18; Instr. and then Assoc. in Bacteriol., Johns Hopkins

Univ., 1919-22; Pathologist, St. Joseph's Hosp., Baltimore, Md., 1920-22; Assoc. in the Rockefeller Inst. for Med. Rsch. in N. Y. City, 1922-25; Assoc. Mem., ibid., 1925-27; Mem., ibid., 1927—; Dir. of the Hosp. of the Rockefeller Inst., 1937—. Hon. Pos.: Mem., Bd. of Hospitals and Bd. of Health of N. Y. C.; General Advisory Com. of Natl. Foundation for Infantile Paralysis and is the Chmn. of the Com. on Virus Rsch. and Epidemiology of the Natl. Foundation for Infantile Paralysis; Mem. and was Chmn. of the Rsch. Council of the Public Health Inst. of N. Y. City; Mem., Armed Forces Epidemiol. Bd.; Pres., Third Internat. Congress for Microbiol. held in N. Y. in 1939; etc. Mem.: A.A.A.S.; Amer. Soc. for Clinical Investigation; Assn. Amer. Physicians; Interurban Clinical Club; Amer. Pediatric Soc.; Amer. Soc. of Exptl. Pathol.; Soc. of Amer. Bacteriologists; Soc. Amer. Immunologists; Harvey Soc.; Amer. Assn. of Pathologists and Bacteriologists; Natl. Acad. Sci.; Amer. Philos. Soc.; Amer. Public Health Assn.; Amer. Epidemiol. Soc.; A.M.A.; Sigma Nu; Alpha Omega Alpha; Phi Beta Kappa. War Record: World War I, 1st Lt. in the Med. Corps of the U. S. on three commissions to study respiratory infections; commission to study pneumonia following measles; empyema commission; permanent pneumonia board. World War II, active duty for four and half years in the Med. Corps of the U. S. Naval Reserve, and organized and ran a research unit in the Hosp. of the Rockefeller Inst.; Also organized and was made the commanding officer of Naval Med. Rsch. Unit No. 2 which he took to Guam and which operated in the South and Central Pacific for over a year during the last part of the war; In 1945, was promoted to the rank of Commodore; Legion of Merit by the U. S. Navy. Special Int.: Med. Rsch.; Bacteriol.; Virology.

RITTI, Mabel Marguerite, Asst. Prof., Dept. of Physiol., Hygiene, Hunter Coll., 695 Park Ave., N. Y., N. Y. PHYSIOLOGY.

RITTMAN, Walter Frank, Consulting Engr., 6112 Alder St., Pittsburgh, Pa. PETROLEUM.

RITZMAN, Otto Frederick, Patent Dept., Gulf Oil Corp., 1240 Munsey Bldg., Washington, D. C. GEOPHYSICS.

RIVES, James Allen, Assoc. Consulting Engrng. John B. McGaughy Associates, Norfolk, Va. SANITARY AND CIVIL ENGINEERING.



b. Dec. 16, 1914, Norfolk, Va. s. James Allen and Catherine Holly (Drewry) R. Edn.: B.S., Civil Engrng., Va. Poly. Inst., 1938; M.S., San. Engrng., ibid., 1940. m. Maxine Burks of Amherst, Va., Sept. 6, 1947. d. Wm. Frank and Winifred Gregory Burks. c.: James Allen, Jr. Exp.: Chf., Party on Construction of Foreman Field, Norfolk, Va., 1935-36; Construction Engr. and Supt., Various Bldg., Norfolk, Va., 1938-39; Tchng. Fellow, Civil

Engrng., V.P.I., 1939-40; San. Engr., W. K. Kellogg Found., Allegan, Mich., 1940; Instr. Civil Engrng., V. P. I., 1940; Supt. of Construction, \$3,500,000 Improvements, N.A.D., Ports, Va., 1941-42; Lt., U. S. Navy, Seabees, Alaska, England, France, Okinawa, 1942-46; Promoted to Lt. Commander in Seabee Reserve effective July, 1951; Served as C.O. of Reserve Seabee Companies in Roanoke and Norfolk, 1950-51; Assoc. Prof. of San. and Civil Engr., Va. Poly. Inst., 1946-51; Consulting Engr. John B. McGaughy Associates, Norfolk, Va., 1951—; Co-designer of Sewage Treatment Works, Va. Poly. Inst., and Blacksburg, Va., 1946—; Registered Professional Engr. in Va.; Dir., Annual Short Course for Water Works, Sewage Works and Indus. Wastes Personnel. Mem.: A.S.E.E.; Pres., V.S.P.E., 1951; Appointed by Governor as Member of Engineering Section of State Board for Examination and Certification of Architects, Professional Engineers and Land Surveyors in Jan., 1952; S.W.F.; Va. Indus. Wastes and Sewage Works Assn., Pres., 1950;

3rd Vice Pres., Va. Section, A.S.C.E.; A.W.W.A.; Chi Epsilon; Engineers Club of Hampton Roads; Alpha Phi Omega; Univ. Club of Va. Poly. Inst., Pres., 1950. War Record: (See above—Commendation Ribbon for Work in Normandy Invasion). Travel: N. Amer.; England; Scotland; Wales; France; Hawaii; Panama; Guam; Okinawa; Pacific Islands; Alaska. Listed in: Who's Who in S. and S. W.

ROADHOUSE, Chester Linwood, Prof. of Dairy Indus. and Dairy Technologist, Agri. Expt. Sta., Univ. of Calif. Coll. of Agri., Davis, Calif. **DAIRY TECHNOLOGY**.

ROARK, Donald Beno, Prof. and Head, Dairy Production, Box 272, State Coll., Miss. **DAIRY PHYSIOLOGY**.



b. Birchwood, Tenn., Feb. 26, 1923. s.: Thomas J. and Minnie (Price) R. Edn.: B.S., Univ. of Tenn., 1946; M.S., Kans. State Coll., 1948; Ph.D., Univ. of Mo., 1950. m.: Gene Ford, Nov. 2, 1945. c.: Donna Elaine; Gene Allen. Exp.: Rsch. Asst., Kan. State Coll., Manhattan, Kans., 1947-48; Graduate Asst., Univ. of Mo., Columbia, Mo., 1948-50; Assoc. Prof. Dairying, Miss. State Coll., Starkville, Miss., 1950-52; Prof. and Hd., Dairy Production, ibid., 1952—. Hon. P. o. s.:

Miss. Brown Swiss Breeders Assn., Sec.-Treas. Advisory Staff, Y.M.C.A. Mem.: Amer. Soc. of Animal Production; Amer. Dairy Sci. Assn.; Southern Agricultural Workers; Amer. Genetic Assn.; A.A.A.S.; Commonwealth Bureau of Animal Breeding and Genetics; Phi Kappa Phi; Sigma Xi; Gamma Sigma Delta; Alpha Zeta; Starkville Lions Club; Starkville Exchange Club. Contrb. to: Jour. of Animal Sci.; Jour. of Dairy Sci. War Record: Enlisted U. S. Army, 1942, Combat Infantryman, Wounded in Action, Purple Heart; Unit Citation; Medical Discharge, 1945. Gen. Int.: Supt. Starkville First Bapt. Church Sunday School; Vice-Chmn., Bd. of Deacons, Starkville First Bapt. Church; Bd. of Directors, Starkville Lions Club. Special Int.: Reproductive Physiol.; Physiol. of Milk Secretion.

ROARK, Ruric Creagan, Chemist in Chg. Div. Insecticide Investigations, Bureau Entomology and Plant Quarantine, U. S. D. A., Beltsville, Md. **CHEMISTRY**.

ROBBINS, Benjamin Howard, Prof. Anesthesiology, Med. Schl., Vanderbilt Univ., Nashville, Tenn. **ANESTHESIOLOGY**.

ROBBINS, Charles Kendall, Asst. Prof. of Math., Purdue Univ., Lafayette, Ind. **MATHEMATICS**.

ROBBINS, D. S., 343 Armiji St., Las Cruces, N. Mex. **PHYSICS, MATHEMATICS**.

ROBBINS, Mary Louise, Assoc. Prof. of Bacteriol., George Washington Univ., Schl. of Med., 1335 H St., N. W., Washington 5, D. C. **BACTERIOLOGY**.



b. St. Paul, Minn., Sept. 26, 1912. d. Orison Benjamin and Mary Ednah (Fiske) R. Edn.: B.A., American Univ., 1934; M.A., Geo. Washington Univ., 1940; Ph.D., ibid., 1944. Exp.: Instr. in Bacteriol., Geo. Wash. Univ., Wash., D. C., 1944-48; Asst. Prof. of Bacteriol., ibid., 1948-52; Assoc. Prof. of Bacteriol., ibid., 1952—. Mem.: Sigma Xi; Assn. Amer. Immunologists; Soc. Amer. Bacteriologists; A.A.U.W.; Sigma Delta Epsilon. Contrb. to: Jour. Immunology; Jour. A.M.A.; Jour.

Bacteriol.; Jour. Antibiotics and Chemotherapy. Special Int.: Virology; Immunology and Chemotherapy of Viruses; Antigenic Analysis of Listeria monocytogenes; Antibiotic Production by Coliform Bacteria.

ROBBINS, Samuel Dowse, Prof. of Psychol., Emerson Coll., 711 Pleasant St., Belmont, Mass. **SPEECH THERAPIST**.

ROBBINS, William Jacob, Dir., N. Y. Bot. Garden, Prof. of Bot., Columbia Univ., N. Y., N. Y. Address:

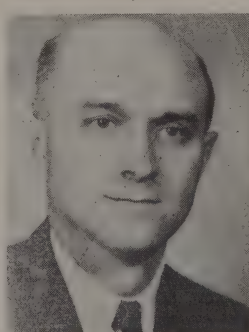


N. Y. Botanical Garden, Bronx Park, N. Y. 58, N. Y. **BOTANY**. b. Feb. 22, 1890, N. Platte, Nebr. s. Frederick W. and Clara (Federhoof) R. Edn.: A.B., Lehigh Univ., 1910; Ph.D., Cornell Univ., 1915; Hon. Sc.D., Lehigh Univ., 1937; Hon. Sc.D., Fordham Univ., 1945. m. Christine F. Chapman of Springfield, Mass., July 15, 1915. c.: Frederick C.; Wm. C.; Daniel H. Exp.: Instr., Biol. Lehigh Univ., 1910-11; Instr., Plant Physiol., Cornell Univ., 1912-15; Summer Asst., Plant

Physiol., Marine Biol. Lab., Woods Hole, Mass., 1912-13; Prof., Bot. and Plant Physiol., Ala. Poly. Inst., Auburn, Ala., 1915-17; Soil Biochem., Bur. Plant Ind., Wash., D. C., 1918; Prof., Bot., Univ. of Mo., 1919-37; Spec. Investigator, Univ. of Calif., Citrus Expt. Sta., Riverside, Calif., 1924; Assoc. with European Office, Rockefeller Foundation, 1928-29; Dean, Grad. Schl., Univ. of Mo., 1930-37; Act. Pres., 1933-34; Prof., Bot., Columbia Univ., and Dir., N. Y. Botanical Garden, 1937—. Mem.: Hort. Soc., N. Y.; Dir., Boyce Thompson Inst. for Plant Rsch.; Amer. Philos. Soc.; Panel of Natural Sci. Advisory Comm.; N. Y. Acad. of Sci.; Phi Beta Kappa; etc. Author: Robbins and Rickett, Botany—(Textbook for Coll. and Univ. Students), 1929; Rsch. Papers. Ph.D. Dissertation: Influence of Certain Salts and Nutrient Solutions on the Secretion of Diastase by Penicillium Camemberti. War Record: 2nd Lt., San. Corps. Travel: Europe; Japan. Listed in: Who's Who in N. Y.; Who Knows—and What; Who's Who in the East; Who's Who in Amer.; A.M.S.

ROBBINS, William Rei, Assoc. Prof. of Plant Physiology, Rutgers Univ., New Brunswick, N. J. **PLANT PHYSIOLOGY**.

ROBERTS, Clarence Nelson, Prof. of Hist., N. Central Coll., 28 S. Loomis St., Naperville, Ill.



HISTORY, SPECIALIZATION IN AMERICAN HISTORY. b. Sturgeon, Mo., Dec. 11, 1912. s. William and Barbie (Schultz) R. Edn.: B.S., Univ. of Mo., 1935; M.A., ibid., 1936; Ph.D., ibid., 1950. m. Ruth Elizabeth Gee of Moberly, Mo., July 1, 1944. d. Mr. and Mrs. James Gee. Exp.: Instr., Hannibal-LaGrange Coll., Hannibal, Mo., 1936-39; Instr., Univ. of Mo., 1939-41; Instr., Flat River, Mo. Jr. Coll., summer, 1938; Instr., Kemper Military Schl., Boonville, Mo.,

1941-42; Asst. Prof., Mo. Schl. of Mines, Rolla, Mo., 1942-50; Prof. of Hist., Chmn. of Dept., N. Central Coll., Naperville, Ill., 1950—. Mem.: State Hist. Soc. of Mo.; Miss Valley History Assn.; Pi Gamma Mu. Author: History of Mo. Schl. of Mines and Metallurgy, 1946; A History of the Firebrick and Refractories Ind. in Mo., 1950; A History of the Brick and Tile Ind. in Mo., 1950. Ph.D. Dissertation: A History of the Brick and Tile Ind. in Mo. Hobbies: Genealogy. Listed in: Who's Who in the Midwest.

ROBERTS, Edith Adelaide, Chmn., Dept. of Plant Sci., Vassar Coll., Poughkeepsie, N. Y. PLANT PHYSIOLOGY.

ROBERTS, Edward Noel, Rsch. Chemist, Standard Oil Co., Whiting, Ind. CHEMISTRY.

ROBERTS, Edwin Jay, Owner, J. L. Roberts, 15 Water St., Laconia, N. H. INORGANIC CHEMISTRY.

ROBERTS, Elmer, Prof. of Animal Genetics, Univ. of Ill., Urbana, Ill. ANIMAL GENETICS.

ROBERTS, Frank Harold Hanna, Asst. Chf., Bureau Amer. Ethnology, Smithsonian Institution, Washington, D. C. ANTHROPOLOGY.

ROBERTS, George, Prof. of Agron. and Hd. Dept. Asst. Dean, Coll. of Agri., Univ. of Ky., Lexington, Ky.

ROBERTS, Helen Heffron, retired, 222 Everit St., New Haven, Conn. ANTHROPOLOGY, MUSICOLOGY.

ROBERTS, Hugh Marine, Mining Geologist Consultant, 306 Lonsdale Bldg., Duluth, Minn. MINING GEOLOGY.

ROBERTS, John D., Mass. Inst. of Tech., Cambridge, Mass. ORGANIC REACTION MECHANISMS.

ROBERTS, John Henderson, Assoc. Prof., Duke Univ., Box 4987, Durham, N. C. ANALYSIS SITUUS.

ROBERTS, John William, retired, 116 D Park Ave., S., Winter Haven, Fla. PLANT PATHOLOGY.

ROBERTS, Joseph Kent, Prof. of Geol., Univ. of Va., P. O. Box 1471, Charlottesville, Va. GEOLOGY.

ROBERTS, Joseph Thomas, Hd., Dept. of Med. and Dir., Univ. Hosp., Schl. of Med., Univ. of Ark., Little Rock, Ark. MEDICINE.

ROBERTS, Milnor, Prof. of Mining Engrng. and Metallurgy, Univ. of Wash., Seattle, Wash. MINING ENGINEERING.

ROBERTS, R. B., Carnegie Inst., Washington, D. C. BIOCHEMISTRY.

ROBERTS, Ray Harland, Prof. of Horticulture, Univ. of Wis., Madison, Wis. HORTICULTURE.

ROBERTS, Richard B., 2837 Chesapeake St., Washington, D. C. PHYSICS.

ROBERTS, Richard Griffith, Prof. of Biochem. and Chmn. Dept., Chicago Med. Schl., Chicago, Ill. BIOCHEMISTRY.

ROBERTS, Robert Chester, Prof. and Chmn., Dept. of Chem., Carroll Coll., Waukesha, Wis. CHEMISTRY.

ROBERTSON, Howard Percy, Prof. of Mathematical Physics, Norman Bridge Lab. of Physics, Calif. Inst. of Tech., Pasadena 4, Calif. THE THEORY OF RELATIVITY.

ROBERTSON, Howard Percy, Prof. of Mathematical Physics, Calif. Inst. of Tech., Pasadena 4, Calif. THE THEORY OF RELATIVITY. b. Hoquiam, Wash., Jan. 27, 1903. s. George Duncan and Anna (MacLeod) R. Edn.: B.S., Univ. of Wash., 1922; M.S., *ibid.*, 1923; Ph.D., Calif. Inst. of Tech., 1925. m. Angela Turinsky, Jan. 27, 1923. c.: George Duncan; Mariette. Exp.: Asst. Prof. of Math., Calif. Inst. of Tech., 1927-29; Asst. Prof., Princeton Univ., 1928-31; Assoc. Prof., *ibid.*, 1931-38; Prof. of Math. Physics, *ibid.*, 1938-47; Prof. of Math. Physics, Calif. Inst. of Tech., Pasadena, Calif., 1947—. Mem.: Amer. Math. Soc.; Amer. Physical Soc.; Amer. Astron. Soc.; Edinburgh Math. Soc.;

Royal Astron. Soc.; Amer. Philos. Soc.; Natl. Acad. Sci.; Sigma Xi; Phi Beta Kappa. Contrb. to: Trans. Amer. Math. Soc.; Physical Rev.; Rev. Modern Physics; etc. War Record: Awarded Medal for Merit, 1946. Special Int.: The Theory of Relativity; Cosmology; Differential Geometry.

ROBERTSON, A. James, 16 Oxford St., Chevy Chase, Md. ASTRONOMY.

ROBERTSON, Alma, Nezperce, Idaho. PHARMACY.

ROBERTSON, David W., Agronomist, Colo. Agri. Coll., Fort Collins, Colo. PLANT GENETICS.

ROBERTSON, Edwin M. STERILITY.

ROBERTSON, George Gordon, Prof. Chem., Univ. of Calif., Los Angeles, Calif., 10639 Wellworth Ave., Los Angeles, Calif. CHEMISTRY.

ROBERTSON, James, Food Machinery and Chem. Co., Newark, Calif. BASIC REFRACTORIES.

ROBERTSON, James Campbell Hay, Assoc. Prof., Coll. of Forestry, Univ. of Wash., Seattle, Wash.



FOREST MANAGEMENT. b. June 7, 1899, Scotland. s. William and Margaret (Coult) R. Edn.: B.Sc., Univ. of Wash., 1927; M.Sc., Univ. of Calif., 1933; D.S., Duke Univ., 1948. m. Ruth Lawrie of Monrovia, Calif., Nov., 1935. d. A. B. Lawrie. c.: Donald; Jan; Douglas and Lawrie. Exp.: U.S.F. Service, 1925-27; Queensland Forest Service, Australia, 1928-30; B.C. Forest Service, Canada, 1930-35; Colo. A. and M. Forte Collins, 1936-45; Univ. of Wash., 1945—. Mem.:

Sigma Xi; Xi Sigma Pi; Pi Kappa Pi. Ph.D. Dissertation: Potentialities for Econ. Management of Durham Co., N. C. Travel: Europe; Canada; Australia; New Zealand. Hobbies: Golf; Fishing; Boating. Special Int.: Silviculture, Mensuration, Forest Economics.

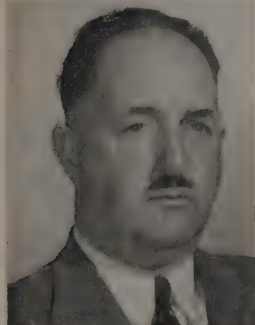
ROBERTSON, Judson H., Prof. Chem., Univ. of Tenn., Knoxville, Tenn. ANALYTICAL CHEMISTRY.

ROBERTSON, Lynn Shelby, Asst. Chf., Agri. Econ. Dept., Purdue Univ., W. Lafayette, Ind. FARM MANAGEMENT. b. Glenville, Minn., Jan. 11, 1890. s. William and Eva B. (Loomis) R. Edn.: B.S., Univ. of Minn., 1914; M.S., Purdue Univ., 1930; Ph.D., Cornell Univ., 1937. m. Adella C. Pettersen of St. Paul, Minn., July 15, 1915. d. Adel and Louisa P. c.: Lynn S., Jr.; Eva B.; John W.; Howard E.; David E. Exp.: State Leader (Ind.) Farm Management Demonstrations, Purdue Univ., 1914-28; Asst. Chf., Agri. Econ. Dept., Purdue Univ., 1928—; Instr., Agri. Econ., Biarritz Amer. Univ., France, 1945. Mem.: Amer. Farm Econ. Assn.; Amer. Soc. of Farm Managers and Rural Appraisers; Amer. Country Life Assn.; Alpha Zeta; Sigma Xi; Optimist Internatl. Author: Profitable Farm Mgt. and Mktg. (co-author), 1936; Farm Bus. Mgt. (co-author), 1946; and numerous articles. Ph.D. Dissertation: Farming Systems, Trends and Returns and the Conditions Affecting Them in the Portion of Northwestern Ind. Influenced by Local Indus. Dev.

ROBERTSON, Martin Luther, Assoc. Editor, Macmillan Co., 60 Fifth Ave., N. Y., N. Y. EDUCATION, BIOLOGY.

ROBERTSON, Oswald Hope, Stanford Univ., Stanford, Calif.

ROBERTSON, Percival, Prof. of Geology, The Principia Coll., Elsie, Ill. GEOLOGY. b. New Haven, Conn., July 12, 1889. s. George E. and Eugenia (Smith) R. Edn.: Ph.B., Yale Univ., 1912; M.S., Washington Univ., 1924; Ph.D., *ibid.*, 1936. m. Gladys M. Smith, June, 1914. c.: Forbes Smith;



Graeme. Exp.: Sci. Instr., Lowville Acad., Lowville, N. Y., 1913-14; Prof. of Geol., The Principia Coll., Elmhurst, Ill., 1915—. Hon. Pos.: Pres. Assoc. of Geol. Tsch., 1942-46; Pres. Ill. State Acad. Sci., 1950-51; Pres. Acad. Conference, 1953. Mem.: Sigma Xi; Geological Soc. of Amer.; Amer. Assn. Petrol. Geologists; A.A.A.S.; Assoc. of Geol. Tsch.; Ill. Acad. of Sci.; Amer. Chem. Soc.; Acad. of Sci. of St. Louis. Author: Manual for Physical Geol., 1951; Manual for Historical Geol., 1953. Contrb. to: Bull. Geological Soc. of Amer.; Sci.; Transaction Ill. State Acad. of Sci.; Acad. of Sci. of St. Louis. Special Int.: Pleistocene Geol., Geodes.

ROBERTSON, Theodore, Pathologist, Dir. of Blood Bank, North Country Community Hosp., Glen Cove, N. Y. **PATHOLOGY**. b. Brooklyn, N. Y., March 4, 1918. s. Ranson Smith and Mary (Doing) R. Edn.: B.S., Cornell Univ., 1939; M.D., *ibid.*, 1943. m. Lorraine D., 1943. c.: Victoria S.; Clark D. Exp.: Instr. in Pathol., Cornell Univ., New York, N. Y., 1948-50; Lectr. in Pathol., *ibid.*, 1950—; Asst. Att. Pathol., New York Hosp., 1950—; Pathologist, North Country Community Hosp., 1950—. Mem.: County, State, and Amer. Med. Soc.; Amer. Assn. Path. and Bact.; Coll. of Amer. Path.; Amer. Soc. Clin. Path.; Diplomate of Amer. Bd. of Pathol.; Sigma Xi; Nu Sigma Nu. Contrb.: Amer. Jour. Med.; Cancer Rsch.; Arch. Path.; Federation Proceedings; N. Y. State Jour. of Med.; Endocrinology. Special Int.: Blood coagulation, Enzyme-Produced Diseases; Hematology; Cardio-Vascular Diseases.

ROBESON, Frank Leigh, Prof. Physics and Hd. Dept., Va. Polytechnic Inst., Blacksburg, Va. **PHYSICS**.

ROBEY, Ashley, Prof. and Chmn. Dept. of Chem., Roanoke Coll., P. O. Box 421, Salem, Va. **ORGANIC CHEMISTRY**. b. Fort Worth, Tex., Aug. 1, 1903. s. Kennerly and Florence Lillian (Ashley) R. Edn.: B.S., Tex. Christian Univ., 1923; M.S., Tex. A. and M. Coll., 1925; Ph.D., Cornell Univ., 1932. m. Elizabeth Ellwanger Chadwick, Jan 2, 1932. c.: William Bradford; Florence Elisabeth; George Kennerly. Exp.: Instr., T.C.U., summer 1923; Fellow in Chem., Univ. of Colo., 1923-24; Fellow in Chem., Tex. A. and M. Coll., 1924-25; Grad. Asst., Cornell Univ., 1925-26; Grad. Asst. in Chg. Genl. Chem. Lab. and Rec., *ibid.*, 1926-31; Acting Asst. Prof., *ibid.*, summer 1930; Prof. and Hd. Dept., Ark. State Coll., 1932-41; Asst. Prof., Roanoke Coll., Salem, Va., 1941-43; Assoc. Prof. and Acting Hd. Dept. Chem., *ibid.*, 1943-45; Prof. and Hd. Dept. of Chem., *ibid.*, 1945—. Hon. Pos.: Past Pres., Salem Camera Club; Past Pres., Stamp and Coin Club of Roanoke; Past Chmn., Salem Bd. of Health; Past Chmn., Dist. Advancement Com., Boy Scouts of Amer.; Past Chmn., Troop Com., B.S.A.; Past Regional Repr., Precancel Stamp Soc. Inc.; Hon. Mem., Precancel Stamp Soc. of Great Britain; Phi Beta Pi. Mem.: Fellow, A.A.A.S.; Fellow, Amer. Inst. Chemists; Amer. Chem. Soc.; A.A.U.P.; Va. Acad. Sci.; Acacia, Al-Djebar. Author: Tex. Precancelled Stamps, 1952. Contrb. to: Editor and Bus. Mgr., The Blue Ridge Chemist; Contributing Editor, The Chemist, 1937-50. Gen. Int.: Advisor, Town Mgr. of Salem, Va., 1947—. Special Int.: Toxin of Rattlebox Bean, Alkyl Sulfonic Acids, Fluorenyl Grignard Reagent.

ROBINSON, Arthur, Univ. of Wis., Madison, Wis. **CARTOGRAPHY**.

ROBINSON, Clifford Hanks, Dominion Agr. Chemists, Ottawa Div. Chem., Central Exp. Farm, Ottawa, Ont., Can. **BIOCHEMISTRY**.

ROBINSON, Elizabeth Magers, retired, Box 183, Saratoga, Calif. **PHYSIOLOGY**.

ROBINSON, Elliott Stirling Andrew, Dir., Div. Biologic Labs., Mass. Dept. Public Health, 375 South St., Jamaica Plain, Mass. **IMMUNOLOGY**.

ROBINSON, Hamilton B. G., Prof. Dentistry, Ohio State Univ., Columbus, Ohio. **ORAL PATHOLOGY**.

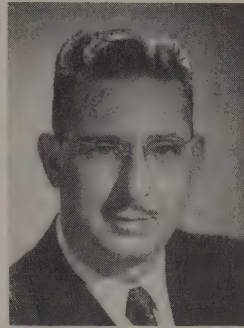
ROBINSON, Howard Addison, Chief Physicist, Armstrong Cork Co., Lancaster, Pa. **PHYSICS**.

ROBINSON, Howard West, Prof. Physiological Chem., Temple Univ., Philadelphia, Pa. **PHYSIOLOGICAL CHEMISTRY**.

ROBINSON, Jesse Mathews, Hd. Prof. Zool. and Entomol., Ala. Polytechnic Inst., Auburn, Ala. **ENTOMOLOGY, GENETICS**.

ROBINSON, L. Vernon, Assoc. Prof. Math., Univ. South Carolina, Columbia, S. C. **ASTRONOMY**.

ROBINSON, Radcliffe Franklin, Biophysics, Rsch. Supvr., 3044 Fremont Ave., Columbus, Ohio.



BIOPHYSICS AND MICROBIOLOGY. b. New Castle, Pa., Feb. 9, 1913. s. Frank and Leona (Thomas) R. Edn.: A.B., Biochem., Ohio State Univ., 1934; B.Sc., *ibid.*, 1935; M.Sc., *ibid.*, 1936. m. Catherine Maupin of Columbus, Ohio, Oct. 17, 1932. d. Harry Edward Maupin. c.: Julie Anne; Noel Radcliffe. Exp.: Rsch. Asst., Lake Lab., Put-in-Bay, Ohio, 1935-36; Tchr., Zool., Ohio H. S., 1936-40; Supvr. Biol. Sci., Ohio H. S., Painesville, Ohio, 1940-41; Rsch. Engr. on Fungicides and Civilian with A.E.C., Battelle Mem. Inst., Columbus, Ohio, 1941-45; Tech. Pub. Relations Asst., *ibid.*, 1946-49; Supvr. of Microbiol. Pharm. and Med. Rsch. *ibid.*, 1949—. Mem.: N.E.A.; A.A.A.S.; Sigma Xi; Masons; Elks; Natl. Bd. of Edn.; Cong. Ch.; Amer. Inst. of Biol. Sci.; Amer. Pharm. Protozoologists. Contrb. to: Ind. and Engrng. Chem.; Jour. of Bacteriol. Travel: Canada. Hobbies: Vocal Music; Photography. Listed in A.M.S. Special Int.: X-Ray Sterilization, Toxicology and New Sources of Food for the World.

ROBINSON, Reginald Heber, Prof., Oregon St. Coll., Corvallis, Ore. **CHEMISTRY**.

ROBINSON, Robert B., 4243 Garfield Ave., Kansas City, Mo. **RESEARCH IN MUSIC NOTATION REFORM**.

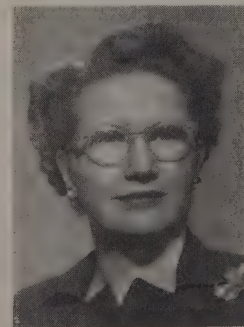
ROBINSON, Thomas Ralph, Sr. Physiologist, retired U. S. D. A., Washington, D. C.; Terra Ceia, Fla. **HORTICULTURE**.

ROBINSON, William Orrin, Sr. Chemist, U. S. D. A., Bur. Plant Industry, Beltsville, Md. **AGRICULTURAL CHEMISTRY**.

ROBINSON, Winifred Josephine, Dean emeritus, Women's Coll., Delaware, Newark; 818 Antoinette Ave., Winter Pk., Fla. **BOTANY**.

ROBINSON, Clarence Hall, Assoc. Prof. emeritus Edn., Univ. of Calif., Los Angeles; Box 98, Rancho Atla Vista, Soquel, Calif. **EDUCATION ADMINISTRATION**.

ROBLEE, Lorraine Amos, Audiologist, D. C. Dept. of Health, 1530 16th St., N. W., Washington 6, D. C. **AUDIOLOGY**.



b. Kokomo, Ind., Oct. 10, 1909. d. Leonidas P. and Elizabeth (Albright) Amos. Edn.: B.E., Akron Univ., 1935; M.A., Columbia Univ., 1937. m. Dana B. Roblee, Dec. 29, 1952. Exp.: Tchr., Ind. State Schl. for the Deaf, Indianapolis, Ind., 1928-31; Tchr., Day Schl. for the Deaf, Akron, Ohio, 1931-34; Organized and Taught Conservation of Hearing Class, Akron, Ohio, 1934-42; Organized Conservation of Hearing Program, Washington, D. C., 1942-43; Hearing Specialist, Aural Rehabilitation

Program, War Dept., 1943; Headed the National Program for Rehabilitation of Veterans with Hearing and Speech Impairments under Vocational Rehabilitation and Edn., Central Office, V. A., 1944-48; Supvr. of Audiology and Phonology, Dept. of Otolaryngology, Columbia Presbyterian Med. Center, 1948-50; Audiologist, D. C. Dept. of Health, 1950—; Consultant in Audiology, Episcopal Eye, Ear, and Throat Hosp., Wash., D. C., 1950— Mem.: N.E.A.; I.C.E.C.; A.S.H.A.; A.H.S.; N.A.R.T.; Col. Univ. Club of Wash.; Speech Assn. of Amer.; N.R.A.; A. E. Hon. Fraternity, Akron Univ.; Hon. Mem. Sigma Alpha Eta; A.A.U.W.; Ind. State Soc. Contbr. to: Quarterly Jour. of Speech; Volta Rev.; Hearing News. Gen. Int.: Developed Audio-Visual Stimulus Response Test for Testing Hearing of Young Children. Special Int.: Paedo-Audiology.

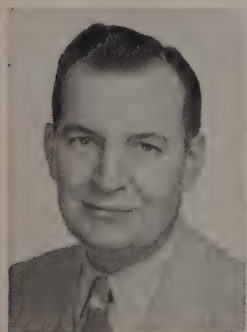
ROBLIN, Richard O., Jr., Stamford Rsch. Labs., Amer. Cyanamid Co., Stamford, Conn. CHEMISTRY.

ROBOZ, Elizabeth, Assoc. Prof. Biochem. Dept., Schl. of Med., Georgetown Univ., 3900 Reservoir Rd., N. W., Washington, D. C. BIOCHEMISTRY.

ROBSON, James T., Allied Engineering Co., 4150 E. 56th St., Cleveland 5, Ohio. CERAMICS.

ROCHE, L. C., Maryland Glass Corp., 2147 Wicomico St., Baltimore 30, Md. CERAMICS.

ROCHOW, Theodore George, Sr. Group Leader, Microscopical Group, Analytical and Testing Div., Rsch. Labs., Amer. Cyanamid Co., Stamford, Conn. INDUSTRIAL MICROSCOPY IN RESEARCH, DEVELOPMENT, PRODUCTION AND SALES. b. Newark, N. J., July 8, 1907. s. Theodore C. and Mary C. (Lieberman) R. Edn.: B.Chem., Cornell Univ., 1929; Ph.D., ibid., 1934. m. Corinne E. Weiler, Mar. 20, 1937. c.: Theodore Frederick. Exp.: Leather Chemist, O. H. Oppenheimer Co., Newark, N. J., 1929-30; Lab. Asst. in Chem. Microscopy, Cornell Univ., 1930-34; Microscopist, Exptl. Lab., Amer. Cyanamid Co., Linden, N. J., 1934-37; Group Leader, Rsch. Labs., ibid., Stamford, Conn., 1937—. Hon. Pos.: Secy., Electron Soc. Amer., 1952. Mem.: Amer. Chem. Soc.; Amer. Soc. for Metals; Amer. Soc. for Testing Materials; Amer. Optical Soc.; N. Y. Microscopical Soc.; N. Y. Soc. of Electron Microscopists; Alpha Chi Sigma; Sigma Xi. Contbr. to: Analytical Chem.; Sci.; Jour. Physical and Colloid Chem.; Indus. and Engrng. Chem.; Paper Trade Jour.; Jour. Physical Chem. Gen. Int.: Naming, Defining and Describing "resinography," the Graphic Study of Effect of Treatment and Use of Resins. Special Int.: Study (by the correlation of synthesis, analysis and perception) of Materials, particularly the plastic phases of the systems; Metals, Waxes, Gums, Resins, Glasses, Ceramics, Putties and Plastics; Metallography, Mineralography, Petrography, Resinography.



scopist, Exptl. Lab., Amer. Cyanamid Co., Linden, N. J., 1934-37; Group Leader, Rsch. Labs., ibid., Stamford, Conn., 1937—. Hon. Pos.: Secy., Electron Soc. Amer., 1952. Mem.: Amer. Chem. Soc.; Amer. Soc. for Metals; Amer. Soc. for Testing Materials; Amer. Optical Soc.; N. Y. Microscopical Soc.; N. Y. Soc. of Electron Microscopists; Alpha Chi Sigma; Sigma Xi. Contbr. to: Analytical Chem.; Sci.; Jour. Physical and Colloid Chem.; Indus. and Engrng. Chem.; Paper Trade Jour.; Jour. Physical Chem. Gen. Int.: Naming, Defining and Describing "resinography," the Graphic Study of Effect of Treatment and Use of Resins. Special Int.: Study (by the correlation of synthesis, analysis and perception) of Materials, particularly the plastic phases of the systems; Metals, Waxes, Gums, Resins, Glasses, Ceramics, Putties and Plastics; Metallography, Mineralography, Petrography, Resinography.

ROCHOW, W. F., Harbison-Walker Refractories Co. 1800 Farmer Bank Bldg., Pittsburgh 22, Pa. CERAMICS.

ROCK, John, STERILITY.

ROCKIE, William Allan, Chief reg. project plans div., Soil Conservation Serv., Portland, Ore. SOIL CONSERVATION.

ROCKWELL, George Edmund, Med. Rsch., Rt. 1, Milford, Ohio. ALLERGY, BACTERIOLOGY.

ROCKWOOD, Lawrence Peck, Entomologist, U. S. D. A., Bur. Entomology and Plant Quarantine, Forest Grove, Ore. ENTOMOLOGY.

RODDEN, Clement J., U. S. Atomic Energy Comm., New Brunswick, N. J. ANALYTICAL CHEMISTRY.

RODEBUSH, Worth Juff, Univ. of Ill., Urbana, Ill.

RODENHISER, Herman A., Plant Pathologist, U. S. D. A., Plant Indus. Sta., Beltsville, Md. PLANT PATHOLOGY.

RODERICK, Lee M., Dept. of Veterinary Pathol., Kans. State Coll., Manhattan, Kans. VETERINARY PATHOLOGY.

RODEWALD, Charles William, Assoc. Prof. Chem., Washington Univ., St. Louis, Mo. PHYSICAL CHEMISTRY.

RODGERS, Tom G., Dean Emer., Highland Univ.; 1018 Fourth St., Las Vegas, N. M. GEOMETRY, ADMINISTRATION.

RODRIGUEZ, Juan G., Asst. Entomologist, Kentucky Agri. Expt. Sta., Lexington, Ky. ENTOMOLOGY, INSECT PHYSIOLOGY, NUTRITION OF PLANT FEEDING MITES. b. Espanola, N. M., Dec. 23, 1920. s. Manuel D. and Lugarda (Salazar) R. Edn.: B.S., New Mex. Coll. of A. & M. A., 1943; M.S., Ohio State Univ., 1946; Ph.D., ibid., 1949. m. Lorraine Ditzler, April 17, 1948. c.: Maria Carmen, Maria Teresa. Exp.: Asst. Ohio State Univ., Expt. Sta., Columbus, Ohio, 1946-49; Asst. Entomologist, Ky. Agri. Expt. Sta., Lexington, Ky., 1949—. Mem.: A.A.A.S.; Sigma Xi; Gamma Alpha; Gamma Sigma Delta. Contbr. to: Annals Ent. Soc. of Amer.; Jour. Economic Entomol. Special Int.: Mineral Nutrition of the Two-Spotted Spider Mite. Relation of Vit. B, Complex in the Nutrition of the Two-Spotted Spider Mite. Nutrition of Plant-Feeding Mites, Phosphorus Metabolism in the Two-Spotted Spider Mite.

ROE, Joseph Hiram, Prof. and Exec. Officer, Dept. Biochem., Schl. Med., George Washington Univ., Washington, D. C. BIOCHEMISTRY.

ROE, Mabel Lewis, retired, 4509 Greenmeadow Rd., Long Beach, Calif.

ROEDER, Kenneth David, Assoc. Prof. Biol., Tufts Coll., Medford, Mass. NEUROPHYSIOLOGY.

ROEHM, Victor J., 2320 Ridgewood Ave., Alliance, Ohio. CERAMICS.

ROEPKE, Martin, Prof. Veterinary Med., Univ. Minn., Univ. Farm, St. Paul 8, Minn. CHEMISTRY, VETERINARY MEDICINE.

ROESER, Jacob, Jr., Asst. Forest Supervisor, U. S. Forest Service, Fort Collins, Colo. FORESTRY.

ROESSLER, Edward Biffer, Assoc. Prof. Math.; Assoc. Statistician, Agri. Expt. Sta., Univ. of Calif., Davis, Calif. MATHEMATICS.

ROEVER, William Henry, Prof. Math., Washington Univ., St. Louis, Mo. MATHEMATICS.

ROFF, Merrill Flag, Prof. Inst. Child Welfare, Univ. of Minn., Minneapolis, Minn. STATISTICAL PSYCHOLOGY.

ROGER, Henry, Owner, Rolab Photo-Science Labs., Sandy Hook, Conn. PHYSICS, ENGINEERING.

ROGERS, Alfred Paul, retired, 60 Charlesgate W., Boston, Mass. ORTHODONTICS.

ROGERS, Austin F., Prof. Emer., Stanford Univ.; Box 87, Stanford Univ., Calif. MINERALOGY.

ROGERS, Carl Ransom, Univ. of Chicago, Chicago, Ill. PSYCHOLOGY.

ROGERS, Charles Gardner, Prof. Emer., Oberlin Coll., Oberlin, Ohio; 378 Reamer Place, Oberlin, Ohio. PHYSIOLOGY.

ROGERS, David Camp, retired; 26 Pine St., Middletown, Conn. PSYCHOLOGY.

ROGERS, Fred Terry, Physician, Dallas Medical and Surgical Clinic, 4540 Bordeauz Ave., Dallas, Tex. **NEUROLOGY MEDICINE.**

ROGERS, Fred Terry, Jr., Assoc. Prof., Physics, Univ. of North Carolina, Chapel Hill, N. C. **PHYSICS OF ELECTRONS.**

ROGERS, Harris White, Assoc. Prof. Chem., Colgate Univ., Hamilton, N. Y. **CHEMISTRY, ANALYTICAL.**

ROGERS, Herbert Charles, Prof. Pharmaceutical Chem., Dean, Univ. Minn., Minneapolis, Minn. **PHARMACEUTICAL CHEMISTRY.**

ROGERS, Herbert Wesley, Prof. Psychology, Lafayette Coll., Easton, Pa. **PSYCHOLOGY.**

ROGERS, John Sinclair, Assoc. Prof. of Agronomy, Tex. Agri. Expt. Sta., Coll. Sta., Tex. **AGRONOMY AND GENETICS.** b. Monticello, Ark., May 5, 1917. s. Gideon Kirk and Lucy Jane (Sinclair) R. Edn.: B.S., A. and M. Coll. of Tex., 1938; M.S., A. and M. Coll. of Tex., 1940; Ph.D., Harvard Univ., 1949. m. Margaret Jean Robb of Tex., 1938. d. Mr. and Mrs. D. D. Robb. c.: Lucy Jean; Nancy Jo; Shirley Ann; Judy Kay. Exp.: 1940-48, Agronomist, Tex. Agri. Expt. Sta.; 1950—, Assoc. Prof. of Agron., Tex. Agri. Expt. Sta. Mem.: A.A.A.S.; Amer. Soc. of Agronomy; Genetics Soc. of Amer.; Masons. Contrb. to: Genetics; Agronomy Jour. Ph.D. Dissertation: A Genetic Study of Characters Differentiating Maize and Teosinte. War Record: U.S.N.R., 1945. Travel: Western Europe. Hobbies: Family; Gardening. Listed in: A.M.S. Special Int.: Corn Improvement and Corn Genetics.

ROGERS, Thomas Hunton, Assoc. Dir. Rsch., Standard Oil Co.; Dune Acres, Chesterton, Ind. **PETROLEUM CHEMISTRY.**

ROGERS, Walter E., Prof. Biology, Lawrence Coll., Appleton, Wis. **DENDROLOGY.**

ROGOFF, Julius M., Prof. Endocrinol., Univ. of Pittsburgh, Pittsburgh, Pa. **EXPERIMENTAL MEDICINE.**

ROHDENBURG, George L., Dir. Lab., Lenox Hill Hospital, 111 East 76th St., New York, N. Y. **PATHOLOGY.**

ROHRBAUGH, John Henry, Asst. Prof. Physics, New York Univ., 100 Wash. Square, N. Y. **MILLIMETER WARES.**

ROHRBAUGH, Lawrence Milburn, Assoc. Prof., Univ. Okla., Norman, Okla. **PLANT PHYSIOLOGY.**

ROHRBAUGH, P. W., P. O. Box 285, Upland, Calif. **BOTANICAL SCIENCES, AGRICULTURE.**

ROHSENOW, Warren M., Assoc. Prof. of Mech. Engrng., Mass. Inst. of Technol., Cambridge, Mass. **MECHANICAL ENGINEERING.** b. Feb. 12, 1921, Chicago, Ill. s. Fred A. and Selma (Gorss) R. Edn.: D.Eng., Yale Univ., 1944; M.Eng., ibid., 1943; B.S. in M.E., Northwestern Univ., 1941. m. K. Towneley on Sept. 20, 1946. d. Capt. Lybrand Palmer and Katharine Atwater Smith. Exp.: Asst. Prof. of Mech. Engrng., M. I. T., 1946—; Consultant, Carbide Carbon Chem. Corp., Oak Ridge, Tenn., 1948—; Consultant, U. S. N. Engr. Expt. Sta., Annapolis, Md., 1946—; Lt. (j.g.), U.S.N.R., ibid., 1944-46; Instr. in Mech. Engrng., Yale Univ., 1943-44. Mem.: Sigma Xi; Tau Beta Pi; A.S.M.E.; Triangle; "Pi Tau Sigma Gold Medal Award", Amer. Soc. of Mech. Engrs., 1951; "Award for Advancement of Basic and Applied Science", from Yale Engrng. Assn., 1952; "Junior Award" of Amer. Soc. of Mech. Engrs., 1952. Contrb. to: A.S.M.E.; Trans.; J. Aero. Sci.; etc. War Record: (See Above). Hobby: Music. Listed in: A.M.S. Special Int.: Heat Transfer, Thermodynamics, Heat Power, Gas Turbines.

ROHWER, Carl, Sr. Irrigation Engr., Soil Conservation Service, U. S. D. A., Fort Collins, Colo. **IRRIGATION ENGINEERING.**

ROLBIECKI, John Joseph, Prof. Philosophy, Catholic Univ. Washington, D. C. **ZOOLOGICAL SCIENCES.**

ROLFE, Fred Moos, Prof. Botany and Plant Pathol., Okla. A. and M. Coll., Stillwater, Okla. **PLANT DISEASES.**

ROLLE, Clifford Jay, Sales and Service Engrs., Interchemical Corp., Newark, N. J. **CHEMISTRY.**

ROLLEFSON, Gerhard Krohn, Prof. Chemistry and Dir. Labs., Univ. Calif., Berkeley, Calif. **CHEMISTRY.**

ROLLEFSON, Karl Egbert, Vice-Pres. and Chief Engr., Muter Co., 1255 S. Michigan Ave., Chicago, Ill. **PHYSICS.**

ROLLER, Emery Marcus, Assoc. Chemist, Plant Industry Sta., Beltsville, Md. **CHEMISTRY.**

ROLLER, Paul S., Sr. Chemist, U. S. Bureau Mines, Coll. Park, Md. **CHEMISTRY.**

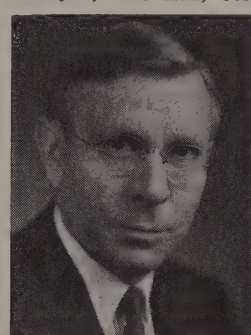
ROLLER, Pleasant Ernest, Prof. Chem., Physics and Math., Morris Harvey Coll., Charleston, W. Va. **PHYSICAL CHEMISTRY.**

ROLNICK, Harry Charles, Physician and Surgeon, Med. Schl., Northwestern Univ., Evanston, Ill. **UROLOGY.**

ROMAINE, Jesse Davis, Sec. and Chief Agronomist, Amer. Potash Inst. Inc., 1155 16th St. N. W., Washington, D. C.

ROMAN, Irwin, Sr. Geophysicist, U. S. Bureau Mines, Custom House, Baltimore, Md. **GEOPHYSICS.**

ROMANOFF, Alexis Lawrence, Prof. of Chem. Embryol., Rice Hall, Cornell Univ., Ithaca, N. Y. **CHEMICAL EMBRYOLOGY.** b. May 17,



1892, St. Petersburg, Russia. s. Lawrence M. and Daria K. (Petroff) R. Edn.: St. Petersburg Tchrs. Coll., Russia; Tomask Univ., 1918-19; Vladivostok Polytech. Inst. 1919-20; Cornell Univ., B.S., 1925; M.S., ibid., 1926; Ph.D., ibid., 1928. m. Anastasia J. Sayenko of Warsaw, Poland, Sept. 1, 1928. d. Jacob O. and Julia V. Slauta Sayenko. Exp.: Rsch. Asst., Cornell Univ., 1924-28; Rsch. Instr., ibid., 1928-32; Rsch. Asst. Prof., ibid., 1932-43; Assoc. Prof., ibid., 1943-48; Prof., ibid., 1948—; Harvard Univ., 1939-40 (as Rsch. Fellow in Biol.); Rsch. Fellow, Yale Univ., 1940-41; Rsch. Assoc. in Phys., Univ. of Fla., 1942; Recipient Borden Award and Gold Medal in Avian Embryology, 1950. Mem: Fellow, A.A.A.S.; Mem. of Soc. Experimental Biol. and Med.; Amer. Physiol. Soc.; Amer. Soc. Zool.; A.C.S.; N. Y. Acad. Sci.; Sigma Xi; Poul. Sci. Assn.; Rotary Club. Author of Book, The Avian Egg, 1949; Sect. on Eggs in Ency. Chem. Techn., Vol. 5, 1950. Contrb. to: Jour. of Expt. Zool.; Jour. Morph. and Physiol.; Anat. Rec.; Biochem. Jour. Brit.; Ind. Engrng. Chem.; Jour. Cell. and Comp. Physiol.; Proc. Natl. Acad. Sci.; et cetera. Ph.D. Dissertation: Effect of Humidity on the Growth and Calcium Metabolism of Chick Embryology. War Record: Russian Army as Lt. of Engr. Corps. Received Training at: St. Petersburg Officers' Engrng. Schl., Officers' Schl. of Chemical Warfare, Kazan Univ. Travel: Europe, England; France; Germany; Denmark; Poland; Russia; Siberia; Orient; China; Japan; Amer. Cont.: Panama; Mexico; Canada; U. S.; Once Around World Including Philippine Islands; Hawaiian Islands. Achievements of Gen. Int.: Produced Moving Picture, "Where Chick Life Begins"; Sketching, Painting and Invention of Sci. Apparatus (U. S. Patent, July 14, 1931, No. 1,813,959, Gas Conditioning

Apparatus; U. S. Patent, Nov. 14, 1944, No. 2,362,774, Egg Sorting Method and Mechanism). Listed in: A.M.S.; Who's Who in N. Y.; Who's Who in the East; Who's Who in the Western Hemisphere; Who Knows—and What; Who's Who in Amer.; Who's Who. Special Int.: Metabolism of Avian Embryo.

ROMANS, Isabella Bradford, Res. Bacteriologist, Pa. Salt Mfg. Co., White Marsh Res. Labs., Chestnut Hill, Pa. BACTERIOLOGY.

ROMBERG, Arnold, 406 East 32nd St., Austin, Tex. PHYSICS.

ROMER, Alfred S., Museum of Comparative Zool., Oxford St., Cambridge, Mass.

ROMER, Caroline S., 97 New England Ave., Summit, N. J. BOTANICAL SCIENCES.

RONNEBERG, Conrad E., Prof. and Chmn., Dept. Chem., Denison Univ., P. O. Box 58, Granville, Ohio. PHYSICAL CHEMISTRY.

ROOD, Paul, Hd. Dept. Physics, Western Mich. Coll., Kalamazoo, Mich. SPECTROSCOPY.

ROOP, Frederick Crouch, Res. Engr., Univ. Calif., Berkeley, Calif. METEOROLOGY.

ROOPE, Percy Martin, Prof. Physics, Clark Univ., Worcester, Mass. DYNAMICS.

ROOS, Charles F., Prés., Econometric Inst., Inc., 500 Fifth Ave., New York, N. Y. ECONOMICS.

ROOT, Raymond Willard, Asst. Prof. Biol., City Coll., New York, 139th St. and Convent Ave., New York, N. Y. GENERAL PHYSIOLOGY.

ROOT, Townner Bowditch, Prof. Geology and Geo., Temple Univ., Broad and Montgomery Ave., Philadelphia, Pa. GEOLOGY.

ROOT, Walter S., Prof. of Physiol., 630 W. 168th St., N. Y. 32, N. Y. PHYSIOLOGY. b. Buffalo, N. Y., Sept. 18, 1902. s. Wm. Francis Stanton and Leontine Margaret (Root) R. Edn.: B.Sc., Wesleyan Univ., 1924; Ph.D., Univ. of Pa., 1930. m. Elizabeth Wigfall of Bloomsburg, Pa., Jan. 26, 1928. d. Samuel and Helen Russell Wigfall. c.: Richard Wigfall. Exp.: Asst. Biol., Wesleyan Univ., 1924-25; Asst. Instr., Univ. of Pa. Med. Schl., 1927-29; Asst. Prof., Syracuse Univ. Med. Schl., 1929-31; Assoc. Prof., *ibid.*, 1931-36; Assoc. Prof., Univ. of Md. Med. Schl., 1936-37; Assoc. Prof., Columbia, 1937-48; Prof., *ibid.*, 1948—; Rsch. Project of Amer. Bureau for Med. Aid to China, Nanking China, Summer 1948; Rsch. Assoc. Med. Physics, Univ. of Calif. 1st. semester 1952—. Mem.: Acad. of Political Sci.; Assoc. Mem. Assn. for Rsch. in Nervous and Mental Disease; A.A.A.S.; Harvey Soc.; Advisory Bd., Society for the Prevention of Asphyxial Death; 18th International Physiological Congress, Copenhagen, 1950; N. Y. State Soc. for Med. Rsch.; N. Y. Acad. of Sci.; Nu Sigma Nu; Sigma Xi; Amer. Bureau for Med. Aid to China; Corp. of Marine Biological Lab.; Amer. Physiol. Soc.; Soc. of Gen. Physiologists; Soc. for Expt. Biol. and Med.; Amer. Heart Soc. Contrb. to: Amer. Jour. of Physiol.; 9th Ed. Macleod's Physiology in Modern Medicine. Ph.D. Dissertation: The Effect of Carbon Dioxide Upon the Oxygen Consumption of Paramecium and the Egg of Arbacia. Travel: China; Europe. Listed in: Who's Who in Amer.; A.M.S. Special Int.: Erythropoiesis, Blood Volume, Bladder, Antonomic Nervous System, Shocks, etc.

ROOTS, Yale Kirby, Prof. and Chmn. Dept. Physics, Western Coll., Oxford, Ohio. SPECTROSCOPY.

RORER, Jonathan Taylor, Lecturer Mathematics, Temple Univ., Philadelphia, Pa. MATHEMATICS, EDUCATION.

ROSAHN, Dolin Paul, Pathologist Charge Labs., New Britain Gen. Hosp., 92 Grand St., New Britain, Conn. PATHOLOGY.

ROSAIRE, Esme Eugene, Consulting Geophysicist, 2711 Westheimer St., Houston, Texas. GEO-PHYSICIST.

ROSANOFF, Martin Andre, retired, 124 Longue Vue Dri., Mt. Lebanon, Pa. CHEMISTRY.

ROSCOE, E. E., Prof. of Pharmacognosy, Idaho State Coll., Pocatello, Idaho. PHARMACOGNOSY.

ROSCOE, Muriel Victoria, Assoc. Prof. and Chmn. Dept. Botany, McGill Univ., Montreal, Que., Can. PLANT ANATOMY, CYTOLOGY.

ROSE, Arthur, Assoc. Prof. Chem. Engrn., Pa. St. Coll., St. Coll., Pa. CHEMISTRY.

ROSE, Flora, Prof. Emer., Cornell Univ., Ithaca, N. Y.; 900 Euclid Ave., Berkeley, Calif. NUTRITION.

ROSE, Ira W., Prof. Practical Pharmacy, Univ. North Carolina Schl. Pharmacy, Chapel Hill, N. C. PHARMACY.

ROSE, John Ernest, Assist. Prof. Physics, Univ. of Chicago, Chicago, Ill. RADIATION PHYSICS.

ROSE, William Cumming, Univ. of Ill., Urbana, Ill.

ROSE, William Henry, Retired, Rt. 1, Bradenton, Fla.

ROSEBOOM, Benjamin Brokaw, Prof., Dept. Physiol. and Pharmacol., Mich. St. Coll., East Lansing, Mich. PHYSIOLOGY.

ROSEBURY, Theodor, Assoc. Prof. Bacteriol., Columbia Univ., New York, N. Y. BACTERIOLOGY.

ROSEMAN, Reuben, Res. Chemist, Glidden, Baltimore, Md. INORGANIC CHEMISTRY.

ROSEN, Harry, Pharmacologist, Wyeth Inst. Applied Biochemistry, Philadelphia, Pa. PHARMACOLOGY.

ROSENBACH, Joseph Bernhardt, Prof. Dept. Pure Math., Carnegie Inst. Tech., Pittsburgh, Pa. MATHEMATICS.

ROSENBERG, Lauren Emery, Assist. Prof., Expt. Sta., Univ. of Calif., Davis, Calif. HISTOLOGY AND PROTOZOOLOGY.

ROSENBERG, Paul, Pres., Paul Rosenberg Associates, 100 Stevens Ave., Mount Vernon, N. Y. PHYSICS. b. N. Y., N. Y., March 31, 1910. s. Samuel and Evelyn (Abbey) R. Edn.: B.A., Columbia Coll., 1930; M.A., Columbia Univ., 1933. m. Marjorie S. Hillson, June 12, 1943. c.: Gale. Exp.: Chemist, Hawthorne Paint and Varnish Corp., Hawthorne, N. J., 1934-39; Grad. Asst. in Physics, Columbia Univ., N. Y., 1934-39; Lectr. in Physics, *ibid.*, 1939-41; Instr. in Physics, Hunter Coll. of the City of N. Y., 1939-41; Rsch. Assoc., Dept. of Elec. Engrng., Mass. Inst. of Tech., Cambridge, Mass., 1941; Staff Mem., Radiation Lab. of the Natl. Defense Rsch. Com., *ibid.*, 1941-45; Pres., Paul Rosenberg Associates, Ht. Vernon, N. Y., 1945—. Hon. Pos.: Pres., Inst. of Navigation, 1950-51; Gen. Chmn., Joint Conf. of the Radio Technical Commn. for Aeronautics, Radio Technical Commn. for Marine Services, and I. O. N., 1950; Co-Chmn., Technical Development Com. for Upper Atmosphere and Interplanetary Navigation, 1947-50. Mem.: Fellow, A.A.A.S.; Inst. of Radio Engrs.; Amer. Physical Soc.; Amer. Chem. Soc.; Acoustical Soc. Amer.; N. Y. Acad. Sci.; Amer. Soc. Photogrammetry; Inst. of Aeronautical Sci.; Sigma Xi; Epsilon Chi; Zeta Beta Tau. Contrb. to: Physical Rev.; Rev. Scientific Instruments; Jour. Inst. Navigation. War Record: War Com. on Radio, Amer. Standards Assn., 1942-44. Gen. Int.: Patents in Radar, Television, and Ultrasonics. Special Int.: Molecular Beams; Kinetic Theory of Gases; Geometric and Physical Optics; Ultrasonics; High Frequency Radar; Synthetic Radar Trainers; Radar Mapping and Charting; Electrical Contacts; Potentiometer Devices; Navigation of Aircraft and Guided Missiles; Photogrammetry; Spinal Mechanics; Industrial Electronics.

ROSENBLUM, Julius L., Assist. Supt. Colo. St. Hosp., Pueblo 10, Colo. NEUROLOGY, PSYCHIATRY.

ROSENDAHL, Carl Otto, Prof. Emer., Botany, Univ. of Minn., Minneapolis, Minn.; 2191 Commonwealth Ave., St. Paul, Minn. **SYSTEMATIC BOTANY.**

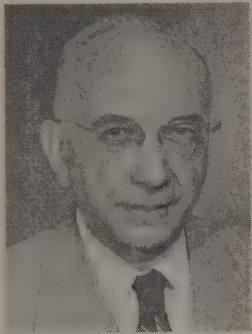
ROSENE, Hilda Florence, Assoc. Prof. Physiol., Univ. of Texas, Austin, Tex. **BIOPHYSICS.**

ROSENHOLTZ, Joseph Leon, Hd. Dept. Geol. and Mineral., Rensselaer Polytechnic Inst., Troy, N. Y. **MINERALOGY.**

ROSENOW, Edward Carl, Bacteriologic Res. Lab., Longview State Hosp., Cincinnati, Ohio. **BACTERIOLOGIC RESEARCH.**

ROSENQUIST, Carl Elmer, Assoc. Prof. Agr. Botany, Univ. Nebr., Lincoln, Nebr. **PLANT BREEDING.**

ROSENTHAL, Arthur, Prof. of Math., Purdue Univ., Lafayette, Ind. **MATHEMATICS.** b. Fuerth, Bavaria, Feb. 24, 1887.



s. Otto and Jette (Heilbronner) R. Edn.: Ph.D., Munich Univ., 1909. Exp.: Munich Univ., Privatdozent, 1912-20; Asst. Prof., 1920-22; Heidelberg Univ.: Assoc. Prof. of Applied Math., 1922-30; Prof. of Math., 1930-33; Dean of Sci., 1932-33; Prof. Emer., 1935—; Univ. of Mich.: Rsch. Fellow and Lectr., 1940-41; Univ. of N. Mex.: Lectr., 1942; Asst. Prof., 1943-46; Assoc. Prof., 1946-47; Purdue Univ.: Prof. of Math., 1947—, Mem. Amer. Math. Soc.; Math.

Assn. of Amer.; Fellow, A.A.A.S.; A.A.U.P.; Heidelberg Akad. d. Wiss.; Ind. Acad. Sci.; Phi Kappa Phi; Sigma Xi; Kappa Mu Epsilon. Author: Neuere Untersuchungen über Funktionen reeller Veränderlichen, 1924; Set Functions, 1948. Contrb. to: Math. Jour. Ph.D. Dissertation: Untersuchungen über gleichflächige Polyeder. Listed in: Who's Who in Amer., A.M.S. Special Int.: Real and Complex Functions.

ROSEWALL, Oscar Waldemar, Prof. Entomology Dept. Zool. and Entomol., La. St. Univ., Univ., La. **ENTOMOLOGY.**

ROSIN, Joseph, retired, 824 Stelle Ave., Plainfield, N. J. **CHEMISTRY.**

ROSS, Archibald Frank, Assoc. Prof. Dept. Plant Pathol., Cornell Univ., Ithaca, N. Y. **VIRUS DISEASES.**

ROSS, Frank Alexander, retired, Thetford, Vt. **STATISTICS.**

ROSS, Frank Elmore, Mt. Wilson Observatory, Pasadena 4, Calif.

ROSS, Frederick William, Dev. Engr. Chrg. Rsch. and Dev. Bendix Aviation Corp., 261 McDougall St., Detroit, Mich. **AERODYNAMICS.**

ROSS, Harry Albert, Vice-Pres., Dir. Borden Co., 350 Madison Ave., New York, New York. **AGRICULTURE, SOCIAL ECONOMIC SCIENCES.**

ROSS, Helen Beaumont, Prof. of Biol., State Tchrs. Coll., Fitchburg, Mass. **BIOLOGY.** b. Feb. 21, 1915, Myerstown, Pa. d. Geo. Smith and Helen Louise (Boyd) R. Edn.: Normal Certificate, State Tchrs. Coll., W. Chester, Pa., 1934; B.A., Lebanon Valley Coll., Pa., 1943; M.A., Cornell Univ., 1947; Ph.D., ibid., 1949. Exp.: One Room Rural Schl., Jackson Twp., Pa., 1934-35; Grade Tchrr., Bethel Cons. Schl., Berks Co., Pa., 1935-42; Geog. and Art, Lebanon City Schls., Pa., 1942-43; Geog. and Sci., Harding Jr. H. S., Pa., 1943-45; Sci., Harding Jr. H. S., Lebanon, Pa., 1945-46; Asst., Cornell Univ., Dept. of Rural Edn., 1947-49; Instr., Cornell Univ., Summer, 1949, 1950; Assoc. Prof., Biol., State Tchrs. Coll., Fitchburg, Mass., 1949-51; Prof., ibid.,

1951—. Mem.: Amer. Nat. Study Soc.; N.C.-E.S.; Pi Lambda Theta; Phi Kappa Phi; A.A.-A.S.; etc. Author: Cornell Rural Schl. Leaflet, Spring, 1948; Apple Tree Animals. Ph.D. Dissertation: Conservation Edn. in the Elem. Schls. of the U. S. Hobbies: Camping; Outdoor Activities.

ROSS, Robert Trowbridge, Consulting Psychologist. **CONSULTING PSYCHOLOGY.**

ROSS, Victor, Res. Assoc., Columbia Univ., New York, N. Y. **BIOCHEMISTRY.**

ROSS, William Harold, Assist. Prof., Mass. St. Coll., Amherst, Mass. **PHYSICS.**

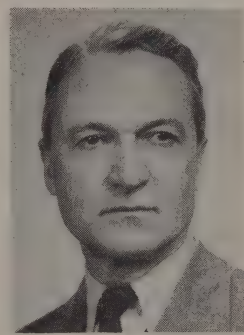
ROSSANDER, Swanie Sigurd, Major Div. Hd., E. I. du Pont de Nemours and Co., Inc., Deepwater, N. J.

ROSSBACHER, Henry John, Engr. Manufacture, Western Electric Co., 100 Central Ave., Kearny, N. J. **ENGINEERING.**

ROSSBY, Carl-Gustaf, Inst. of Meteorol., Univ. of Chicago, Chicago 37, Ill.

ROSSER, Barkley, Cornell Univ., Ithaca, N. Y. **MATHEMATICS.**

ROSSI, Bruno, Prof. of Physics, Room 6-311, Mass. Inst. of Tech., Cambridge, Mass. **COSMIC RAYS.**



b. Venice, Italy, Apr. 13, 1905. s. Rino and Lina (Minerbi) R. Edn.: Univ. of Padua; Ph.D., Univ. of Bologna, 1927. m. Nora Lombroso, Apr. 10, 1938. c.: Florence; Frank; Linda. Exp.: Asst., Univ. of Florence, Italy, 1928-32; Prof. of Physics, Univ. of Padua, Italy, 1932-38; Rsch. Fellow, Univ. of Manchester, Eng., 1938-39; Rsch. Assoc., Univ. of Chicago, 1939-40; Assoc. Prof., Cornell Univ., Ithaca, N. Y., 1940-43; Staff Mem., Los Alamos Lab., Los Alamos, N. Mex., 1943-46; Prof. of Physics, Mass. Inst. of Tech., 1946—. Mem.: Natl. Acad.; Amer. Acad.; Amer. Phys. Soc.; A.A.A.S.; Amer. Assn. Phys. Tchrs.; Soc. Sigma Xi. Author: Rayons Cosmiques, 1935; Ionization Chambers and Counters, with H. Staub, 1949; High-Energy Particles, 1952. Contrb. to: Phys. Rev.; Zeits. f. Phys.; Nuovo Cimento; Nature; Rev. Modern Phys., etc. Special Int.: Cosmic Rays; High-Energy Particles.

ROSSIN, Edgar L., Vice-Pres. Miami Copper Co. 61 Broadway, N. Y., N. Y. **MINING GEOLOGY.**

ROSSINI, Frederick Dominic, Carnegie Inst. of Tech., Pittsburgh 13, Pa.

ROSSMAN, Joseph, Patent Attorney 1820 Jefferson Place, N. W., Washington, D. C. **CHEMISTRY.**

ROST, Clayton Ord, Prof. and Chief Div. Soils, Univ. Minn., Univ. Farm, St. Paul, Minn. **SOIL CHEMISTRY, SOIL SCIENCE.**

ROTH, William Edward, Prof. of Math., 2808 E. Admiral Blvd., Tulsa 4, Okla. **MATRIC ALGEBRA.** b. Chicago, Ill., June 18, 1890. s. John J. and Emma D. (Pagenkopf) R. Edn.: B.A., Univ. of Wis., 1915; Ph.D., ibid., 1928. m. Marguerite (Vogel) R., May 6, 1948. Exp.: Tchrr., Univ. of Ill., Urbana, Ill., 1915-16; Tchrr. High Schl., Ill., 1916-17; Private, World War I, 1917-19; Lieutenant FA Wis. National Guard, 1925-37; Captain 1939-43; Tchrr., Urbana, Ill., 1920-25; Instr., Univ. of Wis., Milwaukee, Wis., 1925-28; Asst. Prof., ibid., 1928-37; Assoc. Prof., ibid., 1937-42; Lab. Technician, Bendix Av. Corp., Elmhurst, Calif., 1942-46; Prof. of Math. Sampson Coll., Sampson, N. Y., 1946-49; Prof. Univ. of Tulsa, Tulsa, Okla., 1949—. Mem.: Amer. Math. Soc.; Phi Beta Kappa; Sigma

XI. Contbr.: Transactions of the Amer. Math. Soc.; London Math. Soc. Proceedings. Special Int.: Matric Algebra.

ROTARIUS, Edward M., Med. Dir. of Parke, Davis and Co., Detroit 32, Mich.



INDUSTRIAL MEDICINE. b. Detroit, Mich., June 25, 1905. s. Peter and Amelia (Hintz) R. Edn.: B.S., Univ. of Detroit, 1925; M.B., Wayne Univ., 1929; M.D., ibid., 1930. m. Colette E. Chateau, Nov. 29, 1930. c.: Edward M.; Donald J.; Mary Colette. Exp.: Resident, Providence Hosp., Detroit, Mich., 1930-31; Staff, Detroit Bd. of Health, 1931-32; Staff, Parke, Davis and Co., Detroit, Mich., 1932—. Mem.: Detroit Industrial Physician's Club; Mich. Industrial Med. Soc.; Amer. Industrial Med.

Assn.; Wayne Co. Med. Soc.; Mich. State Med. Soc.; A.M.A.; Amer. Industrial Hygiene Assn.; Detroit Chapter of the Natl. Assn. of Catholic Physicians Guilds; Nu Sigma Nu; Pi Alpha Kappa; Knights of Columbus. Special Int.: Industrial Med.

ROTHER, Erich Hans, Assoc. Prof., Math., Univ. of Mich., Ann Arbor, Mich. **MATHEMATICS.** b. July 21, 1895, Berlin, Germany. s. Wilhelm and Else (Horwitz) R. Edn.: Wilhelms H. S., Berlin, Germany, 1913; Univ. of Munich, 1913-14; Technische Hochschule, Berlin-Charlottenburg, 1919; Univ. of Berlin, 1919-23; Ph.D., Univ. of Berlin, 1926. m. Hildegard Ille (dec.), of Berlin, Germany, 1928. d. Dr. Otto Ille. c.: Erhard. Exp.: Mommsen H. S., Berlin, 1926; Inst. for Applied Math., Univ. of Berlin, 1926-27; Technische Hochschule (Engr. Schl.), Breslau, 1927-35; Univ. of Breslau, Germany, 1931-35; Wm. Penn Coll., Oskaloosa, Ia., 1937-43; Univ. of Mich., 1943—; Promoted to Assoc. Prof., 1949. Mem.: Amer. Math. Soc.; Math. Assn. of Amer.; A.A.A.S.; Ia. Acad. of Sci.; Sigma Xi. Co-author of Frank-Mises, Die Differential und Integralgleichungen der Mechanik und Physik, 1930, republished, N. Y., 1943. Contbr. to: Math. Rev. of Amer. Math. Soc. and Various Math. Jours. Ph.D. Dissertation: Über einige Analogien zwischen linearen partiellen und linearen gewöhnlichen Differentialgleichungen, Math. Zeitschrift, Vol. 27. War Record: 1914-18. Dismissed as Lt., 1918. Special Int.: Boundary value Problems and Functional Analysis.

ROTHERMEL, Julia Elizabeth, Prof. of Biol., Western Coll., Oxford, Ohio. **BIOLOGY.** b. June 4, 1898, Reading, Pa. d. John P. and Sallie (Kehl) Bechtel R. Edn.: A.B., Mt. Holyoke Coll., 1920; M.A., Cornell Univ., 1925; Ph.D., ibid., 1928. Exp.: Instr. Biol., Agnes Scott Coll., 1920-24; Asst. in Hist. and Embryol., Cornell Univ., 1925-27; Instr. ibid., 1927-28; Assoc. Prof. Biol., Western Coll., 1928-29; Prof. Biol., ibid., 1929—. Mem.: Sigma Xi; Sigma Delta Epsilon; A.A.A.S., Fellow; Ohio Acad. of Sci., Fellow; A.G.A.; A.A.U.W.; A.A.U.P. Author: A Lab. Manual for Gen. Biol. (with Lucy J. Watt). Ph.D. Dissertation: A Developmental Study of the Medical Retropharyngeal Lymphatic Node of the Calf (Bos taurus). Travel: N. Amer.; Europe. Hobby: Music. Listed in: A.M.S.; Amer. Women; Who's Who in the Midwest.

ROTHMAN, Stephen, Univ. of Chicago, Chicago, Ill. **DERMATOLOGY, BIOCHEMISTRY.**

ROUP, Rolland, Globe-Union, Inc., 900 E. Keefe Ave., Milwaukee 1, Wis. **CERAMICS.**

ROUS, Francis Peyton, Rockefeller Inst. for Med. Rsch., 66th St. and York Ave., N. Y. 21, N. Y.

ROUSE, John Thomas, Regional Geologist, Magnolia Petroleum Co., P. O. Box 900, Dallas, Tex. **PETROLEUM GEOLOGY.**

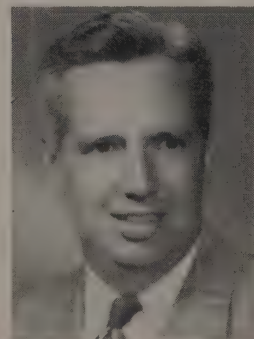
ROUSSEAU, Jacques, Dir., The Montreal Botanical Garden, 4101 Sherbrooke St. E., Montreal, Que., Canada. **PHYTO-GEOGRAPHY, PLANT TAXONOMY, ETHNOLOGY.** b. St. Lambert, Chambly Co., P. Q., Can., Oct. 5, 1905. s. Lacasse and Gabrielle (Fafard) R. Edn.: B.A., Université de Montreal, 1926; Licence es sciences, ibid., 1928; D.Sc., ibid., 1934. m. Madeleine Aquin, July 17, 1934. c.: Lise; Francois; Jerome. Exp.: Asst., Dept. of Botany, Univ. of Montreal, 1928-35; Assoc. Prof. (Professeur Agregé) Institut Botanique, ibid., 1935-44; Asst. Director of Montreal Botanical Garden, 1938-44; Director, ibid., 1944—. Honorary Pos.: Societe Royale du Can.; Institut Polonais des Arts et des Sciences en Amerique; Fellow, Arctic Inst.; Prix Henri de Parville, Academie des Sciences, Paris, 1949; Medaille Marie-Victorin, 1951; Medaille Isidore Geoffroy-St.-Hilaire, 1952. Mem.: Fellow, A.A.A.S.; Amer. Soc. Plant Taxonomists; Assn. Canadienne de Conservation; Champlain Soc., Toronto; Fellow, Amer. Geographical Soc.; Soc. for the Study of Evolution; Amer. Polar Soc.; Societe botanique de France; Amer. Anthropol. Assn.; Amer. Folklore Soc.; Internatl. Assn. for Plant Taxonomy; Societe des Americanistes, Paris; Ecol. Soc. Amer.; Assn. canadienne des geographes; Torrey Botanical Club. Contbr. to: Concordia; Le Jeune Naturaliste; Rhodora; etc. Special Int.: Mainly in the Estuary and on the Gulf of St. Lawrence, in the Arctic and Subarctic Parts of the Quebec-Labrador Peninsula.



ROUTH, Joseph I., Professor of Biochem., Univ. Hosp., Iowa City, Iowa. **CLINICAL BIOCHEMISTRY.** b. May 8, 1910, Logansport, Ind. s. Wm. Arthur and Ethel Marie (Etnire) R. Edn.: B.S., Ch.E., Purdue Univ., 1933; M.S., ibid., 1934; Ph.D., Mich., 1937. m. Dorothy Frances Hayes of Sagola, Mich., Sept. 4, 1937. d. Dr. and Mrs. R. E. Hayes. c.: Joseph Hayes. Exp.: Asst. in Chem., Purdue Univ., 1934; Asst. in Biochem., Univ. of Mich., 1934-37; Instr. in Biochem., State Univ. of Ia., 1937-42; Asst. Prof. of Biochem., ibid., 1942-46; Assoc. Prof., ibid., 1946-51; Prof., ibid., 1951—. Mem.: A.C.S.; Sigma Xi; Soc. for Exp. Biol. and Med.; Amer. Soc. of Biol. Chem.; Phi Gamma Delta; Gamma Alpha; Alpha Chi Sigma; Phi Lambda Upsilon. Author: Fundamentals of Inorganic, Organic and Biochem., 1945. Contbr. to: Archives of Biochem.; Jr. of Biol. Chem.; Jour. of A.C.S.; Jour. of Nutrition. Ph.D. Dissertation: Chem. Studies of the Keratin of Wool and Its Reduction Products, the Keratines. Special Int.: Electrophoretic Studies on Proteins of Plasma, Serum, and Body Fluids from Normal Individuals and Those with Various Diseases. Studies on salicylate metabolism. Listed in: A.M.S.

ROWE, Stanley M., BOTANY.

ROWLAND, James L., Assoc. Prof. of Preventive Med. and Public Health, Kans. City Coll. of Osteopathy and Surgery, Kansas, City, Mo. **PREVENTIVE MEDICINE AND PUBLIC HEALTH, SANITATION.** b. Ft. Smith, Ark., Aug. 20, 1917. s. James L. and Sallie (Biggs) R. Edn.: B.S., Central Coll., 1940; M.S.P.H., Loyola Univ., 1943. m. Eva Louis Squire, 1942. c.: Marcile Suzanne; James Gregory. Exp.: Chief of Sanitation, Oak Park Bd. of Health; Oak Park, Ill., 1941-43. Milk and Food Consultant, U. S. Public Health Service, Dallas, Tex., 1943-46; Sanitation Consultant, Acting Health Officer for Central Fla.



Consultant, Acting Health Officer for Central Fla.

Health District, Fla. State Board of Health, Ocala, Fla., 1946-48; Director, Missouri Division of Health, Kansas City, Mo. 1952—. Mem.: Milk and Food Sanitation; Amer. Assoc. of Food and Drug Officials; Natl. Assoc. of Sanitations; Natl. Chmn., Conf. of Interstate Milk Shipments; Phi Sigma Gamma. Author: New Approach to Food Handler Training, 1950. Contrb. to: Jour. of Amer. Public Health; Milk and Food Tech.; The Sanitarian; Government Publications. Gen. Int.: Help Bring About a Condition That Will Bring A Better Milk Supply to All the People of the U. S. Special Int.: Sanitation, Public Health Edn.; Public Health Administration.

ROWLAND, Roger W., Newcastle Refractories Co., New Castle, Pa. CERAMICS.

ROY, Arthur J., retired, 369 Morris St., Albany, N. Y. ASTRONOMY.

ROYAL, Herbert F., 845 Pilgrim, Birmingham, Mich. CERAMICS.

ROYCE, Stephen, Consulting Geologist, Pickands, Mather and Co., 2000 Union Commerce Bldg., Cleveland, Ohio. MINING ENGINEERING, GEOLOGY.

ROZEBOOM, Lloyd Eugene, Assoc. Prof. Parasitology, Johns Hopkins Schl. Hygiene and Public Health, 615 N. Wolfe St., Baltimore, Md. ENTOMOLOGY.

RUARK, A. E., Univ. of Ala., University, Ala. PHYSICS.

RUBEY, Harry, Chmn., Civil Engrng. Dept., Univ. of Mo., Columbia, Mo. CIVIL ENGINEERING. b. St. Louis, Mo., Feb. 23, 1886. s. Thomas T. and Flora Vivian Rubey. Edn.: B.S. in C.E., Univ. of Ill., 1905; C.E., Univ. of Ill., 1925. m. Maude Harden, 1912 (dec.). c.: Thomas Harden, Mildred Bartlett. 2nd Marriage, Ann Todd, St. Louis, Mo., 1948. Exp.: Engrng. Practice, 1905-15; Asst. and Assoc. Prof. of Civil Engrng., Univ. of Wash. and Carnegie Inst. Tech., 1915-24; Prof. and Chmn., Civil Engrng., Acting Dean, Univ. of Mo., 1924—; Dir. Naval Trng. Schl. and E.S.M.W.-T., 1942-43, Univ. of Mo., Varied Engrng. Practice, 1951—. Mem.: A.S.C.E.; Past Pres., Mid-Mo. Sect.; A.S.E.E.; Past Mem. Council, Chmn., Civil Engrng. Div., 1950-51; Phi Kappa Psi; Tau Beta Pi; Chi Epsilon; Univ. Club (Columbia, Mo.); Adv. Com. to Congress on Flood Control, 1927; Consultant, Natl. Resources Com., 1936-37. Author: Ind. Organization, Ginn, 1931; Engrng. Surveys, Macmillan, 1934-40-50; Route Surveys, Macmillan, 1938-51; Applied Engrng. Surveys, Macmillan, 1941-50; The Engr. and Management, Lucas, 1950-53; Supplemental Irrigation, Univ. Mo., 1945-47-50-53. Contrb. to: Technical Press. Travel: Europe; Mexico; Alaska. Listed in: Who's Who in Amer.; Who's Who in Engrng.; Internatl. World Who's Who; A.M.S.; Who's Who in Industry; Who's Who in Mid-west; Who Knows—What; World Biography. Special Int.: Management Construction, Supplemental Irrigation, Engrng. Surveys.

RUBEY, William Walden, Geol. Survey, U. S. Dept. of the Interior, Washington 25, D. C.

RUBIN, Ernest, Professorial Lectr. in Statistics, Amer. Univ., Wash., D. C. APPLIED STATISTICS. b. New York, N. Y., May 14, 1915. s. George and Louise (Weinstein) R. Edn.: B.S., Coll. of the City of New York, 1937; M.A., ibid., 1938; Ph.D., Columbia Univ., 1947. m. Mary Villon, Oct. 15, 1934. c.: George; Eleanor; Michael. Exp.: Rsch. Analyst, Immigration and Natl. Serv., Philadelphia, Pa., 1943-48; Review Editor, Jour. of Amer. Assn., Washington, D. C., 1949-50; Rsch. Assoc., Natl. Bureau of Economic Rsch., New York, N. Y., 1948-51; Professorial Lectr. in Statistics; Chief, East European Sect., O.I.T., Dept. of Commerce, Washington, D. C., 1951—. Mem.: Inst. for Math. Statistics; Amer. Statistical Assn. Contrb. to: Jour. of Amer. Econ. Special Int.: Design of Schedule and Sample Practice.

RUBIN, Isidor C., STERILITY.

RUBINSTEIN, Hyman Solomon, Consultant Psychiatrist, U. S. District Court; 2349 Eutaw Pl., Baltimore, Md. NEURO-PSYCHIATRY.

RUBY, Charles Ernest, Chem. Engrs. and Patent Attorney, 38 Westland Ave., Boston, Mass. INDUSTRIAL CHEMISTRY.

RUCKER, Augusta, 159 East 37th St., New York, N. Y. HEALTH EDUCATION.

RUCKES, Herbert, Prof. Dept. Biology, City Coll. New York, N. Y., N. Y. ENTOMOLOGY.

RUDD, Wortley Fuller, Prof. and Dean Pharmacy, Med. Coll., Va., Richmond, Va. CHEMISTRY.

RUDENBERG, R., Prof. of Harvard Univ., Cambridge, Mass. ELECTRICAL ENGINEERING.

RUDER, William Ernst, Consulting Engr., 1674 Rugby Rd., Schenectady, N. Y. METALLURGY AND MAGNETIC MATERIALS. b. Stockdale, Pa., Dec. 22, 1886. s. Ernst and Mary Sidonia (Mehner) R. Edn.: B.S., Pa. State Coll., 1907. m. Nellie S. Veenschoten, July 20, 1911. c.: William E., Jr. (dec.); Mary; Richard. Exp.: Rsch. Lab., General Electric Co., Schenectady, N. Y., 1907-52; retired as Mgr. of Metallurgical Dept., ibid., 1952—; Consulting Engr., Technical Advisor, Minerals and Metals Advisory Bd., 1952—. Mem.: A.S.M.; A.A.A.S.; Iron and Steel Inst.; Amer. Inst. Min. and Met. Engrs.; Theta Xi. Gen. Int.: About 20 Patents in Metallurgy and Magnetic Materials Fields. Special Int.: Heat Resisting Alloys; High Temperature Alloys; Magnetic Materials (soft) and Permanent Magnets.

RUDNICK, Dorothea, Assist. Prof., Albertus Magnus Coll., 700 Prospect St., New Haven, Conn. EMBRYOLOGY.

RUDOLF, Paul Otto, Silviculturist, Lake States Forest Exp. Sta., Univ. Farm, St. Paul, Minn. SILVICULTURAL RESEARCH.

RUDOLFS, Willem, Chief Rsch. and Prof. Sanitation, Rutgers Univ., New Brunswick, N. J. SANITATION.

RUDOLPH, Bert Alexander, Assoc. Plant Pathologist, U. C. Deciduous Fruit Sta., 2675 Stevens Creek Rd., San Jose, Calif. PLANT PATHOLOGY.

RUDOLPH, Charles Eugene, Prof. Dentistry, Chmn. Div. Orthodontics and Dir. Grad. Clinic, Univ. Minn., Minneapolis, Minn. DENTISTRY.

RUEDEMANN, Rudolf, 161 Dana Ave., Albany 3, N. Y.

RUEDIGER, Ernest Henry, Pathologist, Fla. St. Hospital, Chattahoochee, Fla. PATHOLOGY.

RUEDY, John E., Physicist, R. C. A. Labs.; 23 Markham Rd., Princeton, N. J. ELECTRONIC PHYSICS.

RUEHE, Harrison August, Prof. Dairy Sci., Univ. of Ill., Urbana, Ill. DAIRY SCIENCE. b. June 26, 1888, Gilman, Ill. s. August Henry and Sarah (Williams) R. Edn.: B.S., Univ. of Ill., 1911; M.S., Univ. of Ill., 1916; Ph.D., Cornell Univ., 1921. m. Phoebe Olive Barni-Ph.D., Cornell Univ., 1921. m. Phoebe Olive Barnicoat, Quincy, Mass., Sept. 7, 1918. d. S. Henry and Eliza (Bailey) Barnicoat. c.: Harrison Barnicoat, Richard Williams. Exp.: Instr. in Dairy Mfg., Univ. of Calif., 1911-12; Instr. in Dairy Mfg., Univ. of Ill., 1912-14; Assoc. in Dairy Mfg., ibid., 1914-18; Asst. Prof., Dairy Mfg., ibid., 1918-21, Acting Hd., Dairy Husb., ibid., 1919-20; (on leave of absence, 1920-21; Prof. of Dairy Mfgs. and Hd. of Dept. of Dairy Husb., Univ. of Ill., 1921-45, on leave as Exec. Sec., Amer. Butter Inst., Chicago, Feb., 1943-Sept., 1945); Prof. of Dairy Sci., 1945—. Hon. Pos.: Apptd. Official St. Delegate to World's Dairy Congress, Wash., D. C., 1923; also to World's Dairy Congress, Copenhagen, Denmark, 1931; Assoc. Ed., Jour. of Dairy Sci., 1921-45. Mem.: Sigma Xi; Natl. Geog.; Amer. Dairy Sci. Assn. (Pres. 1935-36); Sigma Pi; Alpha Zeta; Sigma Xi; Gamma Sigma Delta; Phi Kappa Phi; Alpha Tau Alpha; Phi Sigma Soc.; Mason. Author: Many Bulls. of the Ill. Agri. Expt. Sta.; Many Articles in Dairy Trade Journals; Jour. of Dairy Sci. Contrb. to: Encyclopaedia Britannica; World Book Encyclopedia; Various Dairy Trade Jours.; Monthly

Bull. of Agri. and Sci., Pub. in Rome, Italy. Ph.D. Dissertation: A Study of the Effect of the Process of Mfg. upon the Germ Content of Bulk Condensed Milk. Travel: British Isles, Denmark, Germany, 1931; extensive travel in U. S. Devised method for inverting sugar for ice cream making which was widely used during the World War. In 1935, developed method for standardizing flavor in butter. Listed in: Who's Who in Amer.; Who's Who in Western Hemisphere; A.M.S.; Biog. Encyc. of the World. Special Int.: Dairy Chemistry, Dairy Bacteriology and Economics as Applied to the Manufacture and Marketing of all Dairy Products.

RUEHLE, George Dewey, Vice Dir. Chrg., Univ. Fla., Sub-Tropical Exp. Sta., Rt. 2, 508, Homestead, Fla. PLANT PATHOLOGY.

RUEHLE, William, Univ. of Calif., Berkeley, Calif. TECHNIQUES OF RADIOCHEMISTRY.

RUGAR, George F., Res. Chemist, Mgr., Diamond Alkali Co., Painesville, Ohio. ORGANIC CHEMISTRY.

RUGGLES, Arthur Gordon, Prof. Emer., Univ. of Minn., Minneapolis, Minn.; Union Springs, Ala.

RUGH, Roberts, Assoc. Prof. Biology, Washington Square Coll., New York Univ., New York, N. Y. EMBRYOLOGY.

RULE, John T., Assoc. Prof. and Chrmn., Sect., Graphics, Mass. Inst. Tech., Cambridge, Mass. STEROSCOPIC PHOTOGRAPHY.

RULON, G. Olin, Assoc. Prof. Zool., Northwestern Univ., Evanston, Ill. DEVELOPMENTAL PHYSIOLOGY.

RULON, Phillip Justin, Prof. Edn., Harvard Univ., Cambridge, Mass. EDUCATIONAL STATISTICS AND RESEARCH.

RUMSEY, V. H., Prof., Ohio State Univ., Columbus, Ohio. ANTENNA THEORY AND PRACTICE.

RUNGE, Lulu L., Assist. Prof. Math., Univ. Nebr., Lincoln, Nebr. MATHEMATICS.

RUNNING, Theodore Rudolph, Prof. Emer. Math., Univ. Mich., Ann Arbor, Mich.; 1019 Michigan Ave., Ann Arbor, Mich. MATHEMATICS.

RUPERT, Frank Finch, Chief Analyst, Mellon Inst. Industrial Rsch., 4500 Fifth Ave., Pittsburgh, Pa. PHYSICS, CHEMISTRY.

RUSDEN, Philip Lowry, U. S. Control Supr., U. S. D. A., 206 Federal Bldg., Cambridge, Mass. FOREST PATHOLOGY.

RUSH, Richard Irwin, Prof. Chem., Hd. Dept., Centre Coll., Danville, Ky. COLLOID CHEMISTRY.

RUSHMORE, Stephen, 520 Commonwealth Ave., Boston, Mass. OBSTETRICS, GYNECOLOGY.

RUSHTON, J. H., 5128 S. Hyde Park, Chicago 15, Ill. ENGINEERING.

RUSK, Henry Perly, Dean Coll., Univ. of Ill., Urbana, Ill. ANIMAL HUSBANDRY.

RUSK, Hester Mary, Instr., Brooklyn Botanic Garden, 1000 Washington Ave., Brooklyn, N. Y. LOCAL FLORA.

RUSK, Rogers D., Prof. Physics, Mt. Holyoke Coll., South Hadley, Mass. PHYSICS.

RUSOFF, Louis L., La. St. Univ., Univ., La. MEDICAL SCIENCE, AGRICULTURE.

RUSSELL, Carl Parcher, Yosemite National Park, Calif. ECOLOGY.

RUSSELL, Deborah Munro, Assist. Prof. Dept. Chem., St. Tehrs. Coll., Framingham, Mass. CHEMISTRY.

RUSSELL, Henry Norris, Princeton Univ., Princeton, N. J.

RUSSELL, Howard Willis, Chief Physicist, Battelle Mem. Inst., Columbus, Ohio. PHYSICS.

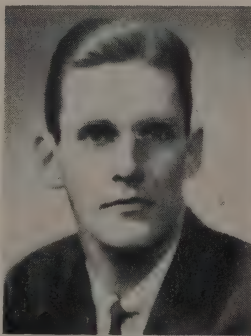
RUSSELL, O. Ruth, Prof. of Psychol.; Hd. Dept., Western Md. Coll., Westminster, Md. PSYCHOLOGY.



b. July 9, 1897, Delta, Ont., Can. d. Wm. A. and Alice A. (Henderson) R. Edn.: B.A., (Hon. Psychol.), Univ. of Toronto, 1931; Scholarship to Study in Scotland, 1931; Ph.D., Psychol., Univ. of Edinburgh, Scotland, 1935; H. S. Prin. Cert., Ont., 1940; Grad. Studies in Vienna, Austria, summer, 1932; Tehrs. Coll., Columbia Univ., 1941. Exp.: Prof. and Hd., Psychol. Dept., Western Md. Coll., 1949—; Assoc. Prof., Psychol., Winthrop Coll., S. C., Department of Veteran Affairs, Ottawa, Can., 1944-47; Personnel Selection Officer, Psychologist, Canadian Army, 1942-44; Teacher of Math. and Director of Guidance, Moulton Coll., Toronto, 1935-42; Research Asst., Dept. of Edn. Rsch., Univ. of Toronto, 1933-35; Prin., Elem. and Secd. Schl., Delta, Ont., 1922-28; Delegate from World Fed. of U. N. Assn. to Conf. of Internat. Fed. of Univ. Women, 1947; Can. Govt. Rep. to Inter-Continental Conf. of Natl. Councils of Women, 1946. Mem.: Gen. Coun. of Univ. of Edinburgh; Can. Psychol. Assn.; Amer. Psychol. Assn.; A.A.A.S.; A.A.P.S.S.; Soc. for Psychol. Study of Soc. Issues; A.A.U.P.; Internat. Coun. of Women Psychol., Fellow; Pi Lambda Theta; Pi Gamma Mu; A.A.U.W.; A.A.U.N. Contbr. to: Ednl. and Psychol. Jours. Ph.D. Dissertation: The Study of Factors Underlying the Intercorrelations of Verbal, Mathematical, and Form Perception Tests. War Record: On Active Service, Can. Army, 1942-44; Capt., Sr. Woman Psychol. Travel: Europe; N. Amer. Hobbies: United Nations. Listed in: A.M.S.; Amer. Psychol. Assn.; Who's Who in S. and S. W.; Internat. Blue Book. Special Int.: Testing and Social Psychology.

RUSSELL, Paul Farr, Staff International Health Div., Rockefeller Inst. 66th St. and York Ave., New York, N. Y. MALARIOLOGY.

RUSSELL, Ralston, Jr., Prof. of Ceramic Engrng., Lord Hall, Ohio State Univ., Columbus 10, Ohio.



CERAMIC ENGINEERING. b. Nov. 4, 1910, Pomeroy, Ohio. s. Ralston and Helen Brown (Lindsey) R. Edn.: B.Cer.E., Ohio State Univ., 1932; M.Sc., ibid., 1933; Ph.D., ibid., 1939; Cer. Engr., ibid., 1948. Exp.: A.C. Spark Plug Div., Gen. Motors Corp., Flint, Mich., Rsch. and Development Engr., 1933-37; Gen. Ceramics Co., Keasbey, N. J., Ceramic Engr., 1937; Engrng. Expt. Sta., Ohio State Univ., Columbus, Ohio, Rsch. Engr., 1937-40; Westinghouse Elec. Corp., E. Pittsburgh, Pa., Dir. of Ceramic Rsch., 1940-46; U. S. Govt., For. Econ. Admin., Sci. Consult., 1945-48; Ohio State Univ., Prof. of Ceramic Engrng., 1946—. Hon. Pos.: Sec.-Treas., Vice-Pres., and Pres. Int. Ceramic Engrs.; Trustee, Amer. Cer. Soc., Chmn., Mem. Comm., Amer. Ceramic Soc.; Vice-Chmn., and Chmn. of Whitewares Div. of Amer. Ceramic Soc.; Exec. Comm. of A.S.T.M.—C21. Mem.: Fellow, Amer. Cer. Soc.; Amer. Chem. Soc.; Amer. Soc. for Testing Materials; British and Canadian Cer. Soc.; Amer. Soc. for Engrng. Edn.; Inst. of Cer. Engrs.; Natl. Soc. of Professional Engrs.; A.A.A.S.; Confer, Elec. Insulation; Ohio Cer. Ind. Assn.; Penna. Cer. Assn.; Sigma Xi; Tau Beta Pi; Phi Delta Theta; Techniki; Sphinx; Phi Eta Sigma; Varsity O. Assn.; Ohio State Univ. Alumni Assn. Author:

The Electrical and Technical Ceramic Industry of Germany. Contrb. to: Ceramic Age; Ceramic Industry; Jour. Amer. Ceramic Soc.; Bull. Amer. Ceramic Soc. Ph.D. Dissertation: The Development of Super Duty Refractories from Ohio, Pa. and Ky. Fire Clays. War Record: Service as Sci. Consult. in England and Germany for U. S. Travel: U. S.; Canada; England; France; Germany; Austria. Gen. Int.: Tech. Articles; Several U. S. and For. Patents. Hobbies: Sports; Travel. Listed in: Who's Who in Engrng.; Who's Who in Amer.; Who Knows—and What; A.M.S.; Dir. of Amer. Scholars; Internatl. Blue Book. Special Int.: General Ceramic Engrng. and Technology; White-ware; Refractories; Structural Clay Products; Technical Ceramics; Electrical Ceramics; Porcelain and China; Glazes and Colors; Ceramic Raw Materials and Processes; Ceramic-Metal Seals.

RUSSELL, Richard Joel, Assist. Dir. Schl. Geology, La. St. Univ., Baton Rouge, La. **PHYSICAL GEOGRAPHY.**

RUSSELL, William Low, Prof. Geol., Tex. A. and M. Coll., Coll. Sta., Tex. **GEOLOGY.** b. New Haven, Conn., Dec. 20, 1897. s. Talcott H. and Geraldine (Low) R. Edn.: B.A., Yale Univ., 1920; M.S., *ibid.*, 1922; Ph.D., *ibid.*, 1927. m. Leonore K. Schuppert of Oxford, Ohio, January 11, 1936. d. Mr. and Mrs. W. L. Schuppert, c.: Wm. Hart; Philip Low. Exp.: Geol., Tidewater Oil Co., 1935-38; Geol. Work in S. Africa for Standard Vacuum Oil Co., 1938-40; Geol. for Well Surveys, Inc., 1940-43; Stanolind Oil and Gas Co., 1943-46; Assoc. Prof. of Geol., Tex. A. and M. Coll., 1946-51; Prof., *ibid.*, 1951—. Mem.: Soc. of Econ. Geol.; Fellow, Geol. Soc. of Amer.; Amer. Assn. of Petrol. Geol.; Phi Beta Kappa; Sigma Xi; Tau Beta Pi. Author: Principles of Petroleum Geol., 1951. Contrb. to: Amer. Assn. Pet. Geol. Bull.; Econ. Geol. Ph.D. Dissertation: Structure and Stratigraphy of Cretaceous of W. S. Dak. Travel: S. Africa; Canada. Hobbies: Canoeing; Hiking. Special Int.: Prospecting for Uranium, Measuring Radioactivity, Radioactivity Well Logs, Regional Alteration.

RUSSELL, William Polk, Prof. Emer., Math., Pomona Coll., Claremont, Calif., P. O. Box 13, Claremont, Calif. **MATHEMATICS.**

RUSSELL, William Walker, Assoc. Prof., Brown Univ., Providence, R. I. **CHEMICAL ANALYSIS.**

RUSSUM, Benjamin Carl, Prof. Pathol. and Bacteriol., Creighton Univ., Omaha, Nebr. **PATHOLOGY.**

RUST, William Monroe, Jr., Hd., Geophysics Res. Div., Humble Oil and Refining Co., P. O. Box 2180, Houston, Tex. **GEOPHYSICS.**

RUTENBER, Charles B., Prof. Chem., Elmira Coll., Elmira, N. Y. **PHYSICAL AND PHYSIOLOGICAL CHEMISTRY.**

RUTH, Burrell Franklin, Prof. Chem. Engrng., Iowa State Coll., Ames, Iowa. **CHEMICAL ENGINEERING.**

RUTHERFORD, Berneice R., **SPEECH AND HEARING.**

RUTHVEN, Grant Alexander, Pres., Univ. Michigan, Ann Arbor, Mich. **HERPETOLOGY.**

RUTLEDGE, Ray W., Assoc. Prof. of Botany, Clemson Agri. Coll., Clemson, S. C. **BOTANY.**

RYAN, Joseph Dennis, Asst. Dir. Res., Libbey-Owens-Ford Glass Co., 1701 E. Broadway, Toledo. **CHEMISTRY.**

RYAN, Mary Hilaire, Prof. Biol., Rosary Coll., River Forest, Ill. **PATHOLOGY.**

RYAN, Will Carson, Hd. Dept. Edn., Univ. North Carolina, Chapel Hill, N. C. **EDUCATION.**

RYBERG, Milton E., Comdr., U.S.N.R., Southeastern Forest Expt. Sta., Univ. of Fla. Industrial and Engrg. Expt. Sta., Gainesville, Fla. **BIOCHEMISTRY.**

RYDER, Frederick L., Section Hd., Du Mont Labs., Passaic, N. J., 50 Harrison Ave., Lynbrook, L. I., N. Y. **STRUCTURAL THEORY, ELECTRICAL NETWORK THEORY, ANALOG COMPUTERS, FIRE CONTROL.** b. N. Y. City, Mar. 30, 1912. Edn.: B.S.E.E., N. Y. Univ., 1938; M.M.E., Poly. Inst. of Brooklyn, 1947; D.Eng.Sc., N. Y. Univ., 1951. m. Sarah Gretney, June 3, 1942. c.: Franklin; Charlotte. Exp.: Mech. Engr., Navy Yard, N. Y. City, 1938-44; Proj. Engr., Norden Labs. Corp., N. Y. C., 1944-45; Chief Mech. Engr., Munston Corp., N. Y. C., 1945-47; Dev. Engr., Arma Corp., Brooklyn, N. Y., 1947-48; Sr. Analyst, Perkin-Elmer Corp., Norwalk, Conn., 1948-50; Asst. to Tech. Dir., Amer. Hydromath Corp., N. Y. C., 1950-52; Section Hd., Du Mont Labs., Passaic, N. J., 1952—. Mem.: Iota Alpha; Sigma Xi; Community Forum. Contrb. to: A Rational Explanation of Column Behavior, Proc. A.S.C.E., The Overstrength of Short Bending Members; Network Analysis by Least Power Theorems; Elec. Analogs of Statically Loaded Structures.



RYDER, Robert Morgan, Technical Staff, Bell Telephone Labs., 463 West St., New York, N. Y. **PHYSICS.**

RYERSON, Knowles A., Assist. Dean and Prof. Expt. Station; Univ. of Calif., Davis, Calif. **HORTICULTURE.**

RYGG, George Leonard, Assoc. Physiologist, U. S. D. A., 209 Federal Bldg., Pomona, Calif. **PLANT PHYSIOLOGY.**

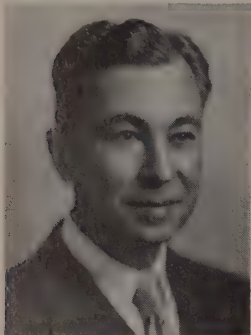
RYLAND, Garnett, Prof. Emer., Univ. Richmond, Richmond, Va. **CHEMISTRY.**

SAALBACH, Louis, Prof. Emer., Univ. Pittsburgh, Pittsburgh, Pa. **PHARMACY.**

SABIN, Albert Bruce, The Children's Hosp. Rsch. Foundation, Elland Ave. and Bethesda, Cincinnati 29, Ohio.

SABIN, Florence Rena, 1333 E. 10th Ave., Denver 3, Colo.

SACCO, Paul, Agril. Dir., St. Ambrose Coll., Davenport, Iowa. **PLANT NUTRITION, AGRICULTURE, BIOLOGICAL CHEMISTRY.**



1946—. Hon. Pos.: Vice Pres., Natl. Catholic Rural Life Conf.; Treas., Natl. Com. on Religion and Rural Life; Dir., Iowa Rural Fellowship Conf. Mem. Botanical Soc.; Amer. Phytopathological Soc. Special Int.: Effect of Nutrition Upon the Resistance—Susceptibility to Pathogenic Organisms in Plants; Plant Hormones.

SACHS, Ernest, Prof. Neurological Surgery, Washington Univ., St. Louis, Mo. **NEUROLOGICAL SURGERY.**

SACHS, George, Rsch. Prof., Dir. of Metallurgical Rsch., Inst. of Indus. Rsch., Syracuse Univ., E. Syracuse 4, N. Y. **METALLURGY.**

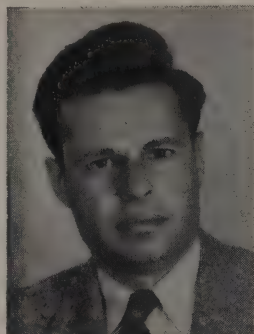


b. Moscow, Russia, Apr. 5, 1896. s. Siegfried and Clara (Hirschmann) S. Edn.: Engineering Coll., Berlin, Germany, 1920 Dipl. Eng.; Dr. Eng., ibid., 1923. m. Liselotte Lehmann, Oct. 18, 1924. c.: Peter; Maria; Rainer. Exp.: Tchng. Rsch., Mech. Dept., Engrng. Coll., Germany, 1921-23; Metallurgical Engineer, Metallgesellschaft, Frankfurt, Germany, 1923; Rsch., Kaiser Wilhelm Inst. for Metals Rsch., Berlin, Germany, 1924-30; Dir. of Rsch., Metallgesellschaft, Germany, 1930-35; Vice-Pres., Duerener Metallwerke, Germany, 1935-36; Hd., Contact Dept., Baker and Co., Inc., Newark, N. J., 1936-39; Prof. of Phys. Metallurgy, Case Inst. of Tech., Cleveland, Ohio, 1939-48; Dir., Rsch. Lab. for Mech. Metall., 1947-48; Dir., Indian Natl. Metallurgical Lab., India, 1948-49; Vice-Pres., Horizons, Inc., Cleveland, Ohio, 1950-52; Dir. Metallurgical Rsch., Inst. of Indus. Rsch., Syracuse Univ., N. Y., 1952—. Mem.: Sigma Xi; Tau Beta Pi; Max Planck Ges. Author: Mech. Tech., 1930; Practical Metallurgy, 1933-36; Practical Metallurgy, 1940; Forming of Austenitic Chromium-Nickel Steels, 1948; Sheet Metal Fabricating, 1951; Theory of Plasticity, co-author, 1952.

SACHS, Ward Hanson, Ammonia Dept., E. I. du Pont de Nemours and Co., Inc., Orlando, Fla. **AGRONOMY.**

SADLER, Herbert Charles, Dean Emeritus, Univ. of Mich.; 1510 Hill St., Ann Arbor, Mich. **MARINE ENGINEERING.**

SACKS, Lawrence Edgar, Bacteriologist, Western Regional Rsch. Lab., Albany, Calif. **MICROBIOLOGY.**



b. Los Angeles, Calif., Mar. 9, 1920. s. Harry L. and Nettie (Hain) S. Edn.: A.B., Univ. of Calif. at Los Angeles, 1941; M.S., Univ. of Wash., 1943; Ph.D., Univ. of Calif., 1948. Exp.: Tchng. Fellow, Bacteriol. Dept., Univ. of Wash., Seattle, Wash., 1941-43; Asst. Bacteriologist, Comm. on Lignin & Cellulose Rsch., Seattle, Wash., 1944; Rsch. Asst., Univ. of Calif., 1945-48; Bacteriologist, Western Regional Rsch. Lab., Albany, Calif., 1949—. Mem.: Sigma Xi; Soc. Amer. Bacteriologists; A.A.A.S. Contrb. to Jour. of Bacteriol.; Proc. Soc. for Exptl. Biol. and Med.; Antibiotics and Chemotherapy. Special Int.: Bacterial Metabolism and Physiol.; Action of Germicides and Antibiotics on Bacteria.

SADLER, William Samuel, 533 E. Diversey Pkwy., Chicago, Ill. **PSYCHIATRY.**

SAEGER, Albert Carl, Assoc. Prof. Biology, Univ. Kansas City, 5100 Rockhill Rd., Kansas City, Mo. **BACTERIOLOGY.**

SAFFER, Alfred, Dir. of Rsch., Sci. Design Co., Inc., Two Park Ave., N. Y. 16, N. Y. **PHYSICAL ORGANIC CHEMISTRY.**



b. N. Y., N. Y., Dec. 3, 1918. s. Louis and Ruth (Mirkis) S. Edn.: A.B., N. Y. Univ., 1939; M.S., ibid., 1941; Ph.D., ibid., 1943. m. Ruth Rudow, Jan. 31, 1942. c.: Anita Carolyn; Martin Kenneth. Exp.: Grad. Asst. in Chem., N. Y. Univ., N. Y. C., 1939-42; Rsch. Assoc., Princeton Univ., Princeton, N. J., 1943-45; Sr. Rsch. Chem., Firestone Tire and Rubber Co., Akron, Ohio, 1945-48; Dir. of Rsch., Sci. Design Co., Inc., N. Y., N. Y., 1948—. Mem.: Sigma Xi; Phi Lambda Upsilon; Amer. Chem. Soc. Contrb. to Jour. Amer. Chem. Soc.; Indus. Engrng. Chem. Special Int.: Fixed Bed and Fluid Catalysis. Oxidation of Hydrocarbons, Structure of Natural and Synthetic Polymers, Reactions of Free Radicals.

SAFRANSKI, Leo Walter, Chemist, E. I. du Pont de Nemours and Co., Wilmington 98, Del. **CHEMISTRY.**

b. Kenosha, Wis., Oct. 20, 1915. s. John and Josephine (Luzekiewicz) S. Edn.: B.S., Univ. of Wis., 1937. m. Renata Ludwig, Apr. 12, 1947. c.: Gerald Lee. Exp.: Chemist, Monsanto Chem. Co., Anniston, Ala., 1937-38; Tchng. Asst., Univ. of Minn., Minneapolis, Minn., 1938-42; Rsch. Assoc., Univ. of Chicago, Chicago, Ill., 1942-44; Supvr. of Analytical Rsch. Group, Hanford Engr. Works, 1945; Chemist, E. I. du Pont de Nemours and Co., Wilmington, Del., 1946—. Mem.: Amer. Chem. Soc.; Phi Beta Kappa; Phi Eta Sigma; Phi Lambda Upsilon. Special Int.: Development of Analytical Methods for Organic and Inorganic Chem. Analysis. Polarography, Aging of Precipitates, Surface Area Measurements, Kinetics of Crystallization.

SAGE, Bruce H., 1201 E. Calif. St., Pasadena 4, Calif. **CHEMICAL ENGINEERING.**

SAGUE, Mary L. Landon, Prof. Emeritus of Chem., Vassar Coll., 42 Barnard Ave., Poughkeepsie, N. Y. **CHEMISTRY.**

b. Burlington, Vt., Sept. 29, 1885. d. Sealand Whitney and Helen Frank (Weeks) Landon. Edn.: A.B., Vassar Coll., 1907; M.A., Columbia Univ., 1914; Ph.D., ibid., 1920. Hon. Deg.: D.Sc., Middlebury Coll., 1946. m. James

Edward Sague, June 14, 1928. c.: Isobel (step-daughter). Exp.: Tchrr., H. S., Brodowntown, N. J., 1907-08; Asst. in Chem., Vassar Coll., Poughkeepsie, N. Y., 1908-10; Instr., *ibid.*, 1910-13; 1914-17; Asst. Prof., *ibid.*, 1919-24; Assoc. Prof., *ibid.*, 1924-28; Prof., *ibid.*, 1928-52; Chmn. of Dept., *ibid.*, 1924-51; Emeritus Prof., *ibid.*, 1952—. Hon. Pos.: Pres., Community Chest; Pres., Family Welfare Assn.; Pres. and Founder of the Poughkeepsie Branch, A.A.U.W.; Chmn., Mid-Hudson Section of Amer. Chem. Soc. Mem.: Amer. Chem. Soc.; Biochemical Soc. (England); Fellow, A.A.A.S.; Fellow, Amer. Institute of Chemists; A.A.U.W.; Sigma Xi. Contrb. to: Jour. Amer. Chem. Soc.; The Chemist. Special Int.: Inorganic and Phys. Chem.

SAH, Peter Pen Tieh, Assoc. Prof. Vet. Sci. and Assoc. Pharmacologist, Univ. of Calif. Schl. of Veterinary Med., Davis, Calif.



MEDICINAL CHEMISTRY AND PHARMACOLOGY. b. Foochow, China, Feb. 3, 1900. s. Chung Lu and Haw-Lin (Young) S. Edn.: B.S., Univ. of Wis., 1924; M.S., *ibid.*, 1924; Ph.D., *ibid.*, 1926. m. Ethel Tsi Hwa Hsia, Feb. 2, 1932. c.: Louise (Mrs. David Nee); Peter, Jr.; Jenghis; Joan; Hamilton; Emil. Exp.: Asst. in Biochem., Peiping Union Med. Coll., Peiping, China, 1928-29; Prof. of Organic and Biol. Chem., Natl. Tsing Hua Univ.,

Peiping-West, China, 1929-37; Prof. of Organic Chem., The Catholic Univ., Peiping, China, 1935-45; Lectr. of Pharmacol., Peiping Union Med. Coll., Peiping, China, 1940-42; Dir., Rsch. Inst. of Chem., Academia Sinica, Kun-Ming, Yunan Province, China, 1939-45; Chmn., Chem. Dept., Natl. Peking Univ., Peking, China, 1945-46; Dir. of Prod., Fu-Min Pharm. Labs., Peiping, China, 1943-45; Dir. of Rsch., China Biol. and Chem. Labs., Peiping-Branch, Peiping, China, 1943-45; Fellow of Academia Sinica and Hd. of Sect. of Med. Chem., Rsch. Inst. of Med., Formosa, 1946; Lectr. of Pharmacol., Univ. of Calif. Med. Schl. and Coll. of Pharm., San Francisco, Calif., 1946-48; Rsch. Assoc., *ibid.*, 1948-49; Lectr. in Chem. and Pharm. Chem. and Rsch. Assoc., *ibid.*, 1949-53. Mem.: Amer. Chem. Soc.; Chinese Chem. Soc.; Dutch Chem. Soc.; Amer. Pharm. Assn.; Chinese Physiol. Soc.; Amer. Soc. of Pharm. and Exptl. Therapeutics; Soc. of Exptl. Biol. and Med.; Chinese Sci. Soc.; World Sci. Soc.; Sigma Xi; Phi Lambda Upsilon; Kaiserlich Leopold-Caroline Deutsche Adamademie der Naturforscher, Halle on the Saale, Germany. Contrb. to: Jour. Amer. Chem. Soc.; Jour. Chem. Soc. of London; Berichte der Deutschen Chemischen Gesellschaft; Ferment-Forschung; Proc. of Soc. of Exptl. Biol. and Med.; Chinese Jour. of Physiol.; Zeitschrift für Vitamin-Forschung; Recueil des Travaux Chimiques des Pays-Bas; Sci. Reports; Jour. of Pharmacol. and Exptl. Therapeutics; Jour. Amer. Chem. Soc.; Jour. Chinese Chem. Soc.; Sci.; Growth; Jour. of Organic Chem.; Zeitschrift für Vitamin-Hormon und Ferment-Forschung; Jour. Amer. Pharm. Assn.; Proc. of Natl. Acad. of Sci.; Comptes rendus des Seances de l'Academie des Sci., Paris; Pharmaceutica Acta Helvetica; Revue Horticole. Gen. Int.: Conversion of Amino Acids to Alkaloids and Hormones of Ephedrine and Adrenaline Type; Methods of Synthesis of Vitamins K₃, K₄, K₆, K₈, and K₇; Chemotherapeutic Agents for Tuberculosis. Discovery, Mfg. and Distribution of Vitamin K₂ in China; Founder and Assoc. Editor of Jour. of Chinese Chem. Soc., 1932-46; Editor, Chinese Mag. "World Sci.", 1945-46; Co-Winner of 1949 Ebert Prize of Amer. Pharm. Assn.; Hon. Dir. of Rsch., China Univ., Peiping, China, 1945; Hon. Pres., Fukien Provincial Rsch. Acad., 1947; Many Athletic Honors.

SAHAKIAN, William Sahak, Chmn., Dept. of Philos., Suffolk Univ., 20 Derne St., Boston, Mass. **PSYCHOLOGY.** b. Boston, Mass., Oct. 7, 1921. s. Jacob and Anna (Pakchoian) S. Edn.: B.S., Northeastern Univ.; S.T.B., Boston Univ. Schl. of Theology; Ph.D., Boston Univ. Graduate

Schl. m. Mabel Marie Lewis, 1945. c.: James William; Richard Lewis; Barbara Jacquelyn. Exp.: Prof. of Philos. and Psychol., Suffolk Univ., Boston, Mass., 1946—; Lectr. in Philos., Northeastern Univ., 1950; Lectr. in Psychol., The Fisher Schl., 1952. Hon. Pos.: Chmn., Dept. of Philos., Suffolk Univ. Mem.: Amer. Philos. Assn.; A.A.A.S.; Natl. Assn. of Biblical Instructors.

SAHS, Adolph S., State Univ. of Iowa Hospitals, Iowa City, Iowa. **NEUROLOGY.**

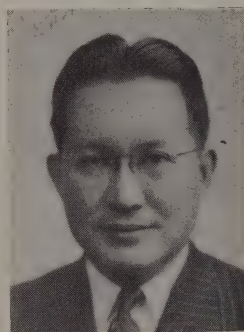
SAHYUN, Melville, Vice-Pres. and Dir. Rsch., Frederick Stearns and Co. Div., Sterling Drug, Inc., Detroit, Mich. **BIOCHEMISTRY.**

ST. CLAIR, Stuart, Consulting Geologist and Engr., Hudson View Gardens, West 183rd St., New York, N. Y. **MINING PETROLEUM.**

ST. HELENS, Hervey John, 644 Main St., W. Rochester, N. Y. **RADIOACTIVITY.**

SAKO, Wallace, Physician—Pediatrician, The Children's Clinic, 3439 Prytania St., New Orleans, La. **PEDIATRICS.** b. Hawaii, Sept. 2, 1908. s. Joseph K. and Alaba (Kealoka) S. Edn.: B.S., Univ. of Minn., 1932; M.D., *ibid.*, 1935; Ph.D., *ibid.*, 1941. m. Inez Falgout, June 22, 1950. c.: Dolores. Exp.: Instr., Univ. of Minn., 1940-41; Instr., L.S.U., 1941-42; Asst. Prof., *ibid.*, 1943-45; Assoc. Prof., Univ. of Tex., 1945-46; Pediatrician, The Children's Clinic, 1946—. Mem.: A.M.A.; La. State Med. Soc.; Orleans Parish Med. Soc.; La. State Pediatric Soc.; Amer. Fed. Clin. Rsch.; A.A.A.S.; Amer. Assn. Clin. Rsch.; Amer. Acad. of Pediatrics; Alpha Omega Alpha; Sigma Xi. Contrb. to: Jour. Pediatrics; Jour. Lancet; Jour. A.M.A.; Minn. Med.; Jour. of L.S.U. Schl. of Med.; New Orleans Med. and Surg. Jour. Special Int.: Immunity.

SALCEDO, Juan, Jr., Secy. of Health, Republic of the Philippines, Dept. of Health, San Lazaro Hosp.



Compound, Rizal Ave., Manila, Philippines. **NUTRITION AND PUBLIC HEALTH.** b. Pasay City, Philippines, Sept. 23, 1904. s. Juan and Felipa (Sanchez) S. Edn.: M.D., Coll. of Med., Univ. of the Philippines, 1929; Grad. Work, Univ. of Chicago, (1941), Johns Hopkins Univ., (1942), and Columbia Univ., (1943-44). m. Elvira Galvez, Dec. 19, 1931. c.: Jose Amos; Maria Corona; Dolores; Rosa Lina; Alberto; Elvirita. Exp.: Instr. in Physiol., Coll. of Med., Univ. of the Philippines, 1929-36; Capt., Med. Corps, Philippine Army, 1936-39; Asst. Prof. of Biochem., Coll. of Med., Univ. of the Philippines, 1939-44; Part-time Asst. in Pediatrics, Johns Hopkins Univ., 1942; Rsch. in Health and Social Welfare, Office of the Pres. of the Philippines, 1944; Health and Welfare Officer, Commonwealth of the Philippines, 1945; Dir. of Public Welfare, *ibid.*, 1945; Exec. Officer, Philippine Relief and Rehabilitation Admin., 1945-47; Treas., Philippine War Relief, Inc., 1946-48; Consultant on Nutrition, U.S. Pub. Health Service, 1946-47; Dir. of Field Operations, *ibid.*, Philippines, 1947-50; Official Representative of the Pres. of the Philippines to U.N.R.R.A., 1945-47; Part-time Prof. of Physiol., Biochem. and Pharmacol., Centro Escolar Univ., 1933-36; Part-time Prof. of Physiol., Biochem. and Pharmacol., Coll. of Oral and Dental Surgery, 1933-36; Part-time Prof. of Physiol., Biochem. and Pharmacol., Philippine Women's Univ., 1933-36; Adviser to Philippine Delegate to U.N.-R.R.A. in Conference in Montreal, 1944, Washington, 1946, and Shanghai, 1947; Adviser on Nutrition, Philippine Delegation, and Official Delegate League of Red Cross Societies to FAO Conf., Baguio, 1948; Chmn., Philippine Delegation, Fourth Internatl. Congresses on Tropical Med. and Malaria, Washington, D. C., 1948; Mem., FAO-WHO Expert Com. on Nutrition, Geneva, Switzerland, 1949; Alternate Delegate of Philippines to Fifth Annual

Session of Conf. of FAO, Washington, D. C., 1949; Delegate of Philippines to Second Meeting of FAO Nutrition Com. for South and East Asia, Rangoon, Burma, 1950; Consultant on Social Welfare Matters, SEA Conf., Baguio, 1950; Chmn., Achievements in Health Com., Phil. Achievement Week, 1951; General Chmn., Anti-Tuberculosis Fund Campaign, 1951; Chf., Philippine Delegate to Sixth World Health Assembly, 1953, Secy. of Health, Republic of the Philippines, 1950; Professorial Lectr. of Physiol. and Biochem., Coll. of Med., Univ. of the Philippines, 1947-53; General Supvr., Bataan Enriched Rice Project, 1947—; Professorial Lectr. in Nutrition, Inst. of Hygiene, Univ. of the Philippines, 1949—; Nutrition Consultant, Philippine Natl. Red Cross, 1948—, Hon. Pos.: Mem., U.N.I.C.E.F. Administrative Com., Philippine Participation and Chmn., Com. on Med. and Health Projects, 1949—; Mem., Advisory Bd., Junior Red Cross, 1950—; Mem., Budget and Admission Com., Community Chest of Greater Manila, 1949—; Hon. Pres., Eighth Pacific Sci. Congress; Chmn., Bd. of Dirs., Metropolitan Water District, 1951—; Chmn., Natl. Advisory Health Council, 1951—; Chmn., Inst. of Nutrition Bd., 1951—; Chmn., Bd. of Governors, Philippine Natl. Red Cross, 1951—; Adviser, Bd. of Dirs., White Cross; Chmn., Food Commn., 1952—; Pres., Fifth World Health Assembly, 1952—; Pres., Sci. Foundation of the Philippines, 1952—; U. P. Coll. of Med. Most Distinguished Alumnus, 1951—; Most Outstanding Professional in Med., 1951—; Colegio Medico-Farmacutico de Filipinas Distinguished Service Award; Pasay City Lions Club Distinguished Service Award; Rotary Club of Manila Award of Distinguished Service, 1951-52; Manila Med. Soc., 50th Anniversary Outstanding Award in Nutrition, 1952; First Fellowship, Philippine Public Health Assn., 1952. Mem.: Sigma Xi; Natl. Rsch. Council of the Philippines; Phi Kappa Phi; A.A.A.S.; Philippine Assn. of Nutrition; Amer. Chem. Soc.; Philippine Assn. for the Advancement of Sci.; Pasay City Lions Club. Contrb. to: Jour. Philippine Med. Assn.; Jour. Nutrition; Acta Medica Philippina; M. D. Jour.; Nutrition News. War Record: Col. Med. Corps, AFWESPAC Attached to the Office of the Pres. of the Philippines; reverted to Lieut. Col. M. C., Armed Forces of the Philippines. Gen. Int.: Study on Artificial Enrichment of White Rice as a Solution to Endemic Beriberi; Nutrition Information and Education of the People of the Philippines. Special Int.: Beriberi; Nutrition Edn.: Pub. Health Admin.

SALEM, Raphael, Assoc. Prof. Math., Mass. Inst. Tech., Cambridge, Mass. MATHEMATICS.

SALES, Reno Haber, Chief Geologist, Anaconda Copper Mining Co., Butte, Mont. MINING GEOLOGY, ORE DEPOSITS.

SALISBURY, L. Frank, Rsch. Mgr., Carothers Rsch. Lab., DuPont Expt. Sta., Wilmington, Del. CHEMISTRY.

SALISBURY, Winfield Wyman, Dir. Rsch., Collins Radio Co., Cedar Rapids, Iowa. NUCLEAR PHYSICS.

SALLE, A. J., Univ. of Calif., Los Angeles 24, Calif. MICROBIOLOGY.

SALLER, Henry Andrew, Div. Chief, Battelle Memorial Inst., 505 King Ave., Columbus, Ohio. METALLURGY. b. Kendallville, Ind., Apr. 16, 1918. s. Andrew J. and Sara (Murphy) S. Edn.: B.S., Purdue Univ., 1940. m. Marjorie Amerine, Sept. 17, 1945. c.: Susan; Katherine; Henry, Jr. Exp.: Metallurgical Observer, Carnegie, Ill. Steel Corp., Gary, Ind., 1940-41; Rsch. Engr., Asst. Supvr., Div. Chf., Battelle Mem. Inst., Columbus, Ohio, 1941—. Mem.: Amer. Soc. for Metals; Electrochem. Soc. Special Int.: Metallurgy in the Field of Atomic Energy.

SALMA, Emanuel, Assist. Prof. Mechanical Engng., New York Univ., New York, N. Y. MECHANICAL ENGINEERING.

SALMON, Samuel C., Principal Agronomist, U. S. D. A., Bureau Plant Industry, U. S. D. A., Beltsville, Md. AGRONOMY.

SALMON, Udall J., STERILITY.

SALMON, William Davis, Animal Nutritionist Chg. Rsch., Ala. Polytechnic Inst., Auburn, Ala. NUTRITION.

SALTER, William Thomas, Chmn. and Prof., Dept. of Pharmacol., Schl. of Med., Yale Univ., 333 Cedar St., New Haven, Conn. PHARMACOLOGY.

SALZMANN, Jacob Amos, Hd., Dental Service, N. Y. City Vocational Schs., Bd. of Edn., 654 Madison Ave., N. Y., N. Y. ORTHODONTICS.

SAMARAS, Nicholas Napoleon Triantaphyllos, Dir. of Rsch., Plastics Div., Monsanto Chem. Co., Springfield, Mass. CHEMICAL RESEARCH.

SAMPEY, John Richard, Prof. of Chem., Furman Univ., Greenville, S. C. CHEMISTRY. b. Louisville, Ky., Aug. 5, 1896. s. John R. and Annie (Renfro) S. Edn.: S.B., Univ. of Chicago, 1920; S.M., ibid., 1921; Ph.D., ibid., 1923. m. Jewell Cheatham, 1925. c.: John R., III; Jane Renfro. Exp.: Grad. Asst., Univ. of Chicago, 1922-23; Graftlin Scholar, Johns Hopkins Univ., Baltimore, Md., 1923-24; Assoc. Prof. of Chem., Howard Coll., 1924-26; Prof., ibid., 1926-34; Fellow, Amer. Petroleum Inst., 1930-31; Prof. of Chem., Furman Univ., Greenville, S. C., 1934—. Hon. Pos.: Pres., Ala. Acad. of Sci.; Pres., S. C. Acad. of Sci.; Trustee and Vice-Pres., S.A.S.I. Mem.: Amer. Chem. Soc.; Fellow, A.A.A.S.; S. C. Acad. of Sci.; A.A.U.P.; Gamma Alpha; Sigma Xi; Chi Beta Phi; Kappa Alpha Kappa. Contrb. to: Jour. Amer. Chem. Soc.; Jour. Organic Chem.; Sci.; Jour. Chem. Edn.; Jour. Higher Edn.; etc. War Record: 2nd Lt., A.E.F., France, 1918-19; Active duty in W. W. II 1941-45, including two years overseas as Inspector General. Special Int.: Rsch. in Phys.-Organic Chem.; Reaction Rates, Photobromination of Aromatic Compounds; Preparation of Carcinogenic and Anticancer Agents.

SAMPSON, Arthur William, Prof. of Forestry, Univ. of Calif., Berkeley, Calif. ECOLOGY.

SAMPSON, Edward, Prof., Dept. of Geol., Princeton Univ., Princeton, N. J. MINING GEOLOGY.

SAMPSON, Homer Cleveland, Prof. of Botany, Ohio State Univ., Columbus, Ohio. BOTANY.

SAMPSON, Jesse, Prof. and Hd., Dept. of Physiol. and Pharmacol., Univ. of Ill., Champaign, Ill. VETERINARY PHYSIOLOGY.

SAMPSON, Myra Melissa, Prof. of Zool., Barron Hall, Smith Coll., Northampton, Mass. PHYSIOLOGY, ENDOCRINOLOGY.

SAMSON, Rayburn Walter, Assoc. and Extension Pathologist, Agri. Expt. Sta., Purdue Univ., Lafayette, Ind. PLANT PATHOLOGY.

SANCHE, Sister Ignatius, Prof. of Chem., Coll. of Mount St. Joseph, Mt. St. Joseph, Ohio. ORGANIC CHEMISTRY.

SANDBERG, Adolph Engelbrekt, Prof. of Geol., Chmn. of Dept., L.S.U., Baton Rouge, La. GEOLOGY. b. Minneapolis, Minn., Feb. 15, 1898. s. Gustaf Adolf and Tekla (Meck) S. Edn.: A.B., Univ. of Minn., 1929; A.M., Univ. of Cincinnati, 1931; Ph.D., ibid., 1937. m. Harriet Burquist, Sept. 14, 1929. c.: David; Philip. Exp.: Instr., Univ. of Cincinnati, 1929-39; Geologist, The Panama Canal, Balboa Heights, Canal Zone, 1939-44; Geologist, Socony Vacuum Oil Co. of Colombia, Bogota, Colombia, 1944-46; Geologist, Gulf Oil Corp., Managua, Nicaragua, 1947-48; Prof. of Geol., La. State Univ., Baton Rouge, La., 1948—. Summer Field Seasons, Colo., Minn., Chile. Mem.: Amer. Inst. of Mining and Metallurgical Engrs.; Soc. Econ. Geologists; Geol. Soc. Amer.; Sigma Chi; Sigma Gamma Epsilon; Geol. and Mining Soc. of Amer. Contrb. to: Pan Amer. Geol.; Colo. Sci. Soc. Proc.; Geol. Soc. Amer. Bull.; Proc. U. S. Naval Inst. War Record: U. S. Marine Corps, 1917-19. Special Int.: Mineralogy; Petrology; Crystallography; Engrng. Geol.

SANDELL, Ernest B., Assoc. Prof. of Analytical Chem., Univ. of Minn., Minneapolis, Minn. ANALYTICAL CHEMISTRY.

SANDERS, Jack Howard, Vice-Pres., Commercial Savings Bank, Sterling, Colo. **PSYCHOLOGY AND BANKING.**

SANDERS, James Glossbrenner, Entomologist, Commercial Solvents Corp., 17 E. 42nd St., N. Y., N. Y. **ENTOMOLOGY.**

SANDERS, James Meadows, Dept. of Biol., Chicago Tchrs. Coll., Chicago 21, Ill. **ZOOLOGY.** b. Nov. 18, 1905, Knoxville, Tenn. s. Frederick Oliver and Frances A. (Meadows) S. Edn.: A.B., William Jewell Coll., 1926; M.A., Univ. of Ill., 1927; Ph.D., *ibid.*, 1931. m. Grace Komarek of Chicago, Ill., May 29, 1929. d. Gustaf and Cecilia Komarek. c.: Mark; Peter; Thomas. Exp.: Instr., Zool., Univ. of N. H., 1929-30; Hd., Biol., Ark. A. and M., 1931-32; Hd., Biol., Cumberland Univ., 1934-36; Hd., Biol., Okla. Bapt. Univ., 1936-37; Hd., Biol., Sioux Falls Coll., 1937-39; Chicago Tchrs. Coll., 1939—; Mo. Univ., Med., 1944-46, C.T.C., 1946—. Mem.: A.A.A.S.; A.A.U.P.; Nature Conservancy; Grassland Res. Foundation; N.S.T.A.; C.A.S.M.T.; N.A.B.T.; Ill. Soc. for Med. Res.; Phi Sigma; Sigma Xi. Ph.D. Dissertation: Development of Thyroid Gland in Urodeles.

SANDERSON, James Owen G., Consulting Geologist, 608 Sifton Blvd., Calgary, Alta., Can. **PETROLEUM GEOLOGY.**

SANDERSON, Sidney, Assoc. Prof. Psychol., Rutgers Univ., New Brunswick, N. J. **PSYCHOLOGY.**

SANDO, William Joseph, Agronomist, Div. Cereal Crops and Diseases, Bureau Plant Indus., Soils and Agri. Engrng., Washington, D. C. **GENETICS.**

SANDS, Matthew, Rsch. Assoc., Mass. Inst. of Tech., Cambridge, Mass. **COSMIC RAYS.**

SANDSTEDT, Rudolph M., Prof. of Agril. Chem., Univ. of Nebr., Lincoln, Nebr. **CEREAL CHEMISTRY.**

SANDSTROM, Carl Johan, Assoc. Prof., Dept. of Biol., N. Y. Univ., N. Y., N. Y. **EXPERIMENTAL EMBRYOLOGY AND MORPHOLOGY.**

SANDSTROM, William Martin, Prof. of Agri. Biochem., Univ. of Minn., Univ. Farm, St. Paul, Minn. **BIOCHEMISTRY.**

SANFORD, Arthur Hawley, Sr. Consultant, Div. Clinical Labs., Mayo Clinic, Rochester, N. Y. **CLINICAL PATHOLOGY.**

SANFORD, Raymond Laraway, Chf., Magnetic Measurements Section, Div. Electricity, Natl. Bureau of Standards, Washington, D. C. **MAGNETIC MEASUREMENTS.**

SANFORD, Roscoe Frank, Astronomer, Mt. Wilson Observatory, 813 Santa Barbara St., Pasadena, Calif. **ASTROPHYSICS.**

SANSUM, William David, Dir., Metabolic Rsch., Santa Barbara Cottage Hosp., Santa Barbara, Calif. **INTERNAL MEDICINE.**

SAPHIR, Otto, Clinical Prof. of Pathol., Univ. of Ill. Med. Schl., Dir., Dept. of Pathol., Michael Reese Hosp., 29th St. and Ellis Ave., Chicago, Ill. **PATHOLOGY.** b. Vienna, Austria, Aug. 28, 1896. s. Joseph and Mathilde (Schwartz) S. Edn.: M.D., Univ. of Vienna, 1921. m. Ethel Spero, Apr. 30, 1925. c.: Mathilde Rose and James Robin. Exp.: Hanna Rsch. Fellow, Western Reserve Univ., Schl. of Med., Cleveland, Ohio, 1923-24; Instr. and Asst. Prof. of Pathol., *ibid.*, 1924-29; Assoc. Prof. and now Clinical Prof. of Pathol., Univ. of Ill. Med. Schl., Chicago, Ill.; Dir. of



Pathol., Michael Reese Hosp., Chicago, Ill. Hon.

Pos.: Past Pres., Ill. Soc. of Pathologists; Past Pres., Chicago Pathol. Soc. Mem.: Amer. Soc. Clinical Pathologists; Diplomate, Amer. Bd. of Pathologists; Amer. Soc. of Pathologists and Bacteriologists; Coll. of Amer. Pathologists; Amer. Soc. of Cancer Research; Fellow, Institute of Medicine in Chicago; A.M.A.; Sigma Xi. Author: Autopsy Diagnosis and Technique, 3rd Edition, 1951. Contrb. to: Archives of Pathol.; Amer. Jour. Clinical Pathol.; Cancer Rsch.; Amer. Jour. Pathol.; etc. Gen. Int.: Importance of Myocarditis. Special Int.: Pathol. of Tumors and Pathol. of the Heart.

SARDESON, Frederick William, 3654 France Ave., S., Minneapolis, Minn. **GEOLOGY, GEOGRAPHY.**

SARGENT, Homer Earle, retired, 222 Arroyo Terrace, Pasadena, Calif. **ANTHROPOLOGY.**

SARGENT, Louisa, Asst. Prof. of Biol., Grinnell Coll., Grinnell, Iowa. **TEACHING OF BOTANY.**

SARLES, Merritt Pardee, Parasitologist, Technical Development Labs., U. S. Indus. Chemicals, Inc., 1901 Patapsco Ave., Baltimore, Md. **PARASITOLOGY.**

SARTAIN, Carl Clinton, Assoc. Prof. of Physics, Univ. of Ala., University, Ala. **NUCLEAR AND ATOMIC PHYSICS.** b. Coker, Ala., Jan. 16, 1913. s. Searcy Brown and Ceba Josephine (Rosser) S. Edn.: B.S., Univ. of Ala., 1935; M.S., *ibid.*, 1937; Ph.D., Univ. of Va., 1949. m. Mildred Hollis, Sept. 29, 1941. c.: Cynthia Joanna. Exp.: Instr., Univ. of Ala., 1939-41; Asst. Prof., *ibid.*, 1946-47; Assoc. Prof., *ibid.*, 1947—; Rsch. Participant, ORNL, 1951-52; Consultant to ORNL, 1951-53. Mem.: A.P.S.; A.A.P.T.; A.A.A.S.; A.A.U.P.; Sigma Xi; Phi Beta Kappa; Tau Beta Pi; Pi Mu Epsilon; Sigma Pi Sigma. Contrb. to: Military Engr.; Amer. Jour. Physics; Physical Rev.; Rev. Modern Physics. War Record: Lt. Col., Corps of Engrs. Special Int.: Experiments at Liquid Helium Temperature and at High Temperatures.

SARTON, George, Assoc., Carnegie Inst. of Wash. and Prof., Harvard Univ., Harvard Lib. 185, Cambridge, Mass. **HISTORY SCIENCE.**

SARTORIS, George Bartholomew, Sr. Pathologist, U. S. D. A., Bureau Plant Indus., Plant Indus. Sta., Beltsville, Md. **PLANT PATHOLOGY.**

SATINA, Sophia, Assoc. Prof., Dept. of Botany, Smith Coll., Northampton, Mass. **BOTANY.**

SATTERLEE, Henry Suydam, Retired Physician, P. O. Box 478, Newport, N. H. **PHYSIOLOGY, BIOCHEMISTRY SIGNIFICANCE OF ARSENIC IN NATURAL AND ARTIFICIAL ENVIRONMENTS.** b. N. Y., N. Y., June 4, 1874. s. Francis Le Roy and Laura (Suydam) S. Edn.: A.B., Harvard Univ., 1896; M.D., Columbia Univ., Coll. of Physicians and Surgeons, 1900. m. Ethel Alice Whitney, Jan. 21, 1903. c.: Henry Suydam, Jr. (dec.); Stanton Whitney. 2nd m. Mrs. Cecily Sheldon Work, Sept. 16, 1933. Exp.: Visiting Physician of the N. Y. Dispensary (Tenement House District of Lower, N. Y. C.), 1903-08; Attending Physician, *ibid.*, 1908-11; Asst. Attending Physician, Willard Parker and Riverside Hosp., Scarlet Fever and Diphtheria Services, 1914-1911-14; Attending Physician, Willard Parker Hosp., Scarlet Fever and Diphtheria Services, 1914-19. Hon. Pos.: N. H. State Chmn., Fight for Freedom Com., 1941. Mem.: Fellow, N. Y. Acad. Med.; Fellow, A.A.A.S. Contrb. to: Jour. A.M.A.; Surgery, Gynecol. and Obstetrics; Arch. of Internal Med.; Analytical Chem. War Record: Served Overseas (Puerto Rico) with Troop A, U. S. Volunteer Cavalry, Rank of Lance Cpl., Spanish War, 1898; Commissioned Maj., Med. Corps, World War



I, Apr., 1917, Promoted to Lt. Col., Feb., 1918. Gen. Int.: Awarded Patents for Inventions in Photographic Apparatus and in Means for Identification of Microfilm Copies in 1921-22. Special Int.: Physiol. Chem. of Blood Coagulation, Inorganic and Organic Anticoagulants, (1912-17); Methods of Blood Transfusion, 1913-16; Occurrence of Arsenic as a Trace Element in Natural and Artificial Environments; Its Detection and Quantitation in Airborne Allergens, Atmospheric Dusts and Products of Combustion, 1923-33; Fractional Ultramicrodetermination of Volatile and Nonvolatile forms of Arsenic in Fresh Biological Material, 1934-44; Application of paper chromatography and electrophoresis to problems of arsenic metabolism; detection of As as a trace substituent (for P and N atoms) in components of blood plasma, serum and glandular secretions. (1950-53); Immunological and pathological significance of environmental arsenic as a co-carcinogen; esp. in tissue cultures, in precancerous states, in neoplasms of the G-U tract and in lung cancer of cigarette smokers. (1944-53).

SASHOFF, Stephan Pencheff, Prof. Electronics, Melrose, Fla. ELECTRICAL ENGINEERING. b. Sept. 22, 1901, Drenovo, Bulgaria. s. Pencho and Meta (Detcheva) S. Edn.: B.S.E.E., Purdue, 1925; M.S.E.E., Pitts. Univ., 1929; Pre-Doctorate, *ibid.*, 1929-31. m. Zilla Bodie of Ward, S. C., Sept. 2, 1937. d. Daniel and Petula Bodie. Exp.: Rsch. Engr., Westinghouse Elec., E. Pitts., Pa., 1925-31; Rsch. Tele. Engr. Radio Corp. of Amer., Camden, 1931-32; Asst. Prof. Elec. Engrng., Univ. of Fla., 1932-37; Prof. and Assoc. Prof., *ibid.*, 1945—; Grad. Prof. of Electrical Engrng., 1951—. Mem.: Inst. Radio Engrng.; A.A.A.S.; S.P.E.E.; A.A.U.P.; A.I.E.E.; Amer. Phys. Soc.; Fla. Acad. Sci.; Cosmopolitan Club; Sigma Tau. Contrb. to: Electronics; Proceedings IRE; Instruments, etc. Hobbies: Lecturer; Gardening; Woodcraft. Listed in: Amer. Young Men; Who's Who; Who Knows—and What; Who's Who in Engrng.;

SATTERTHWAIT, Alfred Fellenberg, Entomologist P3, B. E. and P. Q., U. S. D. A., 806 W. Ohio St., Urbana, Ill. ENTOMOLOGY.

SATTLER, Louis, Assoc. Prof., Brooklyn Coll., Bedford Ave. and Ave. H, Brooklyn, N. Y. CHEMISTRY, CARBOHYDRATES.

SAUER, Carl O., Univ., of Calif., Berkeley, Calif. GEOGRAPHY.

SAUER, John Anthony, Hd., Dept. of Engrng. Mech., Pa. State Coll., State College, Pa. MECHANICS.

SAUER, Louis Wendlin, Asst. Prof. of Pediatrics, Med. Schl., Northwestern Univ., Evanston, Ill. PEDIATRICS.

SAUER, Mary Elmore, Asst. Prof. of Anatomy, Med. Br., Univ. of Tex., Galveston, Tex. ANATOMY.

SAUNDERS, Frederick Albert, South Hadley, Mass.

SAUNDERS, James Henry, Rsch. Group Leader, Monsanto Chem. Co., Anniston, Ala. ORGANIC CHEMISTRY. b. Ames, Iowa, May 3, 1923. s. Charles Winston and Irene (Peebles) S. Edn.: B.S., Univ. of Ky., 1944; Ph.D., Univ. of Ill., 1946. m. Prickett Carter, Apr. 13, 1946 c.: James Henry, Jr.; Stephen Carter. Exp.: Special Rsch. Asst., Univ. of Ill., Urbana, Ill., 1944-47; Rsch. Chemist, Monsanto Chem. Co., Anniston, Ala., 1947-50; Rsch. Group Leader, *ibid.*, 1950—. Mem.: Phi Beta Kappa; Sigma Xi; Phi Lambda Upsilon; Sigma Alpha Epsilon; Alpha Chi Sigma. Contrb. to: Jour. Amer. Chem. Soc.; Organic Synthesis, Encyclopedia of Chemical Technology; Chem. Rev.; Jour. of Polymer Sci. Special Int.: Organic Synthesis; Isocyanates; Pyrolysis; Polymerization.

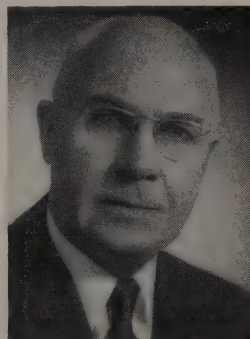
SAUNDERSON, Jason Lewis, Physicist, Dow Chemical Co., Midland, Mich. SPECTROSCOPY.

SAUPE, Mildred Winn., Prof. of Psychol., Mo. Valley Coll., 337 E. North St., Marshall, Mo. PSYCHOLOGY. b. Sedgwick, Kans., Dec. 4, 1897. d. William Lee and Pluma (Kirkbride) Winn. Exp.: B.S., Southeast Mo. State Coll., 1920; M.A., Univ. of Mo., 1934; Ph.D., *ibid.*, 1941. m. Walter J. Saupe, Jan. 29, 1918. c.: Pluma Winn; Joseph Lee. Exp.: H. S. Tchr., Cape Girardeau, Mo., Lathrop, Mo., Alma, Nebr., Clinton, Mo., and Minneapolis, Minn., 1917-24; Instr. in Psychol., Christian Coll., Columbia, Mo., 1934-35; 1940-41; Psychologist, Mo. State Schl., Marshall, Mo., 1942-45; Prof. of Psychol. and Edn., Mo. Valley Coll., Marshall, Mo., 1945—. Mem.: Amer. Psychol. Assn.; Midwest Psychol. Assn.; Mo. Psychol. Assn.; Internatl. Count. Exceptional Children; Amer. Assn. Mental Deficiency; A.A.U.P.; A.A.A.S.; Internatl. Coun. Women Psychol.; N.E.A.; Mo. State Tchrs. Assn.; Pi Lambda Theta; Psi Chi; Delta Kappa Gamma; A.A.U.W. Contrb. to: Jour. Amer. Assn. Collegiate Registrars; Schl. and Community. Special Int.: College Aptitude Testing.



SAVAGE, Alfred, Prof. of Animal Pathol., Univ. of Manitoba, Winnipeg, Man., Can. ANIMAL PATHOLOGY.

SAVAGE, John Lucian, Consulting Engr., 1651 Dahlia St., Denver 7, Colo. CIVIL ENGINEERING.



b. Cooksville, Wis., Dec. 25, 1879. s. Edwin Parker and Mary Therese (Stebbins) S. Edn.: B.S., Univ. of Wis., 1903. Hon. Deg.: D.Sc., Univ. of Wis., 1934; D.Sc., Univ. of Denver, 1946; D.Eng., Univ. of Colo., 1947. m. 1st Jessie Burdick Sexsmith (dec.), June 1, 1918. m. 2nd Olga Lacher Miner, Jan. 14, 1950. Exp.: Engrng. Aide, Asst. Engr. and Engr. in U. S. Reclamation Service, Idaho Div., on Surveys, Investigations, Estimates, Designs and Constrn. of Minidoka

Dam and Canal System; Payette-Boise Canal System; Boise River Diversion Dam; and Upper and Lower Deer Flat Dams, Idaho, 1903-08; Assoc. with A. J. Wiley, Consulting Engr., Boise, Idaho and Engaged on Gen. Consulting Practice in Irrigation and Hydroelec. Fields on Swan Falls Power Plant, Barber Dam, Salmon River Dam, Twin Falls North Side Canal System, Lower Salmon Falls Dam and Power Plant; Arrowrock Dam Spillway, Amer. Falls Power Plant, and Various Irrigation Pumping Plants All Projects Located in Idaho, 1908-16; Designing Engr. for U. S. Bureau of Reclamation in Chg. of Civil Engrng. Design and Later Chf. Designing Engr. in Chg. of All Civil, Elec. and Mech. Design., 1916-45; Consulting Engr. Insular Govt. of Puerto Rico; West Indies Sugar Finance Corp.; Internatl. Boundary Commn., U. S. Dept. of State; Panama Canal Zone; State of Calif.; Cities of Los Angeles, Tacoma and Seattle; Contractors, Pacific Naval Air Bases, Pearl Harbor; Govts. of Commonwealth of Australia; Victoria, Australia; New South Wales, Australia; Afghanistan; New Zealand; British Columbia; Natl. China; City of Bogota, Colombia; Govts. of Punjab, East Punjab; Bengal; United Provinces, Bombay, Kota, Travancore, Patiala, Madras, Mysore, and Central Govt. of India; Govts. of Pakistan; Ceylon; Japan; Mex.; Palestine; Israel; S. Africa; Spain; Switzerland; Turkey and Trans-Jordan; Govt. of U. S. and Tenn. Valley Authority; On Projects Involving Dams, Power Plants, Irrigation, Navigation, Flood Control, Country-wide Surveys, and Organization and Repayment

of Financing. Hon. Pos.: Hon. Life Mem., Reclamation Tech. Club; Hon. Mem., Japan Soc. of Civil Engrs. Mem.: Internal Development Adv. Bd.; Fellow, A.A.A.S.; Natl. Acad. of Sci.; Reclamation Hall of Fame; Life Mem., Amer. Soc. of Civil Engrs.; Amer. Soc. for Testing Materials; Colo. Soc. of Civil Engrs.; Amer. Concrete Inst.; Instn. of Civil Engrs. of Great Britain; Tau Beta Pi; Sigma Xi; Natl. Hon. Mem. Chi Epsilon; Amer. Soc. for Testing Materials; Amer. Acad. of Polit. Sci. Gen. Int.: Awards: Colo. Engrng. Coun. Gold Medal for Distinguished Service, 1937; Natl. Resources Commn. of China Gold Medal as a Friend of China, 1944; John Fritz Gold Medal, 1945; Henry C. Turner Gold Medal from Amer. Concrete Inst., 1946; Washington Award, 1949; U. S. Dept. of Interior Gold Medal for Distinguished Service, 1950; Popular Mechanics Hall of Fame Award, 1952; Received "Order of Ching Hsin" from Nationalist Govt. of China, 1952; Amer. Vice-Pres. of Internatl. Commn. on Large Exec. Comm., U. S. Comm. on Large Dams, 1946-49; Adv. Mem., *ibid.*, 1949—; Reclamation Hall of Dams of World Power Conf., 1937-39; 1946-47; Fame, 1950.

SAVAGE, Thomas Edmund, Prof. Emer., Geol., Univ. of Ill., Urbana, Ill. **GEOLOGY.**

SAVILLE, Douglas Barton Osborne, Asst. Plant Pathologist, Div. Botany and Plant Pathol., Central Expt. Farm, Ottawa, Ont., Can. **MYCOLOGY.**

SAVILLE, Caleb Mills, Water Bureau Metropolitan Dist. 2, American Row, Hartford, Conn. **ENGINEERING.**

SAVILLE, Roscoe Joseph, Agri. Economist, U. S. D. A., Washington, D. C. **SOCIAL SCIENCE.**

SAVILLE, Thorndike, Dean, Coll. of Engrng., N. Y. Univ., N. Y. N. Y. **HYDROLOGY, SANITARY ENGINEERING.**

SAWIN, Paul Baldwin, Assoc. Prof., Biol. Lab., Brown Univ., Providence, R. I. **GENETICS OF THE RABBIT.**

SAWYER, Charles Baldwin, Bd. Chmn., Brush Labs. Co., Brush Beryllium Co., 3714 Chester Ave., Cleveland, Ohio. **PIEZOELECTRICAL CRYSTALS, BERYLLIUM METALLURGY.**

SAWYER, Ralph A., Prof. of Physics and Dean, Grad. Schl., Univ. of Mich., Ann Arbor, Mich. **PHYSICS.**

SAWYER, William Hayes, Jr., Prof. of Biol., Bates Coll., Lewiston, Maine. **BOTANY, BACTERIOLOGY.**

SAYRE, A. Nelson, Chf., Ground Water Branch, Water Resources Div., U. S. Geol. Survey, Dept. of Interior, Rm. 2215 GSA Bldg., Washington, D. C. **GEOLOGY AND HYDROLOGY, ESPECIALLY GROUND-WATER.** b. Granville, Ohio, Jan. 28, 1901. e. Albert Thomas and Ida (Clouse) S. Edn.: B.S., Denison Univ., 1923; Univ. of Kans., 1923-24; Ph.D., Univ. of Chicago, 1928. Hon. Deg.: Dr. of Sci., Denison Univ., 1949. m. May Harriet Laudenslager, June 25, 1927. c.: Elizabeth. Exp.: Asst. Instr., Univ. of Kans., Lawrence, Kans., 1923-24; Geologist, Indian Territory Co., Bartlesville, Okla., 1924; Grad. Asst., Univ. of Chicago, Chicago, Ill., 1924-26; Instr., Univ. of Pa., Philadelphia, Pa., 1926-29; U. S. Geol. Survey, 1929—; Chf., Ground Water Branch, Water Resources Div., *ibid.*, Washington, D. C., 1946—. Hon. Pos.: Consultant, Office Inter-Amer. Affairs, 1943; Pres., Geol. Soc. of Wash., 1951; Pres., Internatl. Com. on Subterranean Waters, 1948—; Consultant, Resch. and Development Bd. Mem.: Geol. Soc. Wash.; Geol. Soc. Amer.; Soc. Econ. Geol.; Amer. Assn. Petrol.



lluminating Oil and Gas 1924; Grad. Asst., Univ. of Chicago, Chicago, Ill., 1924-26; Instr., Univ. of Pa., Philadelphia, Pa., 1926-29; U. S. Geol. Survey, 1929—; Chf., Ground Water Branch, Water Resources Div., *ibid.*, Washington, D. C., 1946—. Hon. Pos.: Consultant, Office Inter-Amer. Affairs, 1943; Pres., Geol. Soc. of Wash., 1951; Pres., Internatl. Com. on Subterranean Waters, 1948—; Consultant, Resch. and Development Bd. Mem.: Geol. Soc. Wash.; Geol. Soc. Amer.; Soc. Econ. Geol.; Amer. Assn. Petrol.

eum Geol.; A.A.A.S.; Amer. Water Works Assn.; Amer. Geophysical Union; Sigma Xi; Sigma Gamma Epsilon; Gamma Alpha; Cosmos Club. Author: Fauna of the Drum Limestone of Kans. and Western Mo., 1930; Geol. and Ground-Water Resources of Uvalde and Medina Counties, Tex., 1936; Ground-Water Resources in the El Paso, Tex. Area, 1945. Contrb. to: Trans. Amer. Geophysical Union; Jour. Sci.; Scientific Amer.; Econ. Geol. War Record: Detailed by Geol. Survey to GHQ, S. W. Pacific Area as Consultant, May 1944-June 1945. Gen. Int.: Awarded Medal of Freedom for Services to Armed Forces during Philippine Campaign. Special Int.: Applications of Geol. to Ground-Water Investigations; Hydrologic Sci. and Its Applications to the Overall Problems of Our Natl. Water Supply.

SAX, Hally Jolivet, 380 S. St., Jamaica Plain, Mass. **BOTANY.** b. La Crosse, Wis. d. Peter L. Jolivet and Sarah (Kelly) Jolivet. Edn.: B.A., Univ. of Wis., 1906; M.A. *ibid.*, 1909; Ph.D., Stanford Univ., 1912. m. Karl Sax, Sept. 22, 1915. c.: Karl Jolivet; William Peter; Edward Alan. Exp.: Asst. in Bot., Univ. of Wis., 1907-10; Tchng. Fellow, Stanford Univ., 1910-12; Instr., State Coll. of Wash., 1912-14; Asst. Plant Pathologist, Bur. Plant Ind., U.S.D.A., 1914-15; Instr., Wellesley Coll., 1916-18. Hon. Pos.: Pres. of Maine Chapter of A.A.U.W., Chmn. of Mem. and Hospitality Jamaica Plain. Mem.: Wis. Acad. of Sci.; Sigma Xi; AA. of Sci.; Biol. Soc. of Maine. Contrb. to: Proc. Wis. Acad. Arts and Sci.; Botanical Gazette; Genetics; Amer. Jour. Bot. Special Int.: Cytol. and Physiol. of the Fungi, Chromosome Studies in Higher Plants.

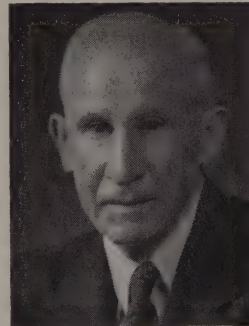
SAX, Karl, Harvard Univ., Cambridge 38, Mass.

SAYLOR, John Henry, Assoc. Prof. of Chem., Duke Univ., Durham, N. C. **PHYSICAL CHEMISTRY.**

SAYRE, Geneva, Assoc. Prof. and Chmn., Dept. of Biol., Russell Sage Coll., Troy, N. Y. **BRYOLOGY.**

SAYRE, Jasper Dean, Physiologist, U. S. D. A., Resch. Admin., Wooster, Ohio. **CORN NUTRITION.**

SCARBOROUGH, James Blaine, Prof. Emer. of Math., U. S. Naval Acad., Ferry Farms, R. 4, Annapolis, Md. **APPLIED MATHEMATICS.** b. Mt. Gilead, N. C., June 22, 1885. s. Isham Wilson and Jane (Haywood) S. Edn.: A.B., Univ. of N. C., 1913; A.M., *ibid.*, 1914; Ph.D., Johns Hopkins Univ., 1923. m. Lessie Neville, (dec.) June 30, 1915. c.: Lucile Elizabeth; James Blaine, Jr., (dec.); Ernest Neville; m. 2nd. Julia Kauffman, Aug. 18, 1930. c.: William Kauffman. Exp.: Instr. in Math., N. C. State Coll., 1914-18; Instr. in Math., U. S. Naval Acad., 1918-21;



Asst. Prof., Math., *ibid.*, 1921-28; Assoc. Prof., *ibid.*, 1928-37; Prof., *ibid.*, 1937-50; Prof., Emer. of Math., *ibid.*, 1950—. Hon. Pos.: Chmn. of Md.-Va.-D. C. Section of Math. Assn. of Amer.; Consultant in Numerical Analysis, U. S. Naval Ordnance Lab.; Class Chmn. in Math. Dept., U. S. Naval Acad., 1946-49. Mem.: Math. Assn. of Amer.; Amer. Math. Soc.; Assn. for Computing Machinery; Phi Beta Kappa Soc. Author: Numerical Mathematical Analysis, 1930. Contrb. to: Amer. Monthly; Proc. of the National Acad. of Sci.; Amer. Jour. of Physics. Gen. Int.: Awarded Cain Math. Medal, U. N. C., 1912; Showed that one method of computing a certain probable error is wrong, 1935; Made first direct Numerical Comparison of Difference Between the Assumed Parabolic and Elliptic Paths of a Modern Projectile in a vacuum. Special Int.: Numerical Math., Differential Equations, Gyroscopic Theory, Statistics, Exterior Ballistics, Engrng, Math., Miscellaneous Applications of Math.

SCATCHARD, George, Prof. of Physical Chem., Mass. Inst. of Tech., Cambridge 39, Mass. PHYSICAL CHEMISTRY OF SOLUTIONS. b. Oneonta, N. Y., Mar. 19, 1892.



s. Elmer Ellsworth and Fannie (Harmer) S. Edn.: A.B., Amherst, 1913; Ph.D., Columbia Univ., 1917. Hon. Deg.: Sc.D., Amherst, 1948. m. William Beaumont, July 28, 1928. Exp.: Assoc. Prof., Amherst, 1919-23; Natl. Rsch. Fellow, 1923-24; Asst. Prof., Mass. Inst. Tech., 1924-26; Assoc. Prof., ibid., 1926-37; Prof., ibid., 1937-; Scientific Advisor to Deputy Military Governor, Germany, 1946. Hon. Pos.: Chmn.,

Div. of Physical and Inorganic Chem. and Vice-Pres., Amer. Chem. Soc.; Chmn., Chem. Section and Vice-Pres., A.A.A.S.; Pres., M. I. T. Chapter, A.A.-U.P.; Pres., M.I.T. Chapter, Sigma Xi. Mem.: Natl. Acad. Sci.; Amer. Acad. Arts and Sci.; N. Y. Acad. Sci.; A.A.A.S.; Amer. Chem. Soc.; Phi Gamma Delta; Phi Beta Kappa; Phi Lambda Upsilon; Alpha Chi Sigma. Contrb. to: Jour. Amer. Chem. Soc.; Jour. Physical and Colloid Chem.; Jour. Chemical Physics; Chem. Review; Trans. Faraday Soc.; etc. War Record: 1st Lt., Sanitary Corps, U.S.N.A., 1917-19; Rsch. on Fractionation of Uranium Isotopes, and on Fractionation of Plasma Proteins, World War II. Special Int.: Physical Chem. of Solutions.

SCATES, Douglas E., Assoc. Prof. of Edn., Duke Univ., Durham, N. C. STATISTICS, MEASUREMENT.

SCHAAR, Bernard Edward, Pres., Schaar and Co., 754 Lexington St., Chicago 7, Ill. SCIENTIFIC APPARATUS. b. Cincinnati, Ohio, Apr. 1, 1884.



s. Edward and Bella (Rosenthal) S. Edn.: Chem. Engr., Univ. of Cincinnati, 1908. m. Sarah Blumenthal, Aug. 25, 1918. Exp.: Errand Boy, Drug Store, 1898-99; Salesman, Wholesale Jewelry Co., 1899-1904; Lab. Asst., Cincinnati Hosp., 1904; U. S. Engr. Office, summer 1905-08; Foundry Chemist, 1907; Student Asst., Chem. Dept., Univ. of Cincinnati, 1907-08; Chemist, Morris and Co., Chicago, Ill., 1908; Chemist, City of Chicago, 1909-10;

Lectr. in Chem., Central States Coll. of Pharm., 1912; Pres., Schaar and Co., Chicago, Ill., 1909-; Hon. Pos.: Pres., Chicago Section, Amer. Chem. Soc., 1932; Organizing Com. and Dir., Near West Side Planning Bd., 1948-; Trustee, Hull-House Assn., 1951-; Mem.: Amer. Chem. Soc.; Amer. Inst. Chemists; Amer. Soc. for Testing Materials; A.A.A.S.; Amer. Assn. Scientific Workers; Fed. Amer. Scientists; Amer. Acad. Political and Social Sci.; Chicago Technical Council; Tau Beta Pi. Contrb. to: Science; Chem. Bull.; The Chemist; Chem. and Engrng. News. War Record: Office of Naval Officer Procurement, 1944-45.

SCHAEFFEL, Earl Read, retired, Rt. 1, Bayfield, Wis. ECONOMIC GEOLOGY.

SCHAEFER, Arnold Edward, Hd. Biochem. Dept., The Squibb Inst. for Med. Rsch., E. R. Squibb and Sons, New Brunswick, N. J. NUTRITION AND BIOCHEMISTRY. b. Tripp, S. Dak., Dec. 8, 1917. s. Edward and Emma (Doering) S. Edn.: B.S., S. Dak. State Coll., 1939; M.S., Univ. of Wis., 1941; Ph.D., ibid., 1947. m. Carmen Castillo, S. D., Jan. 24, 1942. c.: Camille Carmen; Edward Arnold. Exp.: Rsch. Assoc., S. Dak. Chem. Expt. Sta., S. Dak. State, 1939-40; Grad. Asst., Biochem.

Dept., Univ. of Wis., 1940-41; U. S. Army, Nutrition Officer, Rank 2nd Lt. to Maj., 1942-46; Rsch. Asst., Univ. of Wis., 1946; Rsch. Assoc., ibid., 1947; Assoc. Animal Nutritionist, Ala. Polytech. Inst., 1947-51; Hd., Biochem. Dept., The Squibb Inst. for Med. Rsch., E. R. Squibb and Sons, New Brunswick, N. J., 1951-; Hon. Pos.: Pres., Trinity Luth. Church, Auburn, 1951. Mem.: Amer. Chem. Soc.; Amer. Assn., Cancer Soc.; Amer. Inst. of Nutrition; A.A.A.S.; Scabbard and Blade; Sigma Xi; Kiwanis. Contrb. to: Jour. of Nutrition; Cancer Rsch.; Proc. Soc. Expt. Biol. and Med.; Archives of Biochem.; Jour., Biol. Chem. Ph.D. Dissertation: Studies on the Vitamin Requirements of Foxes and Mink. War Record: Entered Service as 2nd Lt., Discharged as Maj. Travel: England; France; Belgium; Germany. Hobbies: Baseball; Gardening; Farming; Hunting. Listed in: A.M.S.

SCHAEFFER, Asa Arthur, Dept. of Biol. Temple Univ. Philadelphia Pa. ZOOLOGICAL SCIENCES.

SCHAEFFER, Elmer Raymond, P. O. Box 4801, Washington, D. C. PHYSICS, INDUSTRIAL RESEARCH.

SCHAEFFER, Florence Louise, Prof. of Chem. and Hd. of Dept., Woman's Coll. of Univ. of N. C., Greensboro, N. C. CHEMISTRY. d. John A. and Anna Louise (Bernhardt) S. Edn.: A.B., Barnard Coll., 1920; M.A., Mt. Holyoke Coll., 1922; Univ. of Chicago; Yale Univ. Exp.: Instr., Woman's Coll. of Univ. of N. C., 1922-26; Asst. Prof., ibid.; Assoc. Prof., ibid.; Prof. and Hd. of Dept. of Chem., Woman's Coll. of Univ. of N. C., 1934-; Mem.: Amer. Chem. Soc.; N. C. Acad. of Sci.; N. C. Edn. Assn.; Phi Beta Kappa; A.A.A.S.; Iota Sigma Pi. Contrb. to: Jour. Amer. Chem. Soc.

SCHAEFFER, Jacob Parsons, Prof. of Anatomy and Dir., Daniel Baugh Inst. of Anatomy, Jefferson Med. Coll., Philadelphia, Pa. ANATOMY AND EMBRYOLOGY.

SCHAEFFER, Morris, Dir., Virus Labs., U. S. Public Health Service, P. O. Box 61, Montgomery 1, Ala. VIROLOGY. b.



Berdichev, Ukraine, Dec. 31, 1907. s. Samuel and Celia (Sellman) S. Edn.: A.B., Univ. of Ala., 1930; M.A., ibid., 1930; Ph.D., N. Y. Univ., 1935; M.D., ibid., 1944. m. Josephine M. Wintzer, 1943. c.: Deborah; Colin; David Emil; Jessica. Exp.: Rsch. Fellow, Wash. Univ., St. Louis, Mo., 1931-32; Bacteriologist and Rsch. Assoc., N. Y. City Dept. of Health and N. Y. Univ., 1932-42; Lectr., Hunter Coll., N. Y., N. Y., 1942-44; House Officer, City Hosp., Boston, Mass., 1944-45; Resident, Pediatrics and Contagious Diseases, Cleveland City Hosp. and Babies and Childrens' Hosp., Cleveland, Ohio, 1945-48; Special Consultant, U.S.P.H.S., C.D.C., Atlanta, Ga., 1949; Asst. Prof. of Pediatrics, Western Reserve Univ. and Dir., Contagious Dept., City Hosp., Cleveland, Ohio, 1945-49; Assoc. Prof. Bact. and Immunology, Emory Univ., Schl. of Med., 1951-; Visiting Lectr., Tulane Univ. Schl. of Med., 1952-; Consultant to V. A. Hosp., Montgomery, Ala., 1950-; Med. Dir., Virus Labs., U.S.P.H.S., C.D.C., Montgomery, Ala., 1949-; Mem.: Founder Mem., Amer. Bd. of Preventive Med. and Public Health; Fellow, A.A.A.S.; Fellow, N. Y. Acad. of Sci.; Service Fellow, A.M.A.; Sigma Xi; A.P.H.A.; Soc. Exptl. Biol. and Med.; Amer. Soc. Bacteriol.; N. Y. Acad. Sci.; Southern Soc. Clinical Rsch.; Amer. Federation Clinical Rsch.; Assn. Military Surgeons of U. S. Contrb. to: Quarterly Rev. of Internal Med.; Arch. Pathol.; Proc. Soc. Exptl. Biol. and Med.; Jour. Immunology; etc.

SCHAEFFER, Robert L., Jr., Assoc. Prof. of Biol., Upsala Coll., East Orange, N. J. PLANT TAXONOMY, FLORISTICS OF NEW JERSEY AND PA. b. Allentown, Pa., Oct. 31, 1917. s. Robert L. and

Millie (Ochs) S. Edn.: B.S., Haverford Coll., 1940; Ph.D., Univ. of Pa., 1948. Exp.: Instr. of Botany, Univ. of Pa., Philadelphia, Pa., 1946-47; Asst. Prof. of Biol., Upsala Coll., East Orange, N. J., 1948-49; Assoc. Prof. of Biology, Upsala Coll., 1949—. Mem.: Phi Beta Kappa; Sigma Xi; Philadelphia Botanical Club; Botanical Soc. of Pa.; A.A.A.S.; Amer. Fern. Soc.; Amer. Soc. of Plant Taxonomists; Botanical Soc. of Amer.; I.A.P.T.; Pa. Acad. of Sci.; Torrey Botanical Club; Alpha Phi Omega. Author: Vascular Flora of Northampton, 1950. Special Int.: Floristics of Pa. and N. J., Taxonomy of Vascular Plants.

SCHAEFFERT, Roland M., Supt., Graphic Arts Rsch. Div., Bartelle Memorial Inst., Columbus, Ohio. PHYSICS.

SCHAFER, Edwin George, Prof. Farm Crops and Hd., Dept. of Agron., State Coll. of Wash., Pullman, Wash. AGRONOMY.

SCHAFER, Charles Franklin, Rsch. Chemist, Hope Chapel Rd., Lakewood, N. J. CHEMISTRY.

SCHALES, Otto, Dir., Chem. Rsch. and Dir., Clinical Chem. Lab., Ochsner Clinic, Prytania and Aline Sts., New Orleans, La. CHEMISTRY.

SCHARON, Harry LeRoy, Assoc. Prof. of Geol., Wash. Univ., St. Louis, Mo. APPLIED GEO-PHYSICS. b. Jan. 21, 1915, Baltimore, Md. s. Harry F. and Melba E. (Golderman) S. Edn.: A.B., Bridgewater Coll., Va., 1938; M.A., 1943, Ph.D., 1946, Johns Hopkins Univ.; Voice Diploma, Bridgewater Coll., 1938. m. Anna Jane Swiger of Clarksburg, W. Va., Sept. 7, 1940. d. Ira L. and Maude Swiger. c.: David Frederick; Stephen Bradford; Ann Carol Webster; Kathleen Newcomb; Gretchen Lee. Exp.: Geophysicist, U. S. Geol. Survey, and Bur. of Mines, 1938-47; Asst. Prof. Geol., Washington Univ., 1947-49; Assoc. Prof. Geol., 1949—; Consulting Geophysicist, National Lead Co., 1947—. Mem.: A.I.M.M.E.; Sigma Xi; Soc. of Exp. Geophys.; Amer. Geophys. Union; Tau Kappa Alpha; Alpha Psi Omega; Fellow: Geol. Soc. of Amer.; A.A.A.S. Contrb. to: Mining Engr. Ph.D. Dissertation: Applications of Geophys. in the Fredericktown Lead Dist., Mo. Travel: N. Amer. Hobbies: Music; Stamps. Listed in: A.M.S. Special Int.: Rsch. in adapting known and developing new methods in the exploration for mineral deposits.

SCHARRER, Ernst, Assoc. Prof. of Anatomy, Schl. of Med., Univ. of Colo., 4200 E. Ninth Ave., Denver, Colo. ANATOMY.

SCHEAR, Edward Waldo Emerson, Hematologist, Agri. Rsch. Foundation, Inc., Westerville, Ohio. HEMATOLOGY. b. New Philadelphia, Ohio, Oct. 31, 1880. s. Adam and Lydia J. (Weibel) S. Edn.: A.B., Otterbein Coll., 1907; A.M., Columbia Univ., 1915; Ph.D., Ohio State Univ., 1928. m. Geneva Nichols of Westfield, Ill., Aug. 24, 1909. Died, Dec. 3, 1946. d. Brenton and Laura Nichols. c.: Evan Weibel. m. Marian B. (Pennell) Sharp, April 16, 1949. Exp.: Prof. Sci. and Math., Westfield Coll., 1907-11; Dean and Acting Pres., Westfield Coll., 1911-12; Prof. Dept. of Biol. and Geol., Otterbein Coll., 1912-51; Emeritus, *ibid.*, 1951; Hematology, Brookside Rsch. Laboratories, Inc., New Knoxville, Ohio, 1952; Hematologist, Agricultural Rsch. Foundation, Inc., Lake Geneva, Wis., 1953—. Hon. Pos.: Sec. Med. Sci. Sec., Ohio Acad. of Sci., 1943-44; Pres., 1944-45; Sec.-Treas., Central Ohio Schimstrs. Club, 1943-44; Pres., 1944-45. Mem.: Ohio Acad. of Sci., (Fellow); A.A.A.S., (Fellow); Sigma Xi; N.E.A., Life Mem.; Amer. Gen. Assn.; Natl. Assn. of Biol. Tchrs.; Ohio Archaeol. and Hist. Soc.; Amer. Pub. Health Assn.; Assn. Amer. Mus. Nat. Hist.; Amer. Ornith. Union. Contrb. to: Amer. Jour. of Physiol. Ph.D. Dissertation: The Effect of Temp. on the Content of Sugar in the Blood of the Albino Rat. The Content of Sugar in the Blood of Cats Under the Influence of Cocaine. Hobbies: Bowling; Music; Scouting. Listed in: A.M.S.

SHECK, M. George, Prof. of Psychol. and Hd. Dept., Elmira Coll., Elmira, N. Y. PSYCHOLOGY.

SCHETMAN, Abe Mandel, Assoc. Prof. of Zool., Univ. of Calif., Los Angeles, Calif. EMBRYOLOGY.

SCHEIDENHELM, Frederick William, Consulting Engr., 50 Church St., N. Y., N. Y. HYDRAULIC ENGINEERING.

SCHEIN, Marcel, Prof. of Physics, Univ. of Chicago, Chicago 37, Ill. PHYSICS. b. June 9, 1902, Trstena, Czechoslovakia. s. Hermine Messinger and Henry S. Edn.: Ph. D., Univ. of Zurich, Switzerland, 1927. m. Hilde Schoenbeck of Bad Schandau, Saxony, June 2, 1927. d. Max and Selma Schoenbeck. c.: Edgar H. Exp.: Asst. in Phys., Univ. of Zurich, 1926-29; Awarded \$1,000 Prize of the Stiftung Schnyder von Wartensee, Zurich, 1928; Fellow, Rockefeller Foundation, Univ. of Chicago, 1929-30; Docent in Physics, Univ. of Zurich, 1930-34; Prof. of Expt. Phys., Univ. of Odessa, 1935-37; Rsch., Univ. of Chicago, 1938-43; Asst. Prof., *ibid.*, 1943-44; Assoc. Prof., 1944-45; Prof. of Physics, 1946—. Mem.: Fellow, Amer. Phys. Soc.; Fellow, A.A.A.S.; Chicago Physics Club; Swiss Phys. Soc.; Quadrangle Club, Univ. of Chicago; Brazilian Acad. of Sci. Contrb. to: Phys. Rev. Ph.D. Dissertation: Über die Hyperfeinstruktur und den Zeemaneffekt der Quecksilberesonanzlinie. Travel: Sci. Expeditions on Cosmic Rays to Mt. Evans, Colo., and Jungfrauoch, Switzerland; U.S. S.R.; N. Amer.; Mt. Chacaltaya, Bolivia, 1951. Hobbies: Mtn. Climbing; Skiing; Tennis. Listed in: A.M.S.; Who's Who in Western Hemisphere; W. W.A. Special Int.: Cosmic Radiation; Rsch. on Mesons with Large Cyclotrons.

SCHELKUNOFF, Sergei A., Mem. Technical Staff, Bell Telephone Labs., 463 West St., N. Y., N. Y. MATHEMATICS, PHYSICS.

SHELL, Margaret Wood, Asst. Prof. of Zool., Univ. of Utah, Salt Lake City, Utah. PARASITOL-OGY.

SCHERER, Norman William, 2628 Garfield Ave., S., Minneapolis, Minn. FORESTRY.

SCHERMEISTER, Leo J., 2016 S. Seventh Ave., Maywood, Ill. PHARMACOGNOSY.

SCHERMERHORN, Lyman G., Prof. and Rsch. Specialist Vegetable Crops, Rutgers Univ., New Brunswick, N. J. VEGETABLE PRODUCTION.

SCHERY, Robert W., Assoc. Prof. of Botany, Wash. Univ., St. Louis, Mo. BOTANY, TAXONOMY.

SCHICK, Bela, 17 E. 84th St., N. Y. 28, N. Y. PEDIATRICS. b. Boglár, Hungary, July 16, 1877. s. Jacob and Johanna (Pichler) S. Edn.: 2nd Staats Gymnasium, Graz, Austria, 1894; M.D., Karl Franz Univ., Graz, 1900. m. Catharine C. Fries, Dec. 3, 1925. Exp.: Began Practice in Vienna, 1902; with Univ. of Vienna, 1902-23; Prof. of Pediatrics, *ibid.*, 1918-23; Came to U. S. in 1923, Naturalized Citizen, 1929; Consulting Pediatrician, Mt. Sinai Hosp., N. Y., 1923—; Consulting Pediatrician, Sea View Hosp.; Consulting Pediatrician, Willard Parker Hosp., N. Y. Infirmary for Women and Children; Consulting Pediatrician, Beth Israel Hosp.; Clinical Prof. and Lectr., Diseases of Children, Columbia Univ., 1936-43; Dir., Pediatric Service, Beth El Hosp., Brooklyn, N. Y., 1950. Mem.: Amer. Pediatric Soc.; Acad. Pediatrics; Amer. Assn. Immunologists; A.M.A.; Soc. for Exptl. Biol. and Med. Hon. Mem.: Deutsche Gesellschaft für Kinderheilkunde; Harvey Soc., Virchow Soc., N. Y., Southwest Calif. Pediatric Soc.; Miss Valley Soc.; Sociedad Boliviana de Pediatría. Author: Serum Krankheit (with Clemens Pirquet), 1905, English Translation, 1950; Scarlet Fever (with Theodore Escherich), 1912; Pirquet-sche System der Ernährung, 1918; Child Care Today (with William Rosenson), 1933 and 1948. Gen. Int.: Discoverer of "Schick Test" for Determining Susceptibility to Diphtheria, 1913; Awarded Gold Medal of N. Y. Acad. Med., 1938; Addingham Gold Medal, Apr. 12, 1938, at Leeds, England, in absentia, presented by the Lord Mayor of Leeds; Gold Medal of Midwest Forum on Allergy, Indianapolis, Ind., 1941; Gold Medal, Phi Lambda Kappa, 1933. Special Int.: Scarlet Fever, Tuberculosis, Diphtheria, Nutrition of New-Born Children; Concentrated Feeding in Childhood; Pediatrics; Allergy.

SCHICKS, George Charles, Dir., Perth Amboy General Hosp., Perth Amboy, N. J. PHARMACY, PHARMACOLOGY.

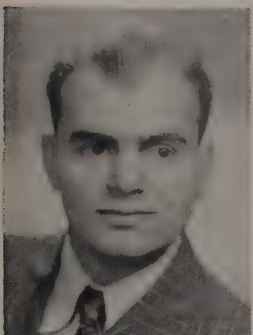
SCHIEFER, Herbert F., Franklin St., Kensington, Md. TEXTILE TECHNOLOGY.

SCHIESSLER, Robert W., Assoc. Prof. of Chem. and Dir., Amer. Petroleum Inst. Rsch. Project 42, Pa. State Coll., State Coll., Pa. CHEMISTRY, ORGANIC AND PHYSICAL RESEARCH.



Honesdale, Pa., Oct. 2, 1918. s. Walter A. and Josephine M. (Herzog) S. Edn.: B.S., Penn. State, 1939; M.S., McGill Univ., 1941; Ph.D., Penn. State, 1944. m. Betty J. Hartman, June 5, 1939. c.: Lynn; Dale. Exp.: Chemist, Eastman Kodak Co., Rochester, N. Y., 1939; Tehng. Asst., McGill Univ., Montreal, Can., 1939-41; Rsch. Chemist, General Electric Co., Schenectady, N. Y., 1941; Amer. Petroleum Inst. Rsch. Fellow, Penn. State, 1941-42; Instr. in Chem. and Supvr., A.P.I. Rsch. Project 42, ibid., 1942-46; Asst. Prof. of Chem. and Dir., A.P.I. Rsch. Project 42, ibid., 1946-51; Assoc. Prof. of Chem. and Dir., A.P.I. Rsch. Project 42, ibid., 1951—. Hon. Pos.: Chmn., Central Pa. Section, Amer. Chem. Soc., 1950-51; Chmn., Gordon Rsch. Conf. on Petroleum Chem., 1951; Mem., Advisory Bd., Gordon Rsch. Conf., 1951—; Mem., Nomenclature Com., Amer. Chem. Soc., 1950—. Mem.: Amer. Chem. Soc.; A.A.A.S.; Fellow, Amer. Inst. Chemists; Sigma Xi; A.A.U.P.; Phi Eta Sigma; Phi Lambda Upsilon; Alpha Chi Sigma; Elks; P.T.A. Contrb. to: Jour. Amer. Chem. Soc.; Anal. Chem.; Proc. Amer. Petroleum Inst.; Indus. and Egrng. Chem. Gen. Int.: \$1000 Amer. Chem. Soc. Award in Petroleum Chem. for 1953; named "Outstanding Young Man of 1952" by the Jr. C. of C. Special Int.: Mechanism of Nitration of Paraffin Hydrocarbons; Reactions of the Grignard Reagent; Organosilicon Chem.; Superexplosives; Reactions of Organolithium Reagents; Wolff-Kishner Reaction; Synthesis and Properties of High Molecular Weight Hydrocarbons; Chromatographic Adsorption; Viscosity Theory and Properties of Liquids; Effect of Pressure and Temperature on Viscosity and Density; Preparation and Properties of Deuterocarbons.

SCHIFFMAN, Theodore H., Rsch. Physicist, Ill. Inst. of Tech., Armour Rsch. Foundation, 3716 N. Pine Grove, Chicago 13, Ill. THEORETICAL ANALYSIS.



Physics; etc. Special Int.: Vibrations; Elasticity; Ballistics; Theory of Compressible Flow and Shock Waves.

SCHIFF, Leon, Assoc. Prof. of Med., Univ. of Cincinnati, Cincinnati, Ohio. INTERNAL MEDICINE.

SCHILLING, Harold K., Prof. of Physics, Pa. State Coll., State College, Pa. PHYSICS.

SCHILLING, Otto F. G., Assoc. Prof. of Math., Univ. of Chicago, Chicago, Ill. ALGEBRA.

SCHIMPF, Gustave Weber, Chemist in Chg., Scientific Supply Co., 1867 W. Ogden Ave., Chicago, Ill. CHEMISTRY.

SCHILLER, Walter, 1401 Lake St., Evanston, Ill. GYNECOLOGICAL PATHOLOGY.



b. Vienna, Dec. 3, 1887. s. Friedrich and Emma (Friedmann) S. Edn.: M.D., Univ. of Vienna, 1912. m. Dr. Marie Popper, Feb. 25, 1923. c.: Esther Marieanne, Eva Susanne. Exp.: Dir. of Lab. Second. Univ. Women's Clinic, Vienna, 1921-36; Jewish Memorial Hosp., N. Y., 1937-38; Dir. of Pathol., Cook County Hosp., Chicago, Ill., 1938-44; Roseland Hosp., Chicago, Ill., 1945-46; Women and Children's Hospital, Chicago, Ill., 1945-52. Mem.: Amer. Soc. of Clin. Path.; Assn. of Amer. Pathol.

and Bacteriol.; A.A.A.S.; Amer. Assn. for Cancer Rsch.; A.M.A. Hon. Mem.: A. F. King Obstetrical Soc., Univ. of Washington; Omaha Midwest Clin. Soc.; Miss. Valley Med. Soc.; Phi Lambda Kappa. Contrb. to: Virchows Archiv., Arch. and Ztschr. f. Gynaekol., Arch. of Path.; Amer. Jour. Obst. and Gyn. of Brit. Emp., etc. Anderson's Pathology; Meigs-Sturgis, Progress in Gynecology, Book on Granulosazellumoren. Gen. Int.: Gynecological Pathology. Special Int.: Early Diagnosis of Cancer of Uterus and Cervix (Schiller Iodine Test), Ovarian Tumors, Discoverer of Ovarian Mesonephroma.

SCHIMPF, Rosalind Klass, Biochemist, Municipal Tuberculosis Sanitarium, 5601 N. Pulaski Rd., Chicago, Ill. CHEMISTRY.

SCHIVELY, Mary Alice, retired Physician, 658 Granada St., Santa Fe, N. Mex. PSYCHIATRY, NEUROLOGY.

SCHLESINGER, Hermann Irving, Prof. Emeritus of Chem., Dir. of a Govt. Sponsored Rsch. Project, Univ. of Chicago, Chicago 37, Ill. INORGANIC CHEMISTRY. b. Minneapolis, Minn., Oct. 11, 1882. s. Louis and Emily (Stern) S. Edn.: B.S., Univ. of Chicago, 1903; Ph.D., ibid., 1905; Hon. Deg.: Sc.D., Bradley Univ. m. Edna Schlesinger, 1910. c.: Richard B.; H. Alan. Exp.: Asst. Phil. Chem., Johns Hopkins Med. Schl., Baltimore, Md., 1907; Assoc. in Chem., Univ. of Chicago, Chicago, Ill., 1907-10; Instr., Asst. Prof., Assoc. Prof., Prof. and Prof. Emeritus, ibid., 1910—. Hon. Pos.: George Fisher Baker Lectr., Cornell Univ., 1949; Chmn., Chicago Sect., Amer. Chem. Soc. Mem.: Natl. Acad. of Sci.; Amer. Chem. Soc.; Fellow, A.A.A.S.; Phi Beta Kappa; Sigma Xi; Quadrangle Club. Author: Gen. Chem., 1925; Lab. Manual of Gen. Chem., with Adelive D. Link, 1925. Contrb. to: Jour. Amer. Chem. Soc.; Some 60 Scientific Articles. War Record: Civilian with Atomic Energy Comm., Office of Naval Rsch., Signal Corps. Gen. Int.: Honor Scroll, Amer. Inst. of Chemists, 1951. Special Int.: Inorganic Chem.; Chem. of Hydrides.

SCHLESINGER, Monroe Jacob, Asst. Prof. of Pathol., Harvard Univ., Beth Israel Hosp., Boston, Mass. PATHOLOGY.

SCHLESMAN, Carlton Hecker, Engr. and Consultant, Naval Ordnance Lab., Washington, D. C. PHYSICAL CHEMISTRY.

SCHLICHTING, Arthur F., Dean and Prof. of Pharm., St. Louis Coll. of Pharm. and Allied Sciences, St. Louis, Mo. PHARMACY.

SCHLICHTING, David Arthur, Fellow, Amer. Foundation Pharmaceutical Edn., Purdue Univ., West Lafayette, Ind. PHARMACEUTICAL CHEMISTRY.

SCHLINK, Frederick John, Technical Dir., Consumers' Rsch., Inc., Wilmington, N. J. PHYSICS, MECHANICAL ENGINEERING.

SCHLINK, Ralph Lester, Sr., Rsch. Chemist in Chg. Organic Rsch., Biochemical Lab., Schenley Rsch. Div., Lawrenceburg, Ind. BIOCHEMISTRY.

SCHLOSBERG, Harold, Assoc. Prof. of Psychol., Brown Univ., Providence, R. I. EXPERIMENTAL PSYCHOLOGY.

SCHLOSS, Oscar M., Prof. of Clinical Pediatrics, Cornell Univ., N. Y., N. Y. PEDIATRICS.

SCHLUCHTER, Alfred W., Bearing Engr., General Motors Rsch. Corp., 485 W. Milwaukee St., Detroit, Mich. METALLURGY.

SCHMECKEBIER, Laurence Frederick, retired, 4450 Dexter St., Washington, D. C. POLITICAL SCIENCES.

SCHMEING, George Michael, Prof. and Chmn., Dept. Chem., Loyola Univ., 6525 Sheridan Rd., Chicago, Ill. PHYSICAL CHEMISTRY.

SCHMIDT, Alfred Francis William, Prof. Emer. Library Sci., Geo. Washington Univ., 35 Bryant St., N. W., Washington, D. C. LIBRARY SCIENCE.

SCHMIDT, Austin Guilford, Chmn., Dept. of Edn., Loyola Univ., Chicago, Ill. EDUCATION.

SCHMIDT, Bruno Moritz, Assoc. Prof., Middleburg Coll., Middleburg, Vt. GEOLOGY.

SCHMIDT, Carl Frederic, Prof. of Pharmacol., Univ. of Pa., 709 Dixon Lane, Gladwyne, Pa. GLOMERULAR CIRCULATION IN THE FROG'S KIDNEY; ACTION OF DRUGS ON RESPIRATION; ACTION OF EPHEDRINE; CEREBRAL CIRCULATION AND RESPIRATION; MORPHINE TOLERANCE; CAROTID SINUS, CAROTID BODY AND RESPIRATION; BLOOD-FLOW MEASUREMENTS IN BRAIN AND KIDNEY. b. Lebanon, Pa., July 29, 1893. s. Jacob C. and Ella (Greth) S. Edn.: A.B., Lebanon Valley Coll., 1914; M.D., Univ. of Pa., 1918. m. Elizabeth Viola Gruber



June 24, 1920. c.: Carl F., Jr.; Barbara E. Exp.: Instr. in Pharmacol., Univ. of Pa., Philadelphia, Pa., 1919-22; Assoc. in Pharmacol., Peking Union Med. Coll., 1922-24; Asst. Prof. of Pharmacol., Univ. of Pa., Philadelphia, Pa., 1924-29; Assoc. Prof. of Pharmacol., ibid., 1929-31; Prof. of Pharmacol., ibid., 1931—. Hon. Pos.: Sec. Subcomm. on Oxygen and Anoxia of Natl. Rsch. Coun., 1942-46; Chmn. of Pharmacol. Study Sect. of U. S. Public Health Service, 1946-51; Mem. of Adv. Panel on Physiol. to Office of Naval Rsch., 1947-53; Mem. of Bd. of Control of Methods in Med. Rsch.; Mem. of Adv. Comm. of Life Insurance Med. Rsch. Fund; Cons. to U. S. Army Chem. Corps, Surg. Gen. U. S. Army, Navy and Air Force; Pharmacol. Soc. of Argentine Med. Assn.; Pres., Amer. Soc. for Pharmacol.; Pres., Penn. Valley Civic Assn. Mem.: Natl. Acad. of Sci.; Assn. of Amer. Physicians; Amer. Soc. for Pharmacol. and Exptl. Therapeutics; Amer. Physiol. Soc.; Soc. for Exptl. Biol. and Med.; Physiol. Soc. of Philadelphia; A.A.A.S.; Amer. Bd. for Med. Aid to China; Alpha Omega Alpha; Sigma Xi; Gladwyne Civic Assn. Author: The Cerebral Circulation in Health and Disease, 1950; Section of Respiration in Macleod Textbook on Physiol., 1941. Contrb. to: Jour. Exptl. Med.; Amer. Jour. of Med. Sci.; China Med. Jour.; Amer. Jour. of Physiol.; Jour. Pharmacol. and Exptl. Therap.; Med.; Proc. Soc. of Exptl. Biol. and Med.; Proc. Assn. for Rsch. in Nervous and Mental Disease; Anesthesia and Analgesia; Physiol. Rev.; Jour. of Pfleger's Arch., Lab. and Clin. Med.; Sci.; Annual Rev. of Physiol.; Jour. Biol. Chem.; Fed. Proc.; Circulation; Jour. Aviation Med. Special Int.: Glomerular Circulation in the Frog's Kidney, Action of Drugs on Respiration, Action of Ephedrine, Cerebral Circulation and Respiration, Morphine Tolerance, Carotid Sinus, Carotid Body and Respiration, Blood-flow Measurements in Brain, Kidney, Heart, etc.

SCHMIDT, Clarence Carl, Prof. and Hd. Dept. Tex. Technol. Coll., Lubbock, Tex. PHYSICS.

SCHMIDT, Erwin Rudolph, Prof. of Surgery, Univ. of Wis., Madison, Wis. SURGERY.

SCHMIDT, Ida Genter, Asst. Prof. of Anatomy, Med. Coll., Univ. of Cincinnati, Cincinnati, Ohio. HISTOLOGY.

SCHMIDT, John Henry, Supt. of Mfg., Bakelite Corp., Bloomfield, N. J. PLASTICS, SYNTHETIC RESINS.

SCHMIDT, Karl Patterson, Chf. Curator of Zool., Chicago Natural History Museum, Chicago, Ill. HERPETOLOGY.

SCHMIDT, Richard Ernst, 113 Bellevue Pl., Chicago, Ill. ASTRONOMY.

SCHMIDT, Walter August, Pres. and General Mgr., Western Precipitation Corp., 1016 W. Ninth St., Los Angeles, Calif. CHEMICAL ENGINEERING.

SCHMIEDER, Rudolf Gustav, Asst. Prof. of Zool., Univ. of Pa., Philadelphia, Pa. ENTOMOLOGY.

SCHMITT, Francis Otto, Hd., Dept. of Biol., Mass. Inst. of Tech., Cambridge, Mass. CELL PHYSIOLOGY; BIOPHYSICS. b. St. Louis, Mo., Nov. 23, 1903. s. Otto Franz and Clara Eloise (Senniger) S. Edn.: A.B., Wash. Univ., 1924; Ph.D., ibid., 1927. Hon. Deg.: Sc.D., Johns Hopkins Univ., 1950; Sc.D., Wash. Univ., 1952. m. Barbara Hecker, June 18, 1927. c.: David Francis; Robert Hecker; Marion Elizabeth. Exp.: Asst. Prof. of Zool., Wash. Univ., 1929; Assoc. Prof., ibid., 1934; Prof., ibid., 1939; Hd. Dept., ibid., 1940; Prof. of Biol., Mass. Inst. Tech., Cambridge, Mass., 1941; Hd., Dept. Biol., ibid., 1942—. Mem.: Natl. Acad. Sci.; Amer. Philosophical Soc.; Amer. Acad. Arts, Sci.; N. Y. Acad. Sci.; Amer. Physiol. Soc.; Electron Microscope Soc. Amer.; Soc. Growth and Development; Histochem. Soc.; Soc. Gen. Physiologists; Amer. Soc. Zoologists; Amer. Leather Chem. Assn.; Soc. Naturalists; Phi Beta Kappa; Sigma Xi. Contrb. to: Jour. of Biol., General Physiol., Biophysics and Biochem. Special Int.: Tissue Ultrastructure, particularly Nerve, Connective Tissue and Muscle; Molecular Biol.

SCHMITT, Harrison Ashley, Consulting Mining Geologist, Cottage San Rd., Silver City, N. Mex.



GENESIS OF MINERAL DEPOSITS. b. Mankato, Minn., June 11, 1896. s. Harrison Lincoln and Esther Matilda (Grannis) S. Edn.: A. B., Univ. of Minn., 1921; B.S., ibid., 1922; Ph.D., ibid., 1926. m. Ethel Malissa Hagan, Oct. 19, 1929. c.: Alexandra; Harrison; Armena. Exp.: Geologist, Amer. Smelting and Refining Co., 1923-26; Geologist, N. J. Zinc Co., 1926-31; Consultant, Amer. Smelting and Refining Co., 1934-44; Consultant, N. J. Zinc Co., 1944-49; Consultant, Amer. Zinc Lead Min. and Smelting Co., 1951—; Consultant, Allison Steel Co., 1949—; Consulting Mining Geologist, Silver City, N. Mex. Mem.: Fellow, Geol. Soc. Amer.; Soc. of Econ. Geol.; Fellow, Mineralogical Soc. of Amer.; Fellow, A.A.A.S.; Amer. Inst. Mining and Metall. Engrs.; Beta Theta Pi; Sigma Xi; Gamma Alpha; Sigma Gamma Epsilon; Rotary. Contrb. to: Soc. of Econ. Geologists; Geol. Soc. of Amer.; Engrng. and Mining Jour.; Amer. Inst. Mining and Metallurgical Engrs. Jour.; etc. Gen. Int.: Application of Unusual Geological mapping Methods to Discovery of Valuable Mineral Deposits. Special Int.: Genesis of Ore Deposits, Mineral Deposit Appraisal, Mineral Econ., Optica'l Mineral., Econ.

SCHMITT, Waldo LaSalle, Hd. Curator, Dept. of Biol., U. S. Natl. Museum, Washington, D. C. ZOOLOGY.

SCHMITZ, Henry, Dean, Coll. of Agri., Forestry and Home Econ., Univ. of Minn., Univ. Farm, St. Paul, Minn. FORESTRY.

SCHNEIDER, Burch Hart, Prof., Dept. of Animal Husbandry, W. Va. Univ., Morgantown, W. Va. ANIMAL NUTRITION.

SCHNEIDER, Edward Christian, Prof. Emer. Biol., Wesleyan Univ., 25 Gordon Pl., Middletown, Conn. PHYSIOLOGY.

SCHNEIDER, Hyrum, Deseret Prof. and Hd., Dept. of Geol., Univ. of Utah, Salt Lake City, Utah. ECONOMIC GEOLOGY.

SCHNITKER, Maurice A., Consultant in Internal Med. and Cardiology, 1031 Secor Hotel Bldg., Toledo, Ohio. INTERNAL MEDICINE.

SCHNITZER, Robert Julius, Hd., Chemotherapy Lab., Rsch. Dept., Hoffman-LaRoche, Inc., Nutley, N. J. CHEMOTHERAPY.

SCHOCH, E. P., Bureau of Industrial Chem., Univ. of Tex., Austin, Tex. CHEMICAL ENGINEERING.

SCHOCK, A. Clyde, Hd., Dept. of Math., Central H. S., 30 W. Evergreen Ave., Philadelphia, Pa. MATHEMATICS.

SCHODER, Ernest William, Prof. Emer. Exptl. Hydraulics, Cornell Univ., 220 Willard Way, Ithaca, N. Y. HYDRAULICS.

SCHOEN, Max, Prof. and Hd., Dept. of Psychol. and Edn., Carnegie Inst. of Tech., Pittsburgh, Pa. PSYCHOLOGY.

SCHOENING, William Harry, Chg. Pathol. Div., Bureau Animal Indus., U. S. D. A., 5504 Nebraska Ave., N. W., Washington, D. C. VETERINARY BACTERIOLOGY AND PATHOLOGY.

SCHOEPFLE, Chester S., Prof. and Chmn., Dept. of Chem., Univ. of Mich., Ann Arbor, Mich. ORGANIC CHEMISTRY.

SCHOEPFLE, George Kerr, Assoc. Prof. of Physics, Kent State Univ., Kent, Ohio. PHYSICS.

SCHOEWE, Walter H., Assoc. Prof. of Geol. and Geologist, State Geol. Survey, 1002 Tennessee St., Lawrence, Kans. GEOLOGY, NEOGRAPHY.

SCHOFIELD, H. Zane, 894 Chambers Rd., Columbus 12, Ohio. CERAMICS.

SCHOLANDER, Per Fredrik, Physiologist, Woods Hole Oceanographic Inst., Woods Hole, Mass. PHYSIOLOGY. b. Orebro, Sweden, Nov. 29, 1905. s. Torkel F. and Agnethe (Faye-Hansen) S. Edn.: M.D., Univ. of Oslo, 1932; Ph.D., ibid., 1934. m. Susan Irving, 1951. Exp.: Instr., Anatomy, Univ. of Oslo, 1932-34; Rsch. Stipendiate, Physiology, ibid., 1934-39; Rockefeller Fellow and Rsch. Associate, Swarthmore Coll., Swarthmore, Pa., 1939-41; Rsch. Assoc., ibid., 1941-43; Aviation Physiologist, U. S. Air Force, 1943-46; Rsch. Biologist, Swarthmore Coll., 1946-49; Special

Fellow, Dept. Biochemistry, Harvard Med. Schl., Boston, Mass., 1949-51; Physiologist, Woods Hole Oceanographic Institution, Woods Hole, Mass., 1952—. Mem.: Assoc. Bot. Norway; Bot. Soc. Amer.; A.A.A.S.; Bermuda Biol. Sta.; Marine Biol. Lab., Woods Hole; Sigma Xi; Explorers Club; Norwegian Polar Club, Arctic Inst. North Amer.; Amer. Soc. Zool.; Amer. Physiol. Soc. Contr. to: Skrift.

Svalbard Ishavet; Hvalraddets Skrift.; Sci.; Rev. Sci. Instruments; Jour. Gen. Physiol.; Biol. Bull.; Amer. Jour. Physiol.; Jour. Marine Rsch; Jour. Biol. Chem.; Jour. Cell. Comp. Physiol.; Amer. Jour. Bot.; Physiol. Zool. Special Int.: Comp. Physiology of Respiration, Diving, Gas Secretion, and Climatic Adaptation, Arctic Botany, Lichens, Microtechniques, Single Cell Respiration.

SCHOLES, Samuel Ray, Prof. of Glass Tech., N. Y. State Coll. Ceramics, Alfred, N. Y. GLASS TECHNOLOGY.

SCHOMER, Harold A., Asst. Physiologist, U. S. Horticultural Sta., Beltsville, Md. BOTANICAL SCIENCES.

SCHOMMER, John Joseph, Prof. of Indus. Chem., Div. Placement, Ill. Inst. of Tech., Chicago, Ill. BACTERIOLOGY, INDUSTRIAL CHEMISTRY.

SCHOONOUER, I. C., Natl. Bureau of Standards, Washington 25, D. C. DENTAL RESEARCH.

SCHOPF, James Morton, Paleobotanist, Coal Constitution Lab., U. S. Bureau of Mines, Central Exptl. Sta., Pittsburgh, Pa. PALEOBOTANY, COAL GEOLOGY.

SCHORLING, Raleigh, Prof. Tchng. Math., Univ. of Mich., Ann Arbor, Mich.

SCHORSCH, Alexander Peter, Dean, Grad. Schl., De Paul Univ., 64 E. Lake St., Chicago, Ill. PSYCHOLOGY.

SCHOTT, Emmett Lee, Chf. Psychologist, Div. Neuro-Psychiatry, Henry Ford Hosp., Detroit, Mich. CLINICAL PSYCHOLOGY.

SCHOTT, Ralph G., Animal Husbandman and Geneticist, Bureau Animal Indus., Rsch. Center, U. S. D. A., Beltsville, Md. ANIMAL GENETICS.

SCHOTTE, Emil Oscar, Prof. of Biol., Amherst Coll., Amherst, Mass. EXPERIMENTAL AND REGENERATION EMBRYOLOGY.

SCHOUR, Isaac, Prof. and Hd., Dept. of Histology, Coll. of Dentistry, Univ. of Ill., 808 S. Wood St., Chicago, Ill. DENTAL RESEARCH.

SCHRADER, Franz, Columbia Univ., N. Y. 27, N. Y.

SCHRAMM, Arthur, Prof. Naturopathic Med., 2270 Colo. Blvd., Los Angeles 41, Calif. BOTANIC MEDICINE b. Bamstedt, Germany, Jan. 19, 1893. s. William and Augusta (Stichling) S. Edn.: M.D., Univ. of Mex., 1941; D.O., N. J. Coll. of Osteopathy, 1925. m. Ellen Rethschlag of Stavenhagen, Germany, July 9, 1920. d. Ernest and Augusta Rethschlag. c.: Eric; William; Frederick. Exp.: 1927-35, Prof. of Naturopathic Med., Calif. Univ. of Lib. Physicians; 1936-51, Pres., Emerson Univ. Rsch. Coun.; Staff mem., Alta Vista Hosp.; 1938-49, Pres. Internatl. Soc.

of Naturopathic Physicians; Prof. Botanic Med., Sierra States Univ. Hon. Pos.: Col. Aide-de-Camp to Gov., State of La. Grand Cross-Imperial Order of Constantine the Great, Grand Officer of Ordre de la Couronne de Charlemagne. Mem.: Academia di Filogia Classica; Sigma Chi Omega; Mason. Author: Phytotherapy, 1949. Contrb. to: Masonic Digest and Jour. of Naturop. Med. War Record: U. S. Army, 1st World War. Travel: 65 countries; Twice around globe. Hobbies: color photography; philately; genealogy. Listed in: World Biography and Who's Who in Med.



SCHRAMM, E. Frank, Prof. and Chmn., Dept. of Geol., Univ. of Nebr., Lincoln, Nebr. **PETROLEUM GEOLOGY.**

SCHRAMM, Edward, Dir. of Rsch., Onondaga Pottery Co., Syracuse, N. Y. **CHEMISTRY, CERAMICS.**

SCHRAMM, J. R., Dir., Morris Arboretum and Prof. of Botany, Univ. of Pa., Philadelphia, Pa. **EXPERIMENTAL ECOLOGY.**

SCHREIBER, Edwin William, Hd., Dept. of Math., Western Ill. State Coll., Macomb, Ill. **MATHEMATICS.**

SCHREINER, Ernst Jefferson, Sr. Silviculturist, Beltsville Expt. Forest, U. S. Forest Service, Rt. 2, Laurel, Md. **FOREST GENETICS AND RESEARCH.**

SCHREINER, Oswald, Prin. Biochemist and Chf., Div. Soil Fertility Investigations, U. S. Bureau Plant Indus., Washington, D. C. **CHEMISTRY.**

SCHRENK, Helmuth H., Chf., Health Div., U. S. Bureau Mines, 4800 Forbes St., Pittsburgh, Pa. **CHEMISTRY.**

SCHREYER, James Marlin, Sr. Chemist, Oak Ridge Natl. Lab., Oak Ridge, Tenn. **INORGANIC AND ANALYTICAL CHEMISTRY.**



SCHREYER, James Marlin, Sr. Chemist, Oak Ridge Natl. Lab., Oak Ridge, Tenn. **INORGANIC AND ANALYTICAL CHEMISTRY.** b. Asheville, N. C., Dec. 26, 1915. s. Roy and Vinnetta S. Edn.: A.B., Univ. of N. C., 1938; Ph.D., Oregon State Coll., 1948. Exp.: Chem. Tchr., Asheboro H. S., Asheboro, N. C., 1938-41; Inspector of Powder and Explosives, Radford Ordnance Wks., Radford, Va., 1941-42; Chem. Engr., Badger Ordnance Works, Baraboo, Wis., 1942-43; Process Engr., U. S. Rubber Co., Charlotte, N. C., 1943-44; Rsch. Engr., Sulphonics, Inc., Baltimore, Md., 1944-45; Grad.

Asst. and Tchng. Fellow, Ore. State Coll., Corvallis, Ore., 1945-48; Asst. Prof., Univ. of Ky., 1948-51; Assoc. Prof. Chem., ibid., 1951; Sr. Cremist Oak Ridge Natl. Lab., Oak Ridge, Tenn., 1951—. Mem.: Sigma Xi; Ky. Acad. of Sci.; A.A.U.P.; Amer. Chem. Soc.; Moose Club. Contrb. to: Anal. Chem.; Jour. Amer. Chem. Soc. Ph.D. Dissertation: Higher Valence Compounds of Iron. Hobbies: Music; Dancing. Listed in: A.M.S.

SCHRIEVER, William, Prof. and Chmn., Dept. of Physics, Univ. of Okla., Norman, Okla. **GEOPHYSICS.**

SCHROEDER, Fred W., A. P. Green Fire Brick Co., Mexico, Mo. **CERAMICS.**

SCHUH, Arthur Eugene, Dir. of Rsch. and Devel., U. S. Pipe and Foundry Co., Burlington, N. J. **PHYSICAL CHEMISTRY.**



SCHUH, Arthur Eugene, Dir. of Rsch. and Devel., U. S. Pipe and Foundry Co., Burlington, N. J. **PHYSICAL CHEMISTRY.** **PROTECTIVE COATINGS TECHNOLOGY.** **CAST IRON PROCESS METALLURGY.** b. Nuremberg, Ger., Nov. 7, 1899. s. Henry F. and Sophie M. (Goettler) S. Edn.: B.S., Univ. of Chicago, 1921; Ph.D., ibid., 1929. m. Mariam G. Schuh, Sept. 30, 1933. c.: Arthur G. Exp.: Staff, C. F. Pease Co., Chicago, Ill., 1921-22; Staff, Universal Oil Products Co., 1922-23; Staff, Western Electric Co., Chicago, Ill., 1923-29; Staff, Bell Telephone Labs., 1929-38; Staff, U. S. Pipe and Foundry Co., 1938—. Hon.

Pos.: Chmn., Gray Iron Rsch. Inst., 1947-48. Mem.: A.A.A.S.; Amer. Chem. Soc.; A.F.S.; A.S.T.M.; Sigma Xi. Co-author: Protective Coatings for Metals, 1939. Contrb. to: Indus. and Engrng. Chem.; Proc. A.S.T.M.; Amer. Foundry Man. War Record: Served on War Metallurgy Com. of N. R. C. Special Int.: Centrifugal Casting of Ferrous Metals; Gray Iron Foundry Technol.

SCHROEDER, Raymond Alfred, Assoc. Prof. of Horticulture, Univ. of Mo., Columbia, Mo. **HORTICULTURE.**

SCHUBAUER, B., Natl. Bureau of Standards, Washington, D. C. **HYDRODYNAMICS.**

SCHUETTE, Henry August, Prof. of Chem., Univ. of Wis., Madison, Wis. **CHEMISTRY.**

SCHUHMANN, Ewald W., Assoc. Prof. and Hd., Dept. of Physics, Univ. of Houston, Houston, Tex. **PHYSICS.**

SCHUHMANN, Reinhardt, Sr., Prof. of Chem., Muskingum Coll., New Concord, Ohio. **PHYSICAL AND PETROLEUM CHEMISTRY.**



SCHUHMANN, Reinhardt, Sr., Prof. of Chem., Muskingum Coll., New Concord, Ohio. **PHYSICAL AND PETROLEUM CHEMISTRY.** b. La Grange, Tex. s. Frederick and Ernestine Schuhmann. m. Alice Shuford, Aug. 20, 1913. d. Rev. J. M. Shuford and Mary Jane Barton Shuford. c.: Reinhardt, Jr.; Shuford; Alice Menger (Mrs. Gale K. Vetter). Edn.: A.B., Univ. of Tex., 1910; A.M., ibid., 1921; Ph.D., Calif. Inst. of Tech., 1924. Exp.: Tchr. of Math. and Sci. in Tex. H. Schls. and Jr. Colls., 1910-17; Prof. of Chem., Daniel Baker Coll., Tex., 1917-18; Instr., War Radio Schl., Penn Field, Austin, Tex., 1918-19; du Pont Scholar, Rsch., and Tchng. Fellow in Chem., Univ. of Tex., 1919-22; Du Pont Schl., Rsch. and Tchng. Fellow in Chem., Calif. Inst. of Tech., 1922-24; Petroleum Rsch., Union Oil Co. of Calif., Los Angeles, 1924-29; Prof. of Chem., Western State Coll. of Colo., 1929-53, (Retired); Temporary Prof. Chem., Muskingum Coll., New Concord, Ohio, 1953-54. Ph.D. Dissertation: Free Energies of the Metalloid Oxides. Contrb. to: Jour. of A.C.S. Gen. Int.: Free Energies and Heats of Reaction of Metalloid Oxides; Activity of Perchloric Acid; Preparation of Hydroxylamine Salts. Mem.: Sigma Xi; Phi Lambda Upsilon; Lambda Delta Lambda, Past Natl. Pres.; Kappa Delta Pi; Amer. Chem. Soc.; N.E.A.; A.A.U.P.; A.A.A.S., Fellow; Colo.-Wyo. Acad. of Sci., (Former Dir., Past Chmn. Chem. Sect.); Colo. Edn. Assn.; Gunnison Rotary Club, (Past Pres.); C. of C. Listed in: Who's Who in Colo.; Who's Who in the West. Special Int.: Petroleum, Metalloids and Their Oxides; Hydroxylamine Salts.

SCHULE, Paul A., retired, 986 Memorial Dr., Cambridge, Mass. **CLINICAL PATHOLOGY.**

SCHULHOF, Kamil, 2100 Ridgeland Ave., Berwyn, Ill. **INTERNAL MEDICINE.**

SCHULMAN, Edmund, Asst. Prof. and Dendrochronologist, Univ. of Ariz., Tucson, Ariz. **DENDROCHRONOLOGY.**

SCHULTZ, Adolph Hans, Anthropologisches Institut, Sempersteig 3, Zurich, Switzerland.

SCHULTZ, Alfred S., Rsch. Chemist, Standard Brands, Inc., 595 Madison Ave., N. Y., N. Y. **FERMENTATION.**

SCHULTZ, Edwin William, Prof. of Bacteriol., Exptl. Pathol., Stanford Univ., Stanford, Calif. **BACTERIOLOGY.**

SCHULTZ, Eugene S., Prin. Pathologist, U. S. D. A., Plant Indus. Sta., Beltsville, Md. **PLANT PATHOLOGY.**

SCHULTZ, Leonard P., U. S. Natl. Museum, Washington, D. C. SYSTEMATIC ICHTHYOLOGY.

SCHULTZ, Mark P., Sr. Surgeon, Natl. Inst. of Health, Bethesda, Md. MEDICINE.

SCHULZ, Ernest Rudolf, Chf. Chemist, Patent Cereals Co., Geneva, N. Y. CHEMISTRY.

SCHULZ, John A., Rsch. Asst. Prof. Animal Chem. and Nutrition, Iowa State Coll., Ames, Iowa. BIO-CHEMISTRY.

SCHULZ, William Frederick, Assoc. Prof. of Physics Emer., Univ. of Ill., 1108 N. Green St., Urbana, Ill. PHYSICS.

SCHUMACHER, Francis Xaner, Prof. of Forestry, Duke Univ., Durham, N. C. FORESTRY.

SCHUMACHER, Henry Cyril, 400 Kentucky Ave., Berkeley, Calif. PSYCHIATRY.

SCHUPP, Orion Edwin, Jr., Rsch. Chemist, Expt. Sta., E. I. du Pont de Nemours and Co., Inc., 710 Blackshire Rd., Wilmington, Del. CHEMISTRY.

SCHURECHT, Harry George, Rsch. Engr., Champion Spark Plug Co., 5808 Blue Hill, Detroit 24, Mich. CERAMICS. b. Chicago, Ill., Oct. 20, 1892. s. Charles and Christine (Wagner) S. Edn.: B.S., Univ. of Ill., 1914. Hon. Deg.: Prof. Engrng. Degree, Univ. of Ill., 1943. m. Caroline Beggs, Oct. 21, 1916. c.: Helen Harris. Exp.: Ceramic Chemist, The Findlay Clay Pot Co., Wash., Pa., 1914-16; Assoc. Ceramic Chemist, Natl. Bureau of Standards, 1916; Ceramic Chemist, Bureau of Mines, 1916-23; Sr. Fellow, Vittrified Salt-Glazed Sewer Pipe Fellowship, Mellon Inst., Pittsburgh, Pa., 1923-25; Sr. Rsch. Assoc., Natl. Terra Cotta Soc. Fellowship, Natl. Bureau Standards, Wash., D. C., 1923-31; Ceramic Chemist, Eastern Terra Cotta Co., Long Island City, N. Y., 1931-36; Prof. of Ceramic Rsch. and Dir. in Chg. of Ceramic Exptl. Station, N. Y. State Coll. of Ceramics, Alfred, N. Y., 1936-44; Rsch. Engr., Champion Spark Plug Co., Detroit, Mich., 1944—. Hon. Pos.: Chmn., Terra Cotta Section, Amer. Ceramic Soc. Mem.: Amer. Ceramic Soc.; Amer. Soc. for Testing Materials; British Ceramic Soc.; German Ceramic and Physical Soc.; Sigma Psi; Phi Lambda Upsilon; Keramos; Mason; Eastern Star; White Shrine; Amaranth. Contrb. to: Amer. Ceramic Soc. Gen. Int.: Originated Autoclave Crazing Test for Glazed Ceramic Ware; Now Standard A.S.T.M. Test. Special Int.: Salt Glazing; Architectural Terra Cotta; Spark Plug Porcelain, etc.

SCHURTZ, D. D., Sharp-Schurtz Co., Lancaster, Ohio. CERAMICS.

SCHUSTER, George L., Dean, Schl. of Agri., Univ. of Del., Newark, Del. AGRONOMY.

SCHWAB, Glenn Orville, Assoc. Prof. of Agri. Engrng., Iowa State Coll., 1520 Duff, Ames, Iowa. SOIL AND WATER CONSERVATION ENGINEERING. b. Gridley, Kans., Dec. 30, 1919. s. Edward and Lizzie (Sauder) S. Edn.: B.S., Kans. State Coll., 1942; M.S., Iowa State Coll., 1947; Ph.D., ibid., 1951. m. Lois A. Saul, Mar. 22, 1951. c.: Richard Steve; Lawrence Glenn. Exp.: U. S. Army Coast Artillery and Corps of Engrs., 1942-46; Part-time and Full-time Grad. Student, 1946-51; Instr., Asst. Prof. and Assoc. Prof. of Agri. Engrng., Iowa State Coll., Ames, Iowa, 1946—. Mem.: Amer. Geophysical Union; Sigma Xi; Phi Kappa Phi; Amer. Soc. Agri. Engrs.; Amer. Soc. Agron.; Tau Kappa Epsilon; Gamma Sigma Delta. Co-author: Manual of Soil and Water Conservation, 1951; Engrng. in Soil and Water Conservation, 1953. Contrb. to: Agri. Engrng. Jour. Special Int.: Soils and Agri. Drainage.

SCHWABE, Edward Ludwig, 41 Highland Ave., Brocton, N. Y. INTERNAL MEDICINE.

SCHWALBE, F. G., 1306 Craigwood Rd., Toledo 12, Ohio. CERAMICS.

SCHWARTZ, Edward Robinson, Prof. of Textile Tech., Rm. 3-309, Mass. Inst. of Tech., Cambridge, Mass. TEXTILE RESEARCH.

SCHWARTZ, Frederick W., Prof. of Analytical Chem., Rensselaer Poly. Inst., Troy, N. Y. CHEMISTRY.

SCHWARTZ, George Melvin, Prof. and Dir., Minn. Geol. Survey, Univ. of Minn., Minneapolis, Minn. ECONOMIC GEOLOGY.

SCHWARTZ, Harry, Dept. of Economics, Syracuse Univ., Syracuse 10, N. Y. SOVIET AREA STUDIES.

SCHWARTZ, Harry Adolph, Mgr. of Rsch., Natl. Malleable and Steel Castings Co., Cleveland, Ohio. METALLURGY.

SCHWARTZWALDER, Karl, A. C. Spark Plug Div., General Motors Corp., Flint 2, Mich. CERAMICS.

SCHWARZ, Guenter, Rsch. Physicist, Johns Hopkins Univ., Radiation Lab., Homewood Campus, Baltimore, Md. X-RAYS.

SCHWARZ, Herbert Ferlando, Rsch. Assoc., Amer. Museum Natural History, 79th St. and Central Park W., N. Y., N. Y. ENTOMOLOGY.

SCHWARZE, Carl Theodore, Prof. Emer. Civil Engrng., N. Y. Univ., N. Y., N. Y.; P. O. Box 351, Athens, Ga. CIVIL ENGINEERING.

SCHWEDE, Harold F., 2903 W. 64th St., Chicago, Ill. PHYSICS, ASTRONOMY.

SCHWEERS, Richard Henry, Geologist, Texas Co., Box 1720, Fort Worth, Tex. PALEONTOLOGY.

SCHWEGLER, Raymond Alfred, Prof. and Dean Emer., Schl. of Edn., Univ. of Kans., Lawrence, Kans. PSYCHOLOGY, EDUCATION.

SCHWEITZER, Arthur Richard, Rsch. Mathematician, Box 653, Lake Forest, Ill. MATHEMATICS.

SCHWEITZER, Morton David, Statistician, Morton David Schweitzer and Assocs., N. Y., N. Y.; 10 Louis Ave., Cincinnati, Ohio. HUMAN HEREDITY.

SCHWEIZER, Malvina, Asst. Prof., Biol. Dept., N. Y. Univ., 100 Washington Sq., N. Y., N. Y. PHYSIOLOGY.

SCHWENCK, Julius Rae, Chem. Instr., Sacramento Jr. Coll., 1116 Cavanaugh Way, Sacramento, Calif. CHEMISTRY AND CHEMICAL ENGINEERING. b. Evanston, Wyo., Aug. 10, 1900. s. Nicholas F. and Minna (Lange) S. Edn.: A.B., Univ. of Utah, 1921; Ch.E., Stanford Univ., 1923. m. Helen Wixcey, July 31, 1927. c.: Dale Mary; Carolyn Rae. Exp.: Sci. Tchr., San Juan Union H. S., 1923-26; Chem. Tchr., Piedmont H. S., 1926-31; Chem. Instr., Sacramento Jr. Coll., Sacramento, Calif., 1931—; Special Employment, Registered Consulting Chem. Engr., 1939—; Special Lectr. in Advanced Organic Chem., Sacramento State Coll., 1948—. Hon. Pos.: Chmn., Chem. Dept., Sacramento Jr. Coll., 1945-50; Chmn., Sacramento Section, A.C.S.; Chf., Radiol. Div., Sacramento City and Co. Civil Defense Council; etc. Mem.: Amer. Chem. Soc.; A.A.A.S.; N.E.A.; C.T.A.; Pacific S. W. Assn. of Chem. Tchrs.; Sigma Xi; Phi Delta Kappa. Co-author: Textbook of Chem., 1950; Lab. Manual to Accompany Text. of Chem., 1950; Basic Organic Chemistry, 1951. Contrb. to: Jour. Phys. Chem.; Jour. Chem. Edn.; Salt Lake Mining Rev.; Chem. and Engrng. News; etc. War Record: U. S. Army, 1918. Special Int.: Chem. Engrng. (Plastics and Explosion Phenomena); Organic Chem.; Chem. as Applied to Nursing.

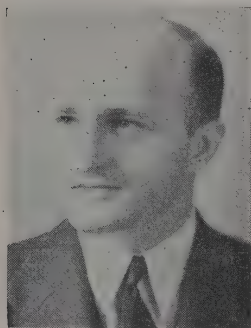
SCHWESINGER, Gladys Clotilde, Sr. Clinical Psychologist, Calif. Youth Authority, Box 170, Ventura, Calif. PSYCHOLOGY.

SCHWINGER, Julian, Harvard Univ., Cambridge, Mass.

SCHWINN, Murrow William, Lab. Inst. Physics, Oberlin Coll., Oberlin, Ohio. PHYSICS.

SCHWITALLA, Rev. Alphonse M., Dean, Schls. of Med. and Nursing, St. Louis Univ., 1402 S. Grand Blvd., St. Louis, Mo.

SCIUCHETTI, Leo Anton, Assoc. Prof. of Pharm. 2558 Tyler St., Corvallis, Ore. **PHARMACOGNOSY.**



b. Harrison, Idaho. Apr. 7, 1913. s. Jack and Theresa (Tam) S. Edn.: B.S., Idaho State Coll., 1940; M.S., Wash. State Coll., 1942. m. Emma Scheer of Creighton, Neb., July 5, 1943. c.: Carole Therese; Larry Leo. Exp.: Lab. Asst., Idaho State Coll., 1938-40; Tch. Fellow, Wash. State Coll., 1940-42; Acting-head of dept. of Pharm. Chem., Creighton Univ., 1942-43; Prof., Ky. Coll. of Pharm., 1943-46; Asst. Prof., Ore. State Coll., 1946-48; Assoc. Prof., 1948—; Sabbatical leave as Rsch. Fellow, Amer. Found. Phar. Ed. at Univ. of Wash., 1952-53. Hon. Pos.: First Aid Chmn., Benton Co. Chapter, Amer. Red Cross, 1947-50. Mem.: Phi Kappa Phi; Rho Chi; Sigma Xi; Kappa Psi; Corvallis Stamp Club, past pres.; Phi Sigma; Amer. Pharm. Assn.; B.P.O.E.; Men's Garden Club. Contrb. to: Amer. Druggist; Jour. Amer. Pharm. Assn.; Amer. Jour. Pharm. Edn.; Pac. Drug Review, Drug and Cosmetic Ind. Jour. Special Int.: Biosynthesis of Solanaceous alkaloids, "precursor" studies with alkaloidal plants, peppermint oil production, plant chemistry and physiology. Hobbies: Bowling; Athletics; Gardening; Philately. Listed in: A.M.S.; Who's Who on the Pacific Coast.

SCOFIELD, Carl Schurz, Collaborator, retired, U. S. D. A., Lanham, Md. **IRRIGATION AGRICULTURE.**

SCOFIELD, Carleton Forman, Chmn., Dept. of Psychol., Univ. of Buffalo, 33 Bryant St., Buffalo, N. Y. **PSYCHOLOGY.**

SCOFIELD, Herbert Temple, Asst. Prof. of Botany, N. C. State Coll., Raleigh, N. C. **PLANT PHYSIOLOGY.**

SCOFIELD, Lloyd Milton, Mining Dept., Picklands, Mather and Co., 700 Sellwood Bldg., Duluth, Minn. **MINING GEOLOGY.**

SCOLES, Dwight L., Prof. of Chem., Albright Coll., Reading, Pa. **CHEMISTRY.**

SCOTLAND, Minnie B., Asst. Prof. of Biol., N. Y. State Coll. for Tchrs., Albany, N. Y. **ENTOMOLOGY.**

SCOTT, Alfred Witherspoon, Prof. and Hd., Dept. of Chem., Chmn. Div. of Phys. Scis., Univ. of Ga., Athens, Ga. **CHEMISTRY.** b. June 25, 1896, Macon, Ga. s. George Edward and Mamie Lee (Wing) S. Edn.: B.S., Univ. of Ga., 1918; Ph.D., Princeton Univ., 1921. m. Jane Shields Sams of Atlanta, Ga., 1923. d. Richard Fuller and Elizabeth (Jones) S. c.: Alfred W., Jr., Richard Sams, George Edward. Exp.: Assoc. Prof. of Chem., Univ. of Ga., 1922-27; Prof., ibid., 1927—; Hd., Dept. of Chem., ibid., 1927—; Chmn., Div. of Phys. Scis., ibid., 1935—. Hon. Pos.: Vice-Pres., Ga. Acad. of Sci., 1932; Pres., 1935; Chmn., Ga. Sec. Amer. Chem. Soc., 1935—; Counselor, Amer. Chem. Soc., 1936 and 1940-41. Mem.: Amer. Chem. Soc.; A.A.A.S.; Fellow, Ga. Acad. of Sci.; Phi Lambda Epsilon; Phi Beta Kappa; Phi Kappa Phi; Sigma Xi; Gamma Sigma; Phi Delta Theta; Alpha Chi Sigma; Gamma Sigma Epsilon; Athens Country Club. Author: A Laboratory Manual of Inorganic Chem. and Semimicro Qualitative Analysis. Contrb. to: Jour. Amer. Chem. Soc.; Jour. Org. Chem. Title of Ph.D. Dissertation: The Beckmann Rearrangement of Some New Hydroxamic Acid Derivatives. War Record: Pvt., Chem. Warfare Service, U.S.A. Travel: U. S. and Canada. Recreations and Hobbies: Fishing; Golf. Listed in: Who's Who in Amer.; Who's Who in Ga.; A.M.S.; Who's Who in the Southeast; Who's Who in the Western Hemisphere; Biog. Encyc. of the World; Who Knows and What; Chemical Who's Who; Internatl. World Who's Who.

SCOTT, Andrew Humbert, Assayer, Lovelock Assay Office, P. O. Box 7, Lovelock, Nev.

SCOTT, Arnold H., Physicist, Natl. Bureau of Standards, Washington 25, D. C. **ELECTRICAL INSULATING MATERIALS.** b. Sutherland, Iowa, Aug. 20, 1899. s. Walter Stanley and Sylvia May (Steele) S. Edn.: B.A., Univ. of Miss., 1921; M.S., ibid., 1923; Ph.D., Johns Hopkins Univ., 1928. m. Pinkie Kirkpatrick, July 16, 1925. c.: Dorothy Gertrude. Exp.: Instr., Univ. of Miss., 1922-24; Jr. Physicist, Natl. Bureau of Standards, 1924 through various grades to present. Mem.: Wash. Philos. Soc.; Amer. Physical Soc.; A.A.A.S.; Wash. Acad. Sci.; A.I.E.E. Contrb. to: Jour. Rsch. of the Natl. Bureau of Standards. Special Int.: Electrical Properties of Rubber; High Polymers and CoPolymers; Measurement of Electrical Properties at High Temperatures.

SCOTT, Caleb Emlen, Extension Specialist in Plant Pathol., Univ. of Calif., Berkeley, Calif. **PLANT PATHOLOGY.**

SCOTT, Donald, Dir., Peabody Museum Archaeol. and Ethnology, Divinity Ave., Cambridge, Mass. **ARCHAEOLOGY.**

SCOTT, Ernest Lyman, retired, 64 South St., Bogota, N. J. **PHYSIOLOGY.**

SCOTT, Flora Murray, Assoc. Prof. of Botany, Univ. of Calif., Los Angeles, Calif. **PLANT ANATOMY.**

SCOTT, Gayle, Prof. of Geol., Tex. Christian Univ., Fort Worth, Tex. **GEOGRAPHY, GEOLOGY.**

SCOTT, Gordon Hatler, Prof. and Hd., Dept. of Anatomy, Wayne Univ. Coll. of Med., Detroit, Mich. **ANATOMY.**

SCOTT, Irl T., Assoc. Prof. of Chem., N. Mex. Schl. of Mines, Socorro, N. Mex. **ORGANIC CHEMISTRY.**

SCOTT, James Robert, Dir., Dept. of Public Health, Santa Fe, N. Mex. **PUBLIC HEALTH.**

SCOTT, John William, Prof. of Zool., Univ. of Wyo., Laramie, Wyo. **ZOOLOGY, ECOLOGY, PARASITOLOGY.**

SCOTT, Joseph Prestwich, Rsch. Veterinarian, Jensen Salsbery Labs., 4444 Booth St., Kansas City, Kans. **VETERINARY BACTERIOLOGY.**

SCOTT, Roy Wesley, Prof. of Clinical Med., Western Reserve Univ., Cleveland, Ohio. **CARDIOLOGY.**

SCOTT, Walter Dill, Pres. Emer., Northwestern Univ., North Shore Hotel, Evanston, Ill. **PSYCHOLOGY.**

SCOTT, Walter M., Dir., Southern Regional Rsch. Lab., New Orleans, La. **CHEMISTRY.**

SCOVILLE, Herbert, Jr. P. O. Box 2610, Washington, D. C. **PHYSICAL CHEMISTRY.**

SCRIBNER, B. F., Natl. Bureau of Standards, Washington, D. C. **SPECTROSCOPY.**

SEABORG, Glenn Theodore, Prof. of Chem. and Dir. of Div. of Nuclear Chem., Radiation Lab., Univ. of Calif., Berkeley 4, Calif.



NUCLEAR CHEMISTRY. b. Ishpeming, Mich., Apr. 19, 1912. s. Herman Theodore and Selma (Erickson) S. Edn.: B.A., Univ. of Calif., L. A., 1934; Ph.D., Univ. of Calif., Berkeley, 1937. Hon. Deg.: D.Sc., Univ. of Denver, 1951. m. Helen Lucille Griggs, June 6, 1942. c.: Peter Glenn; Lynne Annette; David Michael; Stephen Keith. Exp.: Rsch. Assoc. working with Prof. Gilbert N. Lewis, Coll. of Chem., Univ. of Calif., Berkeley, Calif., 1937-39; Instr., Dept. and Coll. of Chem., ibid., 1939-41; Asst. Prof., ibid., 1941-46; Rsch. Chemist at Metallurgical Lab.,

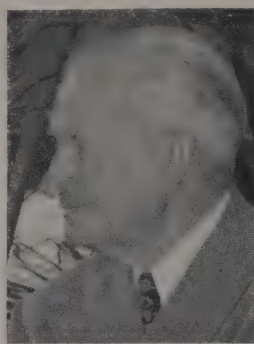
Univ. of Chicago, Chicago, Ill., 1942-46; Prof., Dept. and Coll. of Chem. and Dir. of Div. of Nuclear Chem., Radiation Lab., Univ. of Calif., Berkeley, Calif., 1945—. Hon. Pos.: Appointed by Pres. Truman to Gen. Adv. Comm. to Atomic Energy Commn., 1946-50; Councilor-at-Large, Amer. Chem. Soc., 1947; Second Annual Harrison Howe Mem. Lectr., Rochester, N. Y. Sect. of Amer. Chem. Soc., 1947; Nieuwland Lectr., Univ. of Notre Dame, 1947; Mem. of Subcomm. on Nuclear Constants of Commn. on Nuclear Sci. of Natl. Rsch. Coun., 1947-51; Mem. of Comm. on Standards and Units of Radioactivity of Natl. Rsch. Coun., 1947-51; Mem. of Joint Comm. on Radioactivity of Internatl. Coun. of Sci. Unions, 1946—; Assoc. Editor, Jour. of Chem. Physics, 1948-50; Lectr., Royal Swedish Acad. of Sci., Stockholm, 1949; Secy-Treas., Div. of Phys. and Inorganic Chem. of Amer. Chem. Soc., 1949-50; Chmn.-Elect, *ibid.*, 1950-51; Chmn., *ibid.*, 1951-52; Councilor, *ibid.*, 1951-52; Mem. Edn. Bd. of Jour. of Amer. Chem. Soc., 1950—; Foster Lectr., Univ. of Buffalo, 1951; Phi Lambda Upsilon Lectr., Ohio State, 1952; Appointed Univ. of Calif. Repr. to Pac. Coast Intercol. Conf., 1952; Coun., Calif. Sect. of Amer. Chem. Soc., 1953—. Mem.: Amer. Chem. Soc.; A.A.A.S.; Sigma Xi; Amer. Phys. Soc.; Phi Beta Kappa; Phi Lambda Upsilon; Amer. Natl. Acad. of Sci.; Royal Swedish Acad. of Engrng. Sci.; Amer. Inst. of Chemists; Royal Soc. of Arts; Amer. Phil. Soc.; Alpha Chi Sigma; Commonwealth Club of Calif. Author: Co-editor, J. J. Katz and W. M. Manning, *The Transuranium Elements*, 1949. Contr. to: Phys. Rev.; Jour. of Amer. Chem. Soc.; Rev. of Modern Physics; Nucleonics; Chem. Rev.; Sci. Chem. and Engrng. News; Physics Today. Gen. Int.: Co-Winner with E. M. McMillan of 1951 Nobel Prize Chem.; Presented Univ. of Calif. Alumni Award, 1948; 1948 W. H. Nichols Medal by N. Y. Section of Amer. Chem. Soc.; 1948 John Ericsson Gold Medal Amer. Soc. of Swedish Engrs.; 1947 Award in Pure Chem. of Amer. Chem. Soc.; Chicago Jr. Assn. of Commerce Distinguished Service Award for 1945; One of America's "ten outstanding young men" for 1947 by the U. S. Jr. C. of C.; Co-Discoverer of a No. of Artificial Radioactive Isotopes of Elements Throughout the Periodic System during 1936-42, Univ. of Calif.; Co-Discoverer of Plutonium, Atomic No. 94, *ibid.*; Co-Discoverer of Fissionable Isotope of Plutonium, Pu 239; Primarily Responsible at Metallurgical Lab. of Univ. of Chicago for Lab. Development of Chem. Separation Procedures which were used in Connection with the Mfg. of Plutonium at Clinton, Tenn., Hanford, Wash. and other Investigations Directed Toward the Application of Plutonium to Atomic Energy; Co-Discoverer in 1944 of Americium and of Curium at Metallurgical Lab. in Investigations involving the Berkeley Cyclotron; Correlations and Interpretations Concerning the Electronic Structure of the Heavier Elements; Co-Discoverer at Univ. of Calif., 1942 of New Fissionable Isotope of Uranium, U233, Through which it may be Possible to Indirectly use Thorium for Atomic Energy Purposes; Co-Discoverer at Univ. of Calif. in 1942 of long-lived Isotope of Neptunium, Np 237, and of Existence of Plutonium in Nature in Extremely Small Concentrations; Co-Discoverer of the Missing 4n plus 1 Radioactive Series During Rsch. Extending from 1940-45 at Univ. of Calif. and Met. Lab. of Univ. of Chi.; Co-Discoverer in 1949 of Berkelium and in 1950 of Californium at Univ. of Calif. Special Int.: Main Field of Investigation has been Nuclear Chem. and Nuclear Physics; Present Engaged in Rsch. Work on Transuranium Elements and on the Identification of Various High Energy Nuclear Reactions Induced as a Result of the Operation of the Univ. of Calif. Accelerators.

SCULL, Charles Wesler, Asst. Dir. of Rsch., Smith Kline French Labs., 429 Arch St., Philadelphia, Pa.

SEACIAFERRO, Salvatore John, Civil and Sanitary Engr., 24 Branford Pl., Newark, N. J. SANITATION

SEAGO, Dorothy W., Prof. and Hd., Dept. of Psychol., Newcomb Coll., Tulane Univ., New Orleans, La.

SEALE, Alvin, Supt. Emer., Steinhart Aquarium, Calif. Acad. Sci., 355 Corcoran Rd., Watsonville, Calif.



ICHTHYOLOGY, AQUARIUM MANAGEMENT. b. Fairmont, Ind., July 8, 1873. s. John and Eliza (Davidson) S. Edn.: A.B., Stanford Univ., 1896. m. Jessie Frapwell. Exp.: Curator, Bishop Museum, Honolulu, T. H. 1901-04; Asst., Smithsonian Inst. and U. S. Bur. Fisheries, 1905; Chf., Div. Fisheries, P. I., 1907-16; Assoc. Ichthyol., Museum Comp. Zool., Harvard Univ., Cambridge, Mass., 1916-19; Supt., Steinhart Aquarium, Calif. Acad. Sci., 1923-41; Emer.,

Supt., *ibid.*, 1941—. Mem.: Calif. Alexander Exped. Alaska, 1906; Steinhart Aquarium Exped., Samoa, 1929; A.A.; West, Soc. Natl.; Biol. Soc. Wash.; San Francisco Aquarium Soc.; Far East Med. Soc. Author: *The Quest for the Golden Cloak*, 1946. Contr. to: Smithsonian Reports; U. S. Bur. of Fisheries; Bull. of Bur. of Sci.; Philippines; Aquarium Jour. Gen. Int.: Gift of a Library of more than 2000 Vols. on the South Seas to the Pacific Grove Public Lib. Gift of 1000 Vols. to the Steinhart Aquarium, on Fishes. Special Int.: Ichthyology, Study of Aquarium Bldg. and Mgt.

SEAMAN, Wyllys Arthur, 77 Fifth St., Houghton, Mich. GEOLOGY, GEOGRAPHY.

SEAMANS, Arthur Edgerton, Chg. Rsch. Dryland Agri. and Agronomist, U. S. Huntley Field Sta., Huntley, Mont. AGRONOMY.

SEAMANS, Howard Loomis, Chf., Field Crop Insect Investigations, Div. Entomol., Dominion Div. Entomol., 616 Confederation Bldg., Ottawa, Ont., Can. ENTOMOLOGY.

SEARES, Frederick Hanley, 351 Palmetto Drive, Pasadena 2, Calif.

SEARLE, Harriet Richardson, 3036 Klingle Rd., Washington, D. C. ZOOLOGY.

SEARS, Frederick Edmund, Farnsworth Master Emer. Sci., St. Paul's Schl., 4 Hillside Rd., Concord, N. H. PHYSICS.

SEARS, George Wallace, Prof. and Hd., Dept. of Chem., Univ. of Nev., Reno, Nev. CHEMISTRY.

SEARS, Harry Johnson, Prof. and Hd., Dept. of Bacteriol., Med. Schl., Univ. of Portland, Portland, Ore. BACTERIOLOGY.

SEARS, Jesse Brundage, Prof. Emer., Stanford Univ., Stanford, Calif.; 136 Harriet St., Palo Alto, Calif. EDUCATION.

SEASE, Virgil B., Dept. Dep. Sect., Photo. Prod. Dept., E. I. du Pont de Nemours and Co., Inc., 1010 Berkeley Rd., Wilmington, Del. CHEMISTRY.

SEATON, Max Y., Westvaco Chemical Div., Food Machinery and Chemical Corp., 405 Lexington Ave., N. Y. 17, N. Y. CERAMICS.

SEAYER, F. J., (retired), The New York Botanical Garden, N. Y., N. Y. MYCOLOGY.

SEBRELL, William H., Jr., Natl. Insts. of Health, Bethesda, Md. NUTRITION.

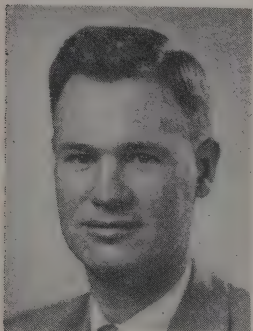
SECREST, Edmund, Dir., Ohio Agri. Expt. Sta., Wooster, Ohio. FORESTRY.

SEDGWICK, Lillian Reynolds, Technical Asst., Syracuse Museum Natural Sci., Syracuse Univ., Syracuse, N. Y. BOTANY.

SEDGWICK, Paul Joseph, Prof. of Botany, Syracuse Univ., Syracuse, N. Y. PHOTOGRAPHY.

SEAY, Maurice F., Dir., Bureau Schl. Service and Hd. Dept. Ednl. Admin., Univ. of Ky., Lexington, Ky. EDUCATION.

SEAY, William Albert, Assoc. Agronomist and Asst. Prof. of Soils, Univ. of Ky., Lexington 29, Ky.



SOILS. b. Charleston, Mo., Sept. 12, 1920. s. William Arthur and Rui Ethelyne (Brooks) S. Edn.: B.S., Univ. of Ky., 1942; M.S., *ibid.*, 1948; Ph.D., Univ. of Wis., 1949. m. Lyda Maxine Short, Jun 27, 1943. c.: Edward Allen; Sally Brooks; Jeffrey Short. Exp.: Asst. in Soils Lab., Univ. of Ky., Lexington, Ky., 1946; Grad. Asst., *ibid.*, 1946-47; Fellow, Univ. of Wis., Madison, Wis., 1948-49; Asst. Prof. of Soils, Univ. of Ky., Lexington, Ky., 1949—; Asst. Prof. Soils and Asst. Agronomist, Ky. Agri. Expt. Sta., Lexington, Ky., 1950; Assoc. Agronomist and Asst. Prof. of Soils, *ibid.*, 1952—. Mem.: Sigma Xi; Soil Sci. Soc. of Amer.; Amer. Soc. of Agronomy. Contrb. to: Agronomy Jour.; Proceedings of Soil Sci.; Soil Sci. Chem. Analyst. Special Int.: Soil nutrients and Plant Nutrition, Soil-Plant-Fertilizer Studies with Radioisotope Tracers, Minor Element Studies in Soils and Plants.

SEE, Thomas Jefferson J., Prof. of Math., retired, 614 Ohio St., Vallejo, Calif. ASTRONOMY MATHEMATICS.

SEECOF, David P(hilip), 1970 Daly Ave., Bronx, N. Y. MEDICINE. b. Dec. 25, 1895, N. Y. C. s. Morris Noah and Jennie (Berlowitz) S. Edn.: M.D., Univ. and Bellevue Hosp. Med. Coll., N. Y., 1918. m. Anna J. Robertson, June, 1948. Exp.: Pathol., Montefiore Hosp., N. Y., 1918-19, 1921-27; Assoc. to Dr. Isaac Levin, N. Y., 1919-21; Assoc. Prof., Pathol., Med. Schl., Univ. of Colo., 1927-29; Asst. Prof., Pathol., Western Reserve, 1929-33; Pathol., City Hosp., Cleveland, Ohio, 1929-33; Dir., Lab., Jewish Hosp., Montreal, Can., 1934-37. Mem.: A.A.A.S.; Soc. Expt. Pathol.; Amer. Cancer Rsch.; Amer. Pathol. and Bacteriol.; Amer. Study Internal Secretions; Soc. Expt. Biol. and Med.; N. Y. Pathol. Soc.; N. Y. Acad. Med.; Canadian Physiological Soc.; N. Y. Acad. of Sci.; Internatl. Assn. Med. Museums; Sigma Xi; Phi Delta Epsilon. Contrb. to: Sci. Papers on Cancer Endocrine Glands; etc. War Record: Pvt., Med. Enlisted Res. Corps; Honorable Discharge. Hobbies: Photography; Music; Walking. Listed in: A.M.S.; Directory of Med. Specialists; Who's Who in Amer. Jewry; Sigma Xi; Who's Who in N. Y.

SEEGAL, Beatrice Carrier, Assoc. Prof. of Bacteriol., Columbia Univ., N. Y., N. Y. BACTERIOLOGY.

SEEGAL, David, Assoc. Prof. of Med., Columbia Univ., N. Y., N. Y. MEDICINE.

SEEGER, Raymond John, Rsch. Consultant Theoretical Physics, Bureau Ordnance, Navy Dept., Washington, D. C. THEORETICAL PHYSICS.

SEEGERS, W. H., Dept. of Pharmacol. and Physiol., Wayne Med. Schl., Detroit, Mich., PROTEINS AND AMINO ACIDS.

SEELER, Edgar Viguers, Jr., Rsch. Assoc. Mycology, Farlow Herbarium, 4 Berkeley Pl., Cambridge, Mass. MYCOLOGY.

SEELY, Leslie B., Jr., Group Leader, Los Alamos Scientific Lab., P. O. Box 1663, Los Alamos, N. Mex. PHYSICAL CHEMISTRY.

SEEVERS, Maurice Harrison, Prof. and Chmn., Dept. of Pharmacol., Med. Schl., Univ. of Mich., Ann Arbor, Mich. PHARMACOLOGY.

SEGOE, Ladislav, Consulting Engr., 517 Provident Bank Bldg., Cincinnati 2, Ohio. CITY AND REGIONAL PLANNING.

SEGRE, Renato, SPEECH AND HEARING.

SEGRÉ, Emilio, Prof. of Physics, Dept. of Physics, Univ. of Calif., Berkeley, Calif. NUCLEAR PHYSICS AND CHEMISTRY. b. Tivoli, Italy, Feb. 1, 1905. s. Giuseppe and Treves (Amelia) S. Edn.: Ph.D., Univ. of Rome, 1928. m. Elfriede Spiro, Feb. 2, 1936. c.: Claudio; Amelia; Fausta. Exp.: Asst. Prof. of Physics, Univ. of Roma, Italy, 1928-30; Fellow, Rockefeller Foundation Univ. of Amsterdam and Hamburg, 1930-32; Asst. Prof. of Physics in Rome, Dir. of Physics Lab., Univ. of Palermo, Italy, 1935-38; Rsch. Assoc. and Lectr., Radiation Lab. and Dept. of Physics, Univ. of Calif., Physicist, Los Alamos Lab., Los Alamos, N. Mex., 1943-46; Prof. of Physics, Univ. of Calif., Berkeley, Calif., 1946—; Visiting Prof. of Physics, Univ. of Ill., 1951-52. Hon. Pos.: Donegani Lectr. of Accademia Nazionale dei Lincei, Italy, 1951. Mem.: U. S. Natl. Acad.; Heidelberg Acad. of Sci.; Soc. for the Progress of Sci. Montevideo; Fellow, Amer. Phys. Soc.; Soc. Italiana di Fisica; Sigma Xi. Contrb. to: Nuovo Cimento; Phys. Rev.; Proc. of Royal Soc.; Nature. Gen. Int.: Co-Discoverer of Elements technetium, astatine and plutonium; Discovery with E. Fermi of the Slow Neutrons; Investigations on High Energy Collisions Between Elem. Nuclei. Special Int.: Nuclear Physics; Atomic Physics.

SEIBERT, Florence B., Assoc. Prof. of Biochem., Henry Phipps Inst., Univ. of Pa., Seventh and Lombard Sts., Philadelphia, Pa. TUBERCULOSIS RESEARCH.

SEIDEL, Wladimir, Prof. of Math., Univ. of Rochester, Rochester, N. Y. THEORY OF FUNCTIONS.

SEIDELL, Atherton, retired, 2301 Connecticut Ave., Washington, D. C. CHEMISTRY.

SEIDEMAN, Roy M., Industrial Hygiene Physician, Conn. State Dept. of Health, 1179 Main St., Hartford, Conn. PUBLIC HEALTH.

SEIDENFELD, Morton Alfred, Dir., Psychol. Services, Natl. Foundation Infantile Paralysis, 120 Broadway, N. Y., N. Y. CLINICAL PSYCHOLOGY.

SEIDLIN, Joseph, Dean, Grad. Schl., Alfred Univ., Alfred, N. Y. EDUCATION.

SEITZ, Clifford P., Psychologist, Flight Section, Special Devices Center, Office of Naval Rsch., Sands Point, Port Washington, L. I., N. Y. AVIATION PSYCHOLOGY.

SEITZ, Frederick, Prof. of Physics, Physics Dept., Univ. of Ill., Urbana, Ill. PHYSICS. b. San Francisco, Calif., July 4, 1911. s. Frederick and Emily C. (Hofman) S. Edn.: B.A., Stanford Univ., 1932; Ph.D., Princeton Univ., 1934. m. Elizabeth Marshall, 1935. Exp.: Asst. Prof., Univ. of Rochester, 1935-37; General Electric Rsch. Lab., 1937-39; Assoc. Prof., Univ. of Pa., 1939-42; Prof. and Dept. Hd., Carnegie Inst. of Tech., 1942-49; Prof. of Physics, Univ. of Ill., Urbana, Ill., 1949—. Mem.: Philosophical Soc.; Natl. Acad. Scis. Author: Modern Theory of Solids, 1940; Physics of Metals, 1943. Special Int.: Solid State Physics.

SELBERG, Atle, Prof., Inst. for Advanced Study, Princeton, N. J. ANALYTIC NUMBER THEORY.

SELBY, Clarence Davey, Med. Consultant, General Motors Corp., 3044 W. Grand Blvd., Detroit, Mich. INDUSTRIAL MEDICINE.

SELEKMAN, Benjamin Morris, Kirstein Prof. of Labor Relations, Grad. Schl. Business Admin., Harvard Univ., Cambridge, Mass. LABOR RELATIONS.

SELHEIMER, Charles William, Jr., Dept. of Chem. Engrng., Ill. Inst. of Technology, Chicago, Ill., 10406 S. Leavitt St., Chicago. CHEMICAL ENGINEERING. b. July 13, 1901, Reading Pa. s. Charles W. and Catherine (Zabel)

S. Edn.: B.S., Midland Coll., Fremont, Neb., 1925; M.S., 1926, Ph.D., 1932, Mich. m. Elizabeth Moore of Lansing, Mich., Nov. 21, 1930. d. Dr. Norman and Mary (Clarke) Moore. c.: Daniel Clarke; John Charles. Exp.: Instr. in Math. and Physics, Dana Coll., 1925; Tchng. Asst. Math., Univ. of Mich., 1925-27; Instr. Math., ibid., 1927-28; Instr. Chem. Engrng., ibid., 1928-30; Chem. Engr., Procter and Gamble Co., Ivorydale, Ohio, 1931-33; Chem. Supvr., Gold Dust Corp., Baltimore, Md., 1933-34; Chief Chem., 2 in 1 Shinola, Bixby Corp., Indianapolis, Ind., 1934-36; Asst. Prof., Chem. Eng., Wayne Univ., 1936-42; Assoc. Prof. Chem. Eng., Wayne Univ., 1942-46; Consulting Work with Detroit Companies, 1936-46; Personnel and Trng. of Tech. Men, Tire Div., Dev. Dept. U. S. Rubber Co., Detroit, 1946-48; Prof. of Chem. Engrng., 1948—. Hon. Pos.: Bd. Dir., Wittenberg Coll., 1938-42; Bd. of Dir., Lutheran Charities, Detroit, 1938-43; Pres., Id., 1940-42; Bd. Dir., Luth. Student Foundation, Ann Arbor, Mich., 1938—. Mem.: Sigma Xi; A.I.Ch.E.; Gamma Alpha. Author: Fuels and their Utilization (with A. R. Carr), 1941; Tech. Articles. Ph.D. Dissertation: Temperature-pressure effect on gas-liquid equilibrium (on paraffin hydrocarbons). Listed in: A.M.S.; Who's Who in Engrng.; Who Knows—and What. Special Int.: Soaps, Detergents, Rubbers, Shoe Dressings, Protective Coatings, Fume and Waste Disposal.

SELL, Harold Melvin, Prof. of Agri. Chem., Mich. State Coll., E. Lansing, Mich. BIOCHEMISTRY. b. Waseca, Minn., June 7, 1905. s. Rudolph and Wanda (Born) S. Edn.: A.B., North Central Coll., 1929; M.S., Mich. State Coll., 1931; Ph.D., Univ. of Wis., 1938. m. Mabelle Alice Sargent of Sparta, Wis., Dec. 26, 1939. d. Mr. and Mrs. J. E. Sargent. c.: John Edward; Elizabeth Kay. Exp.: Asst. in Chem., N. Central Coll., 1927-29; Grad. Asst., Mich. State Coll., 1929-31; Rsch. Chem., Gen. Foods Corp., 1931-35; Grad. Asst. in Biochem., Univ. of Wis., 1935-38; Post Doct. Asst. in Biochem., Univ. of Wis., 1938-39; Assoc. Chemist, Tung Investigations, U.S.D.A., 1939-45; Prof. of Agri. Chem., Mich. State Coll., 1945—. Mem.: Alpha Chi Sigma; Phi Sigma; Gamma Alpha; Phi Lambda Upsilon; Sigma Xi; Kappa Delta Pi; Amer. Chem. Soc.; Amer. Soc. of Plant Physiol.; Mich. Acad. of Sci., Arts, and Letters; A.A.A.S.; Kiwanis. Conbr. to: Jour. Biol. Chem., Jour. Amer. Oil Chem. Soc., Bot. Gaz., Plant Physiol., Arch. Biochem. and Biophysics, and Jour. Amer. Chem. Soc. Ph.D. Dissertation: Syntheses in the Hexuronic Acid Group. Hobbies: Hunting; Fishing. Special Int.: Antibiotics, Plant Growth Regulators, Chem. of Plant Mechanisms and Synthetic Organic Chem.

SELLERS, Jesse Earl, Chem. Engr., General Electric Co., Schenectady, N. Y. CHEMICAL ENGINEERING.

SELLERS, John Alvan, Assoc. Prof. of Chem., Mich. State Normal Coll., Ypsilanti, Mich. CHEMISTRY.

SELLING, Lowell Sinn, P. O. Box 210, Jacksonville, Fla. NEUROPSYCHIATRY.

SELLS, Saul B., Asst. to Pres., A. B. Frank Co., San Antonio, Tex. PSYCHOLOGY.

SELWOOD, Pierce W., Dept. of Chem., Northwestern Univ., Evanston, Ill. MAGNETOCHEMISTRY.

SEMAN, Philip Louis, Hon. Pres., Chicago Recreation Commn. and Hon. Dir. for Life, Jewish Community Centers of Chicago; 536 N. Arden Blvd., Los Angeles, Calif. SOCIAL SCIENCE.

SEMMES, Douglas Ramsay, Pres., Sarnosa Oil Corp., Milam Bldg., San Antonio, Tex. PETROLEUM GEOLOGY.

SENN, Pettus Holmes, Hd. Prof. of Agron., Univ. of Fla., Gainesville, Fla. AGRONOMY.

SENSTIUS, Maurice William, Assoc. Prof. of Geol., Univ. of Mich., Ann Arbor, Mich. SOILS AND SEDIMENTS.

SERBER, Robert, Prof. of Physics, Columbia Univ., 450 Riverside Dr., N. Y. 27, N. Y. THEORETICAL PHYSICS. b. Philadelphia, Pa., Mar. 14, 1909. s. David and Rose (Frankel) S. Edn.: B.S., Lehigh Univ., 1930; Ph.D., Univ. of Wis., 1934. m. Charlotte Leaf, June 15, 1933. Exp.: Natl. Rsch. Fellow at Univ. of Calif., Berkeley, Calif., 1934-36; Rsch. Assoc., ibid., 1936-38; Asst. Prof., Univ. of Ill., Urbana, Ill., 1938-40; Assoc. Prof., ibid., 1940-45; Prof. of Physics, Univ. of Calif., Berkeley, Calif., 1945-51; Prof. of Physics, Columbia Univ., N. Y., N. Y., 1951—. Mem.: Fellow, Amer. Physical Soc.; Natl. Acad. Sci.; Sigma Xi. Conbr. to: Physical Rev.; Jour. Chem. Physics. Special Int.: Nuclear Physics; Meson Theory; High-energy Physics.

SERVICE, William Corr, Assoc. Prof., 1631 Alamo Ave., Colo. Springs, Colo. ALLERGY AND IMMUNOLOGY. b. Nov. 30, 1901, Greenfield, Ind. s. William and Ella (Carr) S. Edn.: A.B., Ind. Univ., 1923; M.D., ibid., 1926; M.D., cum laude, ibid., 1927. m. Louise West of Crawfordsville, Ind., Dec. 6, 1926. d. Judge and Mrs. Jere West. c.: William; Roger; Robert. Exp.: Prosecutor, Anatomy, Ind. Univ., 1922-23; Instr., ibid., 1927-29; Instr., Biol., Colo. Coll., 1931-36; Asst. Prof., ibid., 1936-41; Assoc. Prof., ibid., 1941—. Mem.: Amer. Assn. M.D.; Sigma Nu; Phi Chi; Delta Epsilon; Fellow, Amer. Coll. of Allergy; Rotary; Fellow, Amer. Coll. of Physicians, etc. Ph.D. Dissertation: The Use of Orthodoxy benzoic acid in the treatment of Arthritis. Travel: Mex.; Cent. Amer. Hobbies: Golf; Fishing. Listed in: A.M.S. Special Int.: Antigenic Polysaccharide Components of Pollen.



SERVISS, Frederick LaVerne, Prof. of Geol., Purdue Univ., Lafayette, Ind. GEOLOGY.

SETTE, Oscar Elton, Sr. Biologist in Chg., South Pacific Investigations, U. S. Bureau Fisheries, Stanford Univ., Stanford, Calif. ZOOLOGICAL SCIENCES.

SETZLER, Frank Maryl, Hd. Curator, Dept. of Anthropol., U. S. Natl. Museum, Washington, D. C. ARCHAEOLOGY.

SEULKE, Karl John, Dir. of Nutrition, Cooperative Feed Dealers, Inc., 99 Oak St., P. O. Box 190, Binghamton, N. Y. NUTRITION.

SEVERANCE, Hayward Merriam, Organic Chem. Inst., Los Angeles City Coll., 855 N. Vermont Ave., Los Angeles, Calif. PLANT ECOLOGY.

SEVERENS, James Madison, Dir. of Rsch. and Development, Amer. Scientific Lab., Polo, Ill. BACTERIOLOGY.

SEVERIN, Charles F., Hd., Dept. of Biol., St. Mary's Coll., Winona, Minn. BOTANY.

SEVERIN, Harry Charles, Prof. of Entomol. and Zool., S. Dak. State Coll., Brookings, S. Dak. ENTOMOLOGY.

SEVERINGHAUS, Aura Edward, Assoc. Dean, Coll. of Physicians and Surgeons, Columbia Univ., 630 W. 168th St., N. Y., N. Y. ENDOCRINE CYTOLOGY.

SEVERINGHAUS, Helen C., 101 Grand View Blvd., Tuckahoe, N. Y. MEDICAL SCIENCES.

SEVERINGHAUS, Frances O., Instr., Brooklyn Coll., Brooklyn, N. Y. PHYSICS.

SEVERY, Joseph Warren, Chmn., Div. Biol. Sciences, and Prof. of Botany, Mont. State Univ., Missoula, Mont. PHYSIOLOGY, ECOLOGY.

SEVRINGHAUS, Elmer Louis, Dir. of Clinical Rsch., Hoffmann-La Roche, Inc., Nutley, N. J. **MEDICINE.**

SEYBOLT, Robert Francis, Prof. of Humanities, Univ. of Ill., Urbana, Ill. **MEDIAEVAL LANGUAGES, LITERATURES.**

SEYER, William Frederick, Prof. of Chem. Engrng., Univ. of British Columbia, Vancouver, B. C., Can. **CHEMISTRY, PHYSICS.**

SEYMOUR, Keith Morton, Dept. of Chem., Butler Univ., Indianapolis, Ind. **CHEMISTRY.**

SEYMOUR, Merrill Wilmer, Rsch. Photographic Chemist, Rsch. Lab., Eastman Kodak Co., Rochester, N. Y. **COLOR PHOTOGRAPHY.**

SEYMOUR-JONES, Frank Leslie, Dir., New Products Rsch. Lab., Borden Co., 350 Madison Ave., N. Y., N. Y. **CHEMISTRY, FOOD TECHNOLOGY.**

SHACKELFORD, Benjamin E., Mgr., License Dept., R. C. A. Internatl. Div., 745 Fifth Ave., N. Y., N. Y. **ELECTRONICS.**

SHACKLETON, Samuel Paul, Mem. Technical Staff, Bell Telephone Labs., 463 West St., N. Y., N. Y. **ELECTRICAL ENGINEERING, PHYSICS.**

SHADLE, Albert Ray, Prof. and Hd., Biol. Dept., Univ. of Buffalo, Buffalo, N. Y. **MAMMALOLOGY.**

SHAFFER, George Daniel, Prof. Emer. Physiol., Leland Stanford Jr. Univ., Stanford Univ., Calif.; 321 Melville Ave., Palo Alto, Calif. **PHYSIOLOGY, ENTOMOLOGY.**

SHAFFER, John Irwin, Jr., Wholesale Lumber Business, Sparta, Tenn. **PLANT PHYSIOLOGY.**

SHAFFER, Laurance Frederic, Prof. of Edn. and Hd., Dept. of Guidance, Tchrs. Coll., Columbia Univ., N. Y., N. Y. **PSYCHOLOGY.**

SHAFFER, Morris, Tulane Univ., New Orleans, La. **VIROLOGY.**

SHAFFER, Philip Anderson, Wash. Univ. Med. Schl., St. Louis 10, Mo.

SHAFFER, Wave Henry, Assoc. Prof. of Physics, Ohio State Univ., Columbus, Ohio. **PHYSICS.**

SHAHAN, William Ewing, Clinical Prof. of Ophthalmology, Wash. Univ., Schl. of Med., St. Louis, Mo.

SHAKLEE, Alfred Ogle, Assoc. Prof. of Pharmacol., Schl. of Med., St. Louis Univ., St. Louis, Mo. **PHARMACOLOGY.**

SHALLENBERGER, David W., Physician, Out-Patient Dept., Univ. Hosp. Clinic, Schl. of Med., Western Reserve Univ., Cleveland, Ohio. **INTERNAL MEDICINE.**

SHALLENBERGER, Garvin Dennis, Hd. and Prof. Dept. of Physics, Mont. State Univ., Missoula, Mont. **PHYSICS.**

SHAMEL, Archibald Dixon, Assoc. in Horticulture, Hon., Citrus Exp. Sta., Univ. of Calif., Riverside, Calif. **HYBRID CORN, SYSTEMATIC SEED CORN SELECTION, CORN CULTURE; TOBACCO BREEDING AND SEED SELECTION; BUD MUTATIONS AND BUD SELECTION IN VEGETATIVELY PROPAGATED PLANTS INCLUDING CITRUS, SUGAR CANE, PINEAPPLES, AVACADOS, BANANAS, APPLES, PEACHES AND OTHER FRUITS.** b. Christian Co., Ill., Oct. 15, 1878. s. Conrad and Caroline (Alkire) S. Edn.: B.S., Univ. of Ill., 1898. m. Fay



Brewer, Sept. 25, 1907. c.: Norman Archibald;

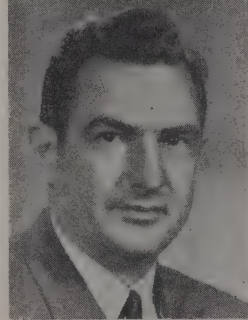
John Dixon; Carol. Exp.: At Univ. of Ill. in Chg. Dept. of Farm Crops and Supt. Expt. Sta., Univ. of Ill., 1898-1902; Sci. Asst., U. S. D. A., 1903-04; Prin. Physiologist, *ibid.*, 1904-44; Assoc. in Hort., Hon., Citrus Expt. Sta., Univ. of Calif., Riverside, Calif., 1944—. Hon. Pos.: Pres., Riverside Bd. of Park Commissioners; Chmn., City Beautiful Com., Riverside C. of C.; Vice Pres. and Dir., Riverside Savings and Loan Assn. Mem.: Fellow, A.A.A.S.; Synopsis Club; Amer. Genetic Assn.; Calif. Avocado Assn.; Calif. Lemon Mens Club; Amer. Pomological Soc.; Natl. Geographic Soc.; A.Z.; S.A.E.; Riverside Rotary Club; Riverside C. of C.; Masons. Author: Book of Corn, 1898; Manual of Corn Judging, 1900; etc. Contrb. to: Jour. Heredity; Yearbooks of Calif. Avocado Soc.; etc. Gen. Int.: Development and Introduction of Systematic Bud Selection and Propagation Practices, Inventions of Air Conditioning Equipment, Steam Soil Sterilizer, Tobacco Seed Separator, Introduction of Successful Cigar Wrapper Variety from Cuba in Conn. Valley, Wilder Medal, Riverside's First Civic Award; Introduction of Shamel Ash and Tecata Ash in Tropical and Subtropical Areas. Special Int.: Systematic Bud and Seed Selection for Plant Improvement, Air Conditioning, Useful Plant Introductions from Latin Amer.

SHAND, S. James, Newberry Prof. of Geol., Columbia Univ., N. Y., N. Y. **PETROLOGY.**

SHANDS, Wayland Arthur, Sr. Entomologist, Potato Insect Investigations in East, U. S. D. A., Bureau of Entomol. and Plant Quarantine, Univ. of Maine, Orono, Maine. **ENTOMOLOGY.**

SHANER, Ralph Faust, Prof. of Anatomy, Univ. of Alberta, Edmonton, Alta., Can. **EMBRYOLOGY.**

SHANK, Paul L., Prof. of Sci. and Edn., State Tchrs. Coll., Clarion, Pa. **PHYSICS.** b. S. Connellsville, Pa., Mar. 10, 1907. s. Charles J. and Ida Mae (Smith) S. Edn.: B.S., Bethany Coll., 1932; M.Ed., Univ. of Pittsburgh, 1941; Ph.D., *ibid.*, 1951. m. Ruth Keck (dec.), Aug. 20, 1940. c.: Susan Elizabeth. Exp.: Prof. of Sci. and Edn., State Tchrs. Coll., Clarion, Pa., 1937—. Mem.: Pa. State Ednl. Assn.; N.E.A.; Natl. Sci. Tchrs. Assn.; A.A.P.T.; A.A.-A.S.; Sigma Nu; Phi Sigma Pi. War Record: U.S.N.R., World War II, 39 months. Special Int.: Title of Rsch.: The Evolution of Natural Philos. (Physics) Textbooks Used in Amer. Secondary Schls. Before 1880.



SHANKS, Royal Eastman, Assoc. Prof. of Botany, Univ. of Tenn., Knoxville, Tenn. **PLANT ECOLOGY.**

SHANKWEILER, John Victor, Prof. of Biol., Muhlenberg Coll., Allentown, Pa. **BIOLOGY.** b. July 22, 1894, Huffs Ch., Pa. s. James Valentine and Catherine (Bittenbender) S. Edn.: Kutztown. Nor. Schl., 1915; B.S., Muhlenberg Coll., 1921; A.B., Cornell Univ., 1927; Ph.D., *ibid.*, 1931. m. Lelah I. Shuler of Allentown, Pa., Sept. 1, 1921. d. Benjamin and Ellen Shuler. c.: Dorothy Isobel; Grace Eileen; Bruce Everett. Exp.: Instr. in Biol., Muhlenberg Coll., 1921-25; Asst. Prof. of Biol., *ibid.*, 1925-28; Prof. of Biol., *ibid.*, 1928—. Premedical Adviser, 1927—. Tennis Coach, 1928—. Mem.: A.A.A.S.; Natl. Geog. Soc.; Amer. Mus. of Nat. Hist.; Phi Kappa Tau; Omicron Delta Kappa; Sigma Xi; Oakmont Tennis Club. Ph.D. Dissertation: The Cutaneous Glands of the Anura. War Record: 312th F. A., 79th Div.; Overseas in France 11 Mos. Hobbies: Photography; Tennis. Listed in: A.M.S.; Who's Who in Pa.

SHANNON, Claude, Bell Telephone Labs., Murray Hill, N. J. **ENGINEERING.**

SHANNON, James Ignatius, Prof. and Hd., Dept. of Physics, St. Louis Univ., 221 N. Grand Blvd., St. Louis, Mo. **ATOMIC PHYSICS.**

SHANOR, Leland, Asst. Prof. of Botany, Univ. of Ill., Urbana, Ill. **MYCOLOGY.**

SHAPIRO, Harry L., Chmn., Dept. of Anthropol., Amer. Museum of Natural History, N. Y., N. Y. **ANTHROPOLOGY.** b. Boston, Mass., Mar. 19, 1902. s. J. and Rose (Clemens) S. Edn.: A.B., Harvard Univ., 1923; A.M., ibid., 1925; Ph.D., ibid., 1926. m. Janice Sandler, June, 1938. c.: Thomas Clemens; Harriet R.; James E. Exp.: Asst. Curator, Dept. of Anthropol., Amer. Museum of Natural Hist., 1926-31; Assoc. Curator, ibid., 1931-41; Chmn., Dept. of Anthropol. and Curator of Phys. Anthropol., ibid., 1942—; Prof. of Anthropol., Columbia Univ., 1943—; Rsch. Prof., Univ. of Hawaii, Honolulu, Hawaii, 1930-35. Hon. Pos.: Elected to Natl. Acad. Sci., 1949; Chmn., Div. of Anthropol. and Psychol., Natl. Rsch. Council, 1953-54; Pres., Amer. Anthropol. Assn., 1948; etc. Mem.: Amer. Anthropol. Assn.; Amer. Assn. Physical Anthropologists; A.A.A.S.; Amer. Ethnological Soc.; Amer. Eugenics Soc.; Commn. on Race and Culture, UNESCO; Natl. Acad. Sci.; N. Y. Acad. Sci.; Societe des Oceanistes; Amer. Soc. of Human Genetics; Harvard Club of N. Y. C. Author: *The Heritage of the Bounty: The Story of Pitcairn through Six Generations*, 1936; *Migration and Environment: A Study of the Physical Characteristics of the Japanese Immigrants to Hawaii and the Effects of Environment on their Descendants*, 1939. Contrb. to: Amer. Jour. Physical Anthropol.; Oceania; Amer. Anthropologist; *The Tehng. Biologist*; Jour. Polynesian Soc.; Asia; Sci.; etc. War Record: Consultant, Amer. Graves Registration Command, U. S. Army, 1946—. Special Int.: Physical Anthropol.; Human Biol.; Race Mixture; Population.

SHAPIRO, Herbert, Rsch. Assoc., Henry Phipps Inst., Seventh and Lombard Sts., Philadelphia, Pa. **PHYSIOLOGY.**

SHAPIRO, Isadore, Mgr., Rsch. Lab., Mathieson Chem. Corp., Pasadena 1, Calif. **PHYSICAL AND INORGANIC CHEMISTRY.** b. Minneapolis, Minn., Apr. 25, 1916. s. Jacob and Bessie (Goldman) S. Edn.: B.Ch.E., Univ. of Minn., 1938; Ph.D., ibid., 1944. m. Mae Hirsch, Sept. 4, 1938. c.: Stanley Harris; Jerald Steven. Exp.: Asst. Instr. in Chem., Univ. of Minn., 1938-41; Rsch. Fellow, ibid., 1944-45; Rsch. Chemist, E. I. du Pont de Nemours & Co., Philadelphia, Pa., 1946; Hd., Chem. Lab., U. S. Naval Ordnance Test Station, Pasadena Calif., 1947-52; Hd., Rsch. Lab., Mathieson Chem. Corp., Pasadena, Calif., 1952—. Mem.: Amer. Chem. Soc.; Soc. of Rheology; Amer. Inst. of Physics; Sigma Xi; Tau Beta Pi; Phi Lambda Upsilon. Contrb. to: Jour. Amer. Chem. Soc.; Jour. Phys. Chem.; Jour. Chem. Phys.; Analytical Chem. War Record: 1st Lieut., Anti Aircraft Artillery, U. S. Army, 1941-44. Special Int.: Aging of Precipitates; Surface Chem.; Catalysis; High Vacuum Equipment; Water-reactive Chemicals, Boron Hydrides.

SHAPIRO, Shepard, Asst. Prof. of Clinical Med., Coll. of Med., N. Y. Univ., 477 First Ave., N. Y., N. Y. **INTERNAL MEDICINE.**

SHAPLEY, Harlow, Harvard Univ., Cambridge, Mass. **ASTRONOMY.**

SHAPOVALOV, Leo, District Fisheries Biologist, Calif. Div. Fish and Game, Stanford Univ., Stanford, Calif. **FISHERIES BIOLOGY.**

SHAPOVALOV, Michael, retired, 740 Greek Dr., Menlo Park, Calif. **PLANT PATHOLOGY.**

SHARP, Aaron John, Prof. of Botany, Univ. of Tenn., Knoxville, Tenn. **BOTANY.**

SHARP, Cleveland Gillespie, Hd., Biol. Dept., Ala. Coll., Montevallo, Ala.

SHARP, Donald E., Libbey-Owens-Ford Glass Co., 1701 E. Broadway, E. Toledo 5, Ohio. **CERAMICS.**

SHARP, Edward Affleck, Prof. of Neurol. Emer. and Assoc. Prof. of Psychiatry Emer., Med. Schl.,

Univ. of Buffalo, 81 Linwood Ave., Buffalo 9, N. Y. **NEUROLOGY AND PSYCHIATRY.** b. Bridgeport, Ohio, Nov. 20, 1875. s. J. Frank and Mary (Affleck) S. Edn.: M.D., Univ. of Buffalo Med. Schl., 1898. m. Helen Gertrude Sharp, May, 1900. c.: Eleanor. Exp.: Assoc. in Neuro-Anatomy, Assoc., Asst. Prof., Assoc. Prof. and Prof. of Neurol., Med. Schl., Univ. of Buffalo, Buffalo, N. Y., 1912-45; Prof. of Neurol. Emer., ibid., 1945—; Assoc. Prof. of Psychiatry, ibid., 1934-45; Assoc. Prof. of Psychiatry Emer., ibid., 1945—. Hon. Pos.: Pres., Med. Soc. County of Erie, 1933. Mem.: A.M.A.; Amer. Neurol. Assn.; Amer. Psychiatric Assn.; Amer. Acad. Neurol.; Assn. for Rsch. in Nervous and Mental Diseases; A.A.A.S.; Assn. Military Surgeons of U. S.; Natl. League against Epilepsy; N. Y. Acad. Medicine; N. Y. Neurological Soc.; Buffalo Acad. of Medicine; Buffalo Neuropsychiatric Soc.; Medical Soc. of State of N. Y.; Med. Soc. County of Erie; Nu Sigma Nu; Alpha Omega Alpha; Aesculapian Club; etc. Contrb. to: Jour. Nervous and Mental Disease Trans. Amer. Neurol. Assn. War Record: Capt., M. C., U. S. A.; Major, M. C., U. S. A.; A. E. F., France, 1918-19; Neuropsychiatric Service in Base Hosps. Gen. Int.: Diplomate in Psychiatry and Neurol. from Amer. Bd. of Psychiatry and Neurol.; Qualified Psychiatrist certified by Dept. of Mental Hygiene, Albany, N. Y.; Consulting Neurologist, Buffalo Gen. Hosp., Buffalo Children's Hosp., E. J. Meyer Memorial Hosp., Craig Colony, Sonyea, N. Y. Special Int.: Poliomyelitis and Infections of the Nervous System.

SHARP, Robert P., Dept. of Geol., Calif. Inst. of Tech., Pasadena, Calif. **GLACIAL GEOLOGY AND GEOMORPHOLOGY.**

SHARP, William Bernard, Prof. of Bacteriol., Med. Schl., Univ. of Tex., Galveston, Tex. **BACTERIOLOGY.**

SHARPLES, Philip P., 17 Farrar St., Cambridge, Mass. **CHEMISTRY.**

SHARRAH, Paul C., Asst. Prof. of Physics, Univ. of Ark., Fayetteville, Ark. **PHYSICS.**

SHATTUCK, George Cheever, Clinical Prof. Tropical Med., Harvard Med. Schl., 25 Shattuck St., Boston, Mass. **TROPICAL MEDICINE.**

SHATZER, Charles Gallatin, Prof. Emer. Geol., Geography and Dean Emer., Wittenberg Coll., 1003 Woodlawn Ave., Springfield, Ohio. **GEOGRAPHY, GEOLOGY.**

SHAUB, Benjamin Martin, Assoc. Prof., Dept. of Geol. and Geography, Smith Coll., 159 Elm St., Northampton, Mass.

MINERALOGY; PETROLOGY; ECONOMIC GEOLOGY. b. Shrewsbury, Pa., Jan. 12, 1893. s. George Henry and Emma Elizabeth (Keeny) S. Edn.: Mech. Engr., Cornell Univ., 1925; M.S., ibid., 1928; Ph.D., ibid., 1929. m. Mary Sumner Church, Mar. 22, 1939. Exp.: Telegraph Operator, Lehigh Valley Railroad, 1911-17; Draftsman, Thomas-Morse Aircraft Corp., 1917; Instr., Machine Design, Cornell Univ., 1923-29; Geologist, Rhodesian-Anglo-



Amer. Mines, Northern Rhodesia, 1929-30; Instr., Machine Design, Cornell Univ., 1930-31; Vice-Pres., Morse-Shaub Oil and Gas Corp., (N. Y.) 1931-32; Instr., Assoc. Prof., Smith Coll., Northampton, Mass., 1931-41; 1st Lieut., Major, Ordnance Dept., U. S. Army, 1941-46; Assoc. Prof., Smith Coll., 1946—. Mem.: Fellow, Mineralogical Soc. Amer.; Fellow, Geol. Soc. Amer.; Amer. Assn. Petroleum Geologists; Mineralogical Soc. of Great Britain; Geol. Soc. of S. Africa; Amer. Geographical Soc.; Soc. Econ. Geologists; Amer. Ornithologists Union; Cooper Ornithol. Club; Soc. Econ. Mineralogists and Paleontologists; Wilson Ornithol. Club; Acacia; Sig-

ma Xi; Sigma Gamma Epsilon. Contbr. to: Econ. Geol.; Amer. Mineralogist; Sci.; Amer. Jour. Sci.; Jour. Sedimentary Petrology; Photo Technique; etc. War Record: U. S. Navy, 1917-19; U. S. Army, 1941-46. Special Int.: Mineralogy; Petrology; Econ. Geol.; Sedimentary Geol.; Mechanical Engrng.

SHAUB, Howard Conway, Hd., Dept. of Math., Washington and Jefferson Coll., Washington, Pa. MATHEMATICS.

SHAVER, John R., Dept. of Zool., Univ. of Mo., Columbia, Mo. BIOLOGY.

SHAW, Albert Norman, Retired Physicist, McGill Univ., Apt. 18, 1874 Sherbrooke St. West, Montreal, Canada. PHYSICS. b. Dec. 31, 1886, England. s. John Henry Shaw and Robina (Milne) S. Edn.: B.A., McGill Univ., 1908; M.Sc., *ibid.*, 1910; D.Sc., *ibid.*, 1915; B.A., Cambridge, Eng., 1913; M.A., *ibid.*, 1927. m. Ethel Skelton of Montreal, 1913. c.: Hilda Margaret (Mrs. J. H. Shipley) Shaw. Exp.: Demonstrator in Physics, McGill Univ., 1908-10; King Res. Fellow, *ibid.*, 1909-10; Lectr. in Physics, *ibid.*, 1910-11; 1851 Exhibition Scholar, Cambridge, Eng., 1911-13; Lectr. in Physics, MacDonald Coll., 1913-18; Assoc. Prof., McGill Univ., 1918-26; Prof. of Physics, *ibid.*, 1926-52; Chmn. of Dept., 1935-52; Retired, 1952. Mem.: Fellow, Royal Soc. of Canada; Fellow, Amer. Phys. Soc.; Sigma Xi; etc. Author of Over 50 Scientific Articles and Papers. Special Int.: Thermodynamics, Lygrometry, Electrical Measurements.

SHAW, Earl B., Prof. of Geography, S. T. C., 46 Elm St., Worcester, Mass. ECONOMIC GEOGRAPHY AND HUMAN GEOGRAPHY. b. Monroe, Ia., Mar. 18, 1889. s. Wm. Henry and Flora S. (Corr) S. Edn.: Bachelor of Bus. Edn., Wash. Univ., St. Louis, Mo., 1927; M.S., *ibid.*, 1929; Ph.D. in Geog., Clark Univ., Worcester, Worcester, Mass., 1933. m. Sophia S. of Detroit, Mich., June, 1940. d. Mr. and Mrs. H. O. Halsted. Exp.: Instr. in Geog., Wash. Univ., 1929-30; Visiting Prof. in Geog., Univ. of Puerto Rico, 1932; Prof. of Geog., S. T. C., Worcester, 1933—; War



Work with O.S.S. and Bd. on Geographic Names, 1943-45; Branch Hd. of Geog., Shrivensham Amer. Univ., Shrivensham, Eng., 1945; Summer Schl., S. T. C., Buffalo, N. Y., 1937, 1941; Clark Univ., 1934; Univ. of Puerto Rico, 1940; Univ. of Pittsburgh, 1947; Univ. of British Columbia, 1950; Lectr. for World's Federation of Edn. Assn., Conference in Latin Amer., 1939. Mem.: Sigma Xi; Assn. of Amer. Geographers; Amer. Soc. of Professional Geographers; Natl. Coun. of Geography Tchrs., Pres., 1949; Worcester Branch, For. Policy Assn., Chmn. Author: Collaborated on Amer. at War, 1942; The Amer. Empire, 1940; Revised 6th Ed., Ellsworth Huntington "Principles of Human Geography," 1951. Contbr. to: Geographical Rev.; Econ. Geog.; Scientific Monthly; Jour. of Geog.; Monthly Weather Rev. Ph.D. Dissertation: Geographic Studies of the U. S. Virgin Islands. War Record: Vet. of First World War. Travel: Every Continent Except Australia and Antarctica. Hobby: Sports.

SHAW, Edwin Adams, Hd., Dept. of Edn., Tufts Coll., Medford, Mass. EDUCATION, PSYCHOLOGY.

SHAW, Edwin Herbert, Jr., Prof. of Biochem., Univ. of S. Dak., Vermillion, S. Dak. BIOCHEMISTRY.

SHAW, Frank Robert, Assoc. Prof., Entomol. and Beekeeping, Fernald Hall, Univ. of Mass., Amherst, Mass. ENTOMOLOGY. b. Nov. 19, 1908, Belchertown, Mass. s. Myron A. and Maria (Howard Stebbins) S. Edn.: B.S., Mass. State Coll., 1931; Ph.D., Cornell Univ., 1936. m. Miriam Morse of New Braintree, Mass., July 14, 1937.

d. Frank and Ethel S. Morse. c.: Wm. Morse. Exp.: Asst. Instr., Morphology and Histol., Cornell Univ., 1931-34; Instr., Econ. Entomol., *ibid.*, 1934-35; Instr. Entomol. and Beekeeping, Mass. State Coll., 1935-42; Asst. Prof. *ibid.*, 1942-51; Assoc. Prof., *ibid.*, 1951—. Mem.: Fellow, Entomol. Soc. of Amer.; Chmn., Sect. Apiculture, A.A.E.E.; Chmn., Lansgroth Mem. Comm.; Phi Kappa Phi; Sigma Xi. Ph.D. Dissertation: Biology and Control of Gladiolus Thrips. Hobbies: Travel; Photography. Listed in: Who Knows—and What; A.M.S. Special Int.: Taxonomy and Phylogeny of Myceto-Philidae and Sciaridae.

SHAW, Fred B., Jr., Director of Plastics Research, Continental Can Co., Milwaukee, Wis. PLASTICS. b. Camp



Keithley, Mindanao, Philippine Islands, Feb. 22, 1913. s. Brig. Gen. F. B. and Mary B. (Davis) S. Edn.: B.Sc., Univ. of Mich., 1934; M.Sc., Detroit Inst. of Tech., 1936. m. Althea Doyle on Apr. 11, 1936. c.: Valerie A. Exp.: Instr., Chem. and Math., Ext. Unit, Univ. of Mich., 1934-35; Rsch. on Synthetic Enamels, Lacquers, Asphalt, etc., Chrysler Corp., Detroit, Mich., 1935-37; Rsch. Devel. on Plastics, Adhesives, Glass, etc., Libbey-Owens-Ford Co., Toledo, Ohio, 1937-40; Chf., Engr. Div., Chem. Corps, Tech. Command, Edgewood Arsenal, Md., 1946-51; Chf., Products Div., Chem. Corps Engrng. Agency, Army Chemical Center, Md., 1951-53; Director of Plastics Research, Continental Can Co., Milwaukee, Wis., 1953—. Hon. Pos.: Pres., Army Chemical Center Chapter of Armed Forces Chemical Assn., 1951. Mem.: Amer. Chemical Soc.; Soc. for Non-Destructive Testing; Armed Forces Chemical Assn.; Soc. of Plastic Engrs. Contbr. to: Jour. of the Amer. Chemical Soc.; Modern Plastics; Armed Forces Chem. Jour.; Shipping and Packing. War Record: Officer, Chem. Corps, Principally in Rsch. and Dev. at Tech. Command, Army Chem. Center, Md., 1940-46. Special Int.: Development of Synthetic Resins and Plasticizers; Plastic Fabrication; Development and Production of Chem. and Mechanical Items of Military Material such as Weapons, Munitions, Protective Devices, etc.

SHAW, Joseph Allan, Sr. Fellow, Mellon Inst., Pittsburgh 13, Pa. COAL CARBONIZATION; GAS TREATING AND POLLUTION PREVENTION. b. Nov. 20, 1887, Philadelphia, Pa. s. William Phillip and Sarah Jayne (Cox) S. Edn.: B.S., Penn. State, 1911. Exp.: Amer. Steel and Wire Co., 1911-16; Pittsburgh Crucial Steel Co., 1916-18; Sr. Fellow, Mellon Inst., 1939-52. Mem.: Amer. Chemical Soc.; Amer. Gas Assn.; Pa. Prof. Engr. Contbr. to: Analytical Chemistry; Jour. of Amer. Chem. Soc.; Sci. Indus. and Engrng. Chem. Special Int.: Gas Purification, Plant Waste Pollution Problems; Recovery of Chem. from Gas, Nitro Gum in Manufactured Gas, Determination of Traces of Impurities in gas.

SHAW, Kendall Jones, Farm Mgr., John F. McNair, Inc., Laurinburg, N. C. PLANT PATHOLOGY.

SHAW, Leon Irwin, Dir., Army Air Force Project, N. Y. State Coll., Alfred, N. Y. CERAMICS.

SHAW, Myril Clement, Rsch. Specialist, Rutgers Univ., New Brunswick, N. J. CERAMICS. b. Columbus, Ohio, Nov. 4, 1907. s. Joseph Bradfield and Marian Margerite (Wilde) S. Edn.: B.Sc. Pa. State Coll., 1929; M.Sc., *ibid.*, 1930; Ph.D., Ohio State Univ., 1934. m. Garnet Imogene Coleman, July 9, 1945. c.: Marilyn Kay. Exp.: Rsch. Engr., Ohio State Engrng. Expt. Station, 1930-34; Supt., Asst. Mgr., Mgr., Edward Orton, Jr. Ceramic Foundation, 1934-44; Ceramic Rsch. Engr., General Ceramics Co., 1944-46; Rsch. Specialist, Rutgers Univ., 1946—. Mem.: Amer. Ceramic Soc.; Amer. Soc. for Testing Materials; Keramos; Sigma Xi.

Contrib. to: Jour. Amer. Ceramic Soc.; Bull. Amer. Soc. for Testing Materials. Special Int.: Ceramics—Temperature Measuring Pyrometric Cones, Ceramic Titania Capacitors; Asbestos Textiles—Asbestiform Minerals and Asbestos Textile Materials.

SHAW, Ralph R., U. S. Dept. of Agri. Library, Washington, D. C. SCIENCE LIBRARIANSHIP.

SHAW, William Francis, 1733 Ohio Ave., Mercedes, Tex.

SHAW, William Thomas, Prof. Emer. Zool., Fresno State Coll., 1002 Cambridge Ave., Fresno, Calif. ORNITHOLOGY.

SHAWHAN, Elbert Neil, Physicist, Sun Oil Phys. Lab., Newtown Sq., Pa. ELECTRONIC INSTRUMENTATION. b. Morrow, Ohio, Oct. 15, 1908. s. Elbert H. and Dora (Anderson) S. Edn.: B.A., Ohio Wesleyan Univ., 1930; M.A., ibid., 1932; Ph.D., Ohio State Univ., 1935. m. Ena Burdine, Sept. 21, 1939. n. Stanley Dean; Carolyn Lucile; Diana Gayle. Exp.: Instr., Asst. Prof. of Math. and Mechanics, Univ. of Minn., Minneapolis, Minn., 1935-46; Physicist, Naval Ordnance Lab., Washington, D. C., 1941-46; Physicist, Sun Oil Physics Lab., Newtown Sq., Pa., 1946—. Mem.: Amer. Phys. Soc.; Inst. of Radio Engrs.; Sigma Xi. Contrib. to: Phys. Rev. Special Int.: Indus. Process Electronic Measuring and Control Instruments, Circuits for Measurement of Very Low Intensity Light.

SHAY, Donald E., Hd., Dept. of Bacteriol., Schl. of Pharm., Univ. of Md., 32 S. Greene St., Baltimore, Md. BACTERIOLOGY.

SHEA, John P., Dept. of Agri., Washington, D. C. ECOLOGY.

SHEA, Richard F., Supvr., Electronics Lab., Gen. Elec. Co., 225 Twin Hills Dr., Syracuse 4, N. Y. ELECTRICAL ENGINEERING. b. Sept. 13, 1903, Boston, Mass. s. John H. and Anne E. (Shea) S. Edn.: B.S., Mass. Inst. of Tech., 1924. m. Helen Glattes, 1930. c.: Doris E.; Eleanor A. and Carol A. Exp.: Development Engr., Bosch, Amrad, Kolster, Atwater Kent, 1925-30; Chf. Engr. of Pilot, Freed-Eisemann, Fada, 1930-37; Supvr., Electronics Lab., Gen. Elec. Co., 1937—. Mem.: Radio Club of Amer.; Inst. of Radio Engrs. Contrib. to: Many articles in practically all Radio magazines. Special Int.: Circuitry, receivers, instrumentation, Transistors.

SHEA, Thomas Francis, Prof. of Chem., Coll. of Mt. St. Vincent, Riverdale Ave., N. Y., N. Y. PHYSICAL CHEMISTRY.

SHEAFF, Howard Martin, Assoc. Attending Physician, Presbyterian Hosp., Chicago, Ill., Clinical



Assoc. Prof. of Med., Rush Med. Schl., Univ. of Ill., 715 Lake St., Oak Park, Ill. BIOCHEMISTRY. b. Hastings, Nebr., Feb. 4, 1889. s. Charles Philip and Clara (Martin) S. Edn.: B.A., Univ. of Nebr., 1910; Ph.D., Univ. of Chicago, 1919; M.D., Rush Med. Coll., 1921. m. Mabel Johanson on Sept. 3, 1914. c.: Lola Fenette; Jane; Charles Johanson; Howard Marchus. Exp.: Instr., Physics and Chem., Sioux Falls, S. Dak., Coll., 1910-12 and 1914-16; Mem., Bureau

of Edn., Philippines, 1912-14; Fellow, later Instr. Physiol. Chem., Univ. of Chicago, 1916-19; Engaged in Practice of Internal Med., 1923—; Asst. to Assoc. Clinical Prof. of Med., Rush Med. Coll., Univ. of Ill., 1925—; Attending Physician, Central Free Dispensary, 1923—; Asst. Attending Physician to Assoc. Attending Physician, Presby. Hosp., 1928—; Attending Physician, Cook County Hosp., 1928-32. Mem.: Diplomate, Amer. Bd. of Internal Med.; Fellow, Amer. Coll. of Physicians; A.A.A.S.; A.M.A.; Ill. and Chicago Med. Soc.; Chicago Inst. of

Med.; Chicago Soc. Internal Med.; Phi Chi; Sigma Xi. Contrib. to: Jour. A.M.A.; Jour. Biological Chem.; Archives of Neurology and Psychiatry. Special Int.: Neuro-muscular Physiol.

SHEAR, Cornelius Lott, Prin. Pathologist in Chg. Mycology and Disease Survey, U. S. D. A., retired, 1707 N. 6th St., Mon-



roe, La. MYCOLOGY and PLANT PATHOLOGY. b. Coeymans Hollow, N. Y., Mar. 26, 1865. s. Henry Lansing and Mary (Spenburg) S. Edn.: B.S., Univ. of Nebr., 1897; A.M., ibid., 1901; Ph.D., George Washington Univ., 1906. m. Avis Morrison Sherwood (dec.), Dec. 25, 1890. c.: Sherwood William; Deming Jonas; Mary Beatrice; George Myron; Dorothy Margaret; Cornelius Barrett. Exp.: Special Field Agt., Div. Agrostology, summers, 1895-

97; Asst. Agrostologist, 1898-1901; Asst. Pathologist, 1901-02; Pathologist, 1902-23; Sr. Pathologist, 1923-25; Prin. Pathologist in Chg. of Office of Mycology and Disease Survey, 1925-35; retired, and Appointed Collaborator, U. S. D. A., 1935—. Hon. Pos.: Pres., Amer. Mycol. Soc., 1933; Vice-Pres., Section Mycol. and Bacteriol., Internatl. Bot. Congress, 1935-50; U. S. Official Delegate, Pasteur Centennial Celebration, Paris, 1923; Delegate, Internatl. Botanical Congress, Cambridge, England, 1930. Mem.: Botanical Soc. Amer.; Amer. Soc. Naturalists; Assn. Internationale des Botanists; Amer. Phytopathol. Soc.; Botanical Soc. of Wash.; Wash. Acad. of Sci.; Fellow, A.A.A.S.; Sigma Xi. Co-author: Key to the Genera of Fungi. Contrib. to: Mycologia; Plant World.

SHEAR, Elmer Vanderzee, Ravena, N. Y. HORTICULTURE.

SHEAR, Murray J(acob), Chf., Lab. of Chem. Pharmacology, Natl. Cancer Inst., Bethesda 14, Md. BIOCHEMISTRY; RESEARCH IN CANCER. b. Brooklyn, N. Y., Nov. 7, 1899. s. Victor J. and Henrietta (Robinson) S. Edn.: B.S., City Coll. of N. Y., 1920; M.A., Columbia Univ., N. Y., 1922; Ph.D., ibid., 1925. m. Rose Roseman on Aug. 14, 1935. c.: David Ben; Victor Henry; Jonathan. Exp.: Asst. in Chem., Columbia Univ., 1923-25; Rsch. Chemist and Admin. Officer, Pediatric Rsch. Lab., The Jewish Hosp. of Brooklyn, 1925-31; Rsch. Fellow, Harvard Univ., 1931-39; Biochemist to Chf., Lab. of Chem. Pharmacology, Natl. Cancer Inst., Bethesda, Md., 1939—. Mem.: Amer. Assn. Cancer Rsch.; Soc. Experimental Biol. and Med.; Amer. Soc. Biol. Chemists; Amer. Chem. Soc.; Cosmos Club; Harvard Club of Boston. Contrib. to: Jour. of Natl. Cancer Inst.; Amer. Jour. of Cancer; Jour. of Biol. Chem.; Personnel Admin. War Record; Private U. S. Army, 1918. Special Int.: Chem. of Cancer; Biochem. of Bone Formation.

SHEARD, Charles, Dir. and Prof., Div. Biophysics, Mayo Foundation, Rochester, Minn. BIOPHYSICS, PHYSIOLOGICAL OPTICS.

SHEARER, David Robert, Consulting Engr., Johnson City, Tenn. ENGINEERING.

SHEDD, Thomas Clark, Univ. of Ill. STRUCTURAL ENGINEERING.

SHEEHAN, John, Mass. Inst. of Tech., Cambridge, Mass. ORGANIC CHEMISTRY.

SHEEHAN, Robert F., Chf. Neurologist, St. Vincent's Hosp., N. Y., N. Y. PSYCHIATRY.

SHEERER, Mary G., 6540 Hamilton Ave., College Hill, Cincinnati, Ohio. CERAMICS.

SHELDON, H. Horton, Rsch. and Prof. Engrng., Univ. of Miami, Coral Gables, Fla. PHYSICS, ELECTRICAL ENGINEERING.

SHELDON, Pearl Gertrude, Trustee, Paleontological Rsch. Inst., Ithaca, N. Y. **GEOLOGY**.

SHELFORD, Victor E., Prof. Emer. Zool., Univ. of Ill., Vivarium Bldg., Wright and Healey Sts., Champaign, Ill. **ANIMAL ECOLOGY**.

SHELL, John S., Vice-Pres., McMahon-Shell, 11777 Mississippi Ave., Los Angeles 25, Calif. **PHYSICAL**



METALLURGY OF NOBLE METALS. b. Denver, Colo., Sept. 2, 1898. s. Alfred and Edith (Mabie) S. Edn.: B.S., Univ. of Calif., 1921; M.A., Stanford Univ., 1934. m. Alyce Smith, 1922. c.: Paulina and Jane. Exp.: Instr. and Asst. Prof. of Chem. and Metallurgy, Univ. of Calif., Coll. of Dentistry, 1921-37; Dir. of Rsch. and Development, Thomas J. Dee and Co., 1937-47; Dir. of Rsch. and Development, Chicago Branch of Handy and Harman, 1948-50; Vice-Pres., McMahon-Shell,

Los Angeles, Calif., 1950—. Mem.: A.A.A.S.; Amer. Soc. for Metals; Amer. Chem. Soc.; Internatl. Assn. of Dental Rsch.; Tau Kappa Epsilon; Alpha Chi Sigma; Phi Lambda Epsilon; Sigma Xi. Contrb. to: Jour. Amer. Dental Assn.; Jour. of Dental Rsch.; Internatl. Jour. of Orthodontia; Dental Survey; Metals and Alloys; Jewelers Circular Keystone; El Meccanico Dental; Natl. Jeweler. Special Int.: Metallography and Phys. Properties of Gold Alloys; Dental and Jewelry; Biochem. of Dental Saliva.

SHELLEY, Robert LaVere, Assoc. Prof. of Sci., Ball State Tchrs. Coll., Muncie, Ind. **PHYSICAL CHEMISTRY**. b. Bluffton, Ind., Dec. 9, 1903. s. David and Laura (Oldfather) S. Edn.: A.B., Ind. Univ., 1925; M.A., ibid., 1928; Ph.D., ibid., 1929. m. Miriam Carol Miller of Kokomo, Ind., Aug. 11, 1934. d. Mr. and Mrs. William Miller. c.: Alice Ann; Jane Carol; David William. Exp.: 1925-26, Tchrs., Shady Springs H. S., Oxley, W. Va.; 1926-27, Tchrs., Clay Twp. H. S., Kokomo, Ind.; 1929-31, Chemist, R. and H. Chem. Co., Niagara Falls, N. Y.; 1933-43, Tchrs., Lew Wallace Schl., Gary Ind.; 1943-48, Asst. Prof., Ball State Tchrs. Coll.; 1948, Assoc. Prof., ibid. Hon. Pos.: Nat. V.P., 1949, Pres., 1940 of Sigma Zeta. Mem.: Amer. Chem. Soc.; Phi Lambda Upsilon; Sigma Xi; Alpha Chi Sigma; Sigma Gamma Epsilon; Ind. Acad. of Sci.; Sigma Phi Epsilon. Ph.D. Dissertation: Expansion as a Controlling Factor in Positive Plate Paste Compositions for Lead Storage Batteries. Hobby: Photography. Listed in: A.M.S.; W. W. in the Midwest. Special Int.: Electrochemistry—Storage Batteries.

SHELTON, G. R., 6614 Delfield St., Chevy Chase 15, Md. **CERAMICS**.

SHENSTONE, Allen Goodrich, Prof. of Physics, Princeton Univ., Princeton, N. J. **PHYSICS**.

SHEPARD, Norman Arthur, Chem. Dir., Amer. Cyanamid Co., 30 Rockefeller Plaza, N. Y. 20, N. Y. **RESEARCH AND DEVELOPMENT IN CHEMICAL AND RUBBER INDUSTRIES**. b. New Haven, Conn., Apr. 8, 1890. s. Arthur Lewis and Gizela (Berger) S. Edn.: Ph.B., Sheffield Scientific Schl., Yale Univ., 1910; Ph.D., Yale Univ., 1913. m. Jessie Olive Male, June 19, 1913. c.: Berger Male; Louise; Molly Elizabeth. Exp.: Instr. in Chem., Yale Univ., New Haven, Conn., 1913-17; Asst. Prof., ibid., 1917-19; Dir., Organic Chem Rsch., Firestone Tire and Rubber Co.,



1919-25; Dir. of Chem. Rsch., ibid., 1925-35; Dir.,

Technical Service, Amer. Cyanamid Co., 1936-41; Chem. Dir., ibid., 1941—. Hon. Pos.: Past Technical Consultant, War Production Bd.; Past Tech. Consultant, Baruch-Conant-Compton Rubber Survey Com.; Past Tech. Consultant, Rubber Reserve Co.; Past Tech. Consultant, Office of Rubber Dir.; Past Tech. Consultant, Navy Rubber Survey Com.; Past Tech. Consultant, U. S. Navy on Bullet-Proof, Self-Sealing Fuel Cells; Mem., Advisory Bd. on Quartermaster Rsch. and Development, Natl. Rsch. Council, 1943-51; Mem., Com. on Equipment and Materials, Rsch. and Development Bd., Dept. of Defense, 1949-52; Chmn., Com. on Materials, Rsch. and Development Bd., ibid., 1952-53; Mem., Exec. Com. and Council, Div. of Engrng. and Indus. Rsch., Natl. Rsch. Council; Mem., Indus. Liaison Panel, Food Protection Com., Natl. Rsch. Council; Mem., Engrng. Manpower Commn. of Engrs. Joint Council; Mem., Gen. Survey Com. of Engrs. Joint Council; Mem., Manpower Subcom. of Com. on Rsch., Natl. Assn. of Manufacturers; Mem., Advisory Com. on Plastics, Schl. of Engrng., Princeton Univ.; Mem., Advisory Com. on Rsch. Div., Coll. of Engrng., N. Y. Univ.; Mem., Editorial Bd., Chemical Week. Mem.: Amer. Chem. Soc.; Amer. Inst. Chem. Engrs.; A.A.A.S.; Chem. Soc. London; Soc. Chem. Indus., London; Fellow and Councillor, Amer. Inst. Chemists; Indus. Rsch. Inst.; Fellow, N. Y. Acad. Sci.; New England Assn. Chem. Tchrs.; Sigma Xi; Alpha Chi Sigma. Contrb. to: Chem. and Engrng. News; Indus. and Engrng. Chem.; Jour. Chem. Edn.; India Rubber World. Special Int.: Rsch. Development; Technical Manpower; Public Relations.

SHEPARD, Francis Parker, Marine Geologist, Scripps Inst. Oceanography, La Jolla, Calif. **MARINE GEOLOGY**.

SHEPARD, John Frederick, Prof. of Psychol., Univ. of Mich., Ann Arbor, Mich. **COMPARATIVE PSYCHOLOGY**.

SHEPARD, Martin, U. S. Bureau of Standards, Washington, D. C. **ANALYTICAL CHEMISTRY**.

SHEPPARD, Charles Wilcox, Asst. Prof. of Biochem., Vanderbilt Univ. Med. Schl., Nashville, Tenn. **APPLIED NUCLEAR PHYSICS**.

SHERBAKOFF, Constantine Dmitriev, Plant Pathologist and Hd. Dept., Tenn. Agri. Expt. Sta., Knoxville, Tenn.

SHERBORNE, John Elliott, Asst. Mgr. of Rsch., Union Oil Co. of Calif., Rsch. Center, P. O. Box 218, Brea, Calif. **PETROLEUM AND CHEMICAL ENGINEERING**. b. Leeds, England, June 14, 1911. s. Harold and Lily Scott (Wright) S. Edn.: B.S., Calif. Inst. of Tech., 1934; M.S., Univ. of Southern Calif., 1941. m. Dorothy Thompson, Aug. 29, 1937. c.: John Elliott, Jr.; Richard Arthur; Kenneth Albert. Exp.: A.P.I. Rsch. Fellow, Calif. Inst. of Tech., 1934-36; Production Engr., Union Oil Co. of Calif., 1936-40; Process Engr., ibid., 1940-44; Div. Production Engr., ibid., 1945-48; Chf. Production Engr., ibid., 1948-49; Rsch. Dept., Asst. to the Vice-Pres., ibid., 1949-51; Asst. Mgr. of Rsch., ibid., 1951—. Mem.: Sigma Xi; Pi Epsilon Tau. Contrb. to: Indus. and Engrng. Chem.; Jour. Amer. Chem. Soc.; Jour. Chem. Phys.; Jour. Petroleum Tech.; World Oil; Trans., A.I.M.E.; etc. Special Int.: Petroleum Development and Production; Phys. Properties of Sedimentary Rocks; Phys. Properties of Oil-water Emulsions; Phase and Thermodynamic Behavior of Hydrocarbon Systems; Multiphase Fluid Dynamics in Porous Media; Application of Electric Logging to Evaluation of Buried Strata.

SHERBURNE, Russell Knight, Assoc. Physicist, New Mexico Coll. of A. & M.A., Box 548, State Coll., N. Mex. **PHYSICS**. b. Tyngsboro, Mass., Sept. 20, 1921. s. Raymond W. and Ethel (Queen) S. Edn.: A.B., Dartmouth Coll., 1942; M.Sc., Brown Univ., 1948; Ph.D., ibid., 1950. m. Eleanor E., Nov. 8, 1942. c.: Donald R.; Kathleen M.; Francena L.; Eleanor Marie. Exp.: Rsch. and Tchrs. Asst., Brown Univ., Providence, R. I., 1946-50; Rsch. and Tchrs., N. Mex. Coll. of A. & M. Coll., N. Mex., 1950—. Mem.: Sigma Xi; Lambda Chi Alpha. Contrb. to: Phys. Rev.; Jour. Chem. Phys.; Amer. Jour. Phys. Gen. Int.: Moderator for Frontier to Space, Half Hour Weekly Program

Over KROD-TV, El Paso, Tex. Special Int.: High Vacuum, Surfaces, Combustion.

SHERESHEFSKY, Judah Leon, Prof. and Hd., Dept. of Chem., Howard Univ., Washington, D. C. **PHYSICAL CHEMISTRY.**

SHERFF, Earl Edward, 7419 Stewart Ave., Chicago 21, Ill. **SYSTEMATIC BOTANY.** b. May 18, 1886.



Flint, Mich. s. John H. and Anna Linda (McHenry) S. Edn.: A.B., Albion Coll., 1907; S.M., Univ. of Chicago, 1912; Ph.D., *ibid.*, 1916. m. Fern Rosetta of Flint, Mich., June 19, 1910. d. Miner L. Seeley. c.: Miner L. Exp.: Prof., Biol. and Agril., Mt. Morris Coll., 1907-09; Instr., Chem. and Physiology, Elgin H. S., Ill., 1909-10; Instr., Biol. and Agri., Deerfield Twp. H. S., 1910-12; Instr., Biol., Chicago H. S., 1912-23; Instr., Bot., Chicago Tehrs. Coll., 1923-29; Hd., Dept. of

Sci., *ibid.*, 1929-51; Retired, June 12, 1951. Hon. Pos.: Hon. Rsch. Assoc., Chicago Natl. Hist. Mus.; Past Pres., Biol. Round Table of Chicago; Past Chmn., Coun. A.S.P.T. Mem.: Sigma Xi; Bot. Soc. of Amer.; Amer. Soc. of Naturalists; Fellow, A.A.A.S.; Pres., Amer. Soc. Pl. Taxonomists; etc. Author: *The Genus Bidens*, 1937; *The Genus Coreopsis*, 1936. Ph.D., Dissertation: Revision of Genus *Bidens*. Travel: N. and C. Amer.; Europe. Hobby: Rsch. Listed in: A.M.S.; Who's Who in Amer. (1950 ed.); Who's Who in Ill.; Who's Who Midwest; Internatl. Blue Book. Special Int.: Systematic Botany.

SHERMAN, Henry Clapp Columbia Univ., N. Y. 27. N. Y.

SHERMAN, James Morgan, Prof. of Bacteriol. and Hd., Dept. Dairy Indus., Cornell Univ., Ithaca, N. Y. **BACTERIOLOGY.**

SHERMAN, John D., Jr., Dealer, Entomol. Books. 132 Primrose Ave., Mount Vernon, N. Y. **BIBLIOGRAPHY. ENTOMOLOGY.**

SHERMAN, Kenneth Lee, Scientific Dir., U. S. Navy Mine Countermeasures Sta., Panama City, Fla. **PHYSICS AND ENGINEERING.** b. Kerhonkson, N. Y., Jan. 1, 1905.



s. Calvin and Ella (Townsend) S. Edn.: B.S., George Washington Univ., 1931. m. Edith Hughes. Exp.: Physicist, Dept. of Terrestrial Magnetism, Carnegie Inst. of Washington, D. C., 1927-47; Physicist, U. S. Navy Mine Countermeasures Sta., Panama City, Fla., 1947—. Mem.: Cosmos Club, Washington, D. C.; Washington Acad. of Sci.; Amer. Phys. Soc.; Amer. Geophys. Union; Sigma Tau; Theta Tau;

Rotary; St. Andrew Bay Yacht Club. Contrb. to: Jour. of Geophys. Rsch.; Trans. of Amer. Geophys. Union; Natl. Geog. Soc. Tech. Publications. Gen. Int.: Participated in Flight of Explorer II, Sponsored by Natl. Geographic Soc. and Army Air Corps from Rapid City, S. Dak., 1935; Participated in Internatl. Polar Year, College, Alaska, 1932-33; Award of Washington Acad. of Sci., 1945; Naval Ord. Dev. Award. Special Int.: Terrestrial Elec.; Ionization of Gases and Mine and Torpedo Countermeasures.

SHERMAN, William Cyrus, Mgr., Biological Labs., Ralston, Purina Co., St. Louis, Mo. **BIOCHEMISTRY.** b. July 22, 1910, Ft. Atkinson, Wis. s.

Willis G. and Emma (Wagner) S. Edn.: B.S., 1932, M.S., 1934, Ph.D., 1936, Wis. m. Marjorie Leonard of Fort Atkinson, Wis., Apr. 11, 1936. d. Mr. and Mrs. W. D. Leonard. c.: Wm. Leonard; Thomas Lee. Exp.: Grad. Asst., Univ. of Wis., 1932-36; Assoc. Animal Nutritionist, Ala. Poly. Inst., Auburn, Ala., 1936-42; Nutrition Officer, San. Corps, U. S. Army, Maj., Nutrition Officer; Animal Nutritionist, Ala. Poly. Inst., Auburn, Ala., 1946-47; Mgr. Biol. Rsch. Labs., Ralston Purina Co., St. Louis, Mo., 1947—. Mem.: A.C.S.; Poultry Sci.; Amer. Inst. of Nutrition; Sigma Xi; Phi. Lambda Upsilon; Phi Sigma; Sigma; Alpha Epsilon; Alpha Chi Sigma; etc. Author: Sci. Papers. Contrb. to: Jour. Nutrition; Jour. Biol. Chem.; Food Rsch. Ph.D. Dissertation: The Action of Vitamin B₁₂ in Intracellular Oxidation. War Record: See above. Hobbies: Photography; Tennis; Music. Special Int.: Animal and Poultry Nutrition, Tissue Respiration.

SHERNDAL, Alfred Einer, Vice-Pres. and Plant Mgr., Winthrop Chemical Co., Rensselaer, N. Y. **CHEMISTRY.**

SHEROCKMAN, Andrew Antoleik, Assoc. Prof. of Chemistry, Evansville Coll., Evansville, Ind. b. Raccoon, Pa., July 19, 1913. s. Andrew and Anna (Antoleik) S. Edn.: A.B., Univ. of Dubuque, 1935; M.Ed., Univ. of Pittsburgh, 1945; Columbia Univ., 1944, Certificate; Carnegie Inst. of Tech., 1937; Harvard Univ., Summer, 1949; Univ. of Pittsburgh, Summer, 1948, 1950, 1951, 1952, 1953. m. Anna Yesko of Burgettstown, Pa., Oct. 31, 1943. Exp.: Exec. Asst. to Chief Med. Officer, Vet. Admin., Pittsburgh, Pa., 1946; Sci. Tchr. and Hd., Dept. of Sci., Union H. S., Burgettstown, Pa., 1935-45; Chemist, Koppers Coal Co., Pittsburgh, Pa., Summer, 1938; Chemist, Pittsburgh Coal Co., Summer, 1935; Coal Miner, 1929. Mem.: A.A.A.S.; Ind. Chemical Soc.; Ind. Acad. of Sci.; Natl. Sci. Tehrs. Assn.; Amer. Legion; N.E.A.; Pi Kappa Delta; Phi Beta Chi; Kiwanis; Schoolmen's Club of Evansville; Amer. Chem. Soc. War Record: Army, June 15, 1942 to Feb. 26, 1946. Hobby: Swimming. Listed in: A.A.A.S.

SHERRILL, Mary Lura, Prof. and Chmn., Dept. of Chem., Mount Holyoke Coll., South Hadley, Mass. **ORGANIC CHEMISTRY.**

SHERRY, Bertram John, retired, 3220 Worthington St., N. W., Washington, D. C. **METEOROLOGY.**

SHERRY, Sol, Dir. The May Inst. for Med. Rsch. of the Jewish Hosp. Assn., 421 Ridgeway Ave., Cincinnati 29, Ohio. **CLINICAL INVESTIGATION.** b. Dec. 8, 1916, N. Y. C. s. Hyman and Ada (Greenman) S. Edn.: A.B., N. Y. Univ., 1935; M.D., *ibid.*, 1939. m. Dorothy Sitzman of N. Y. C., Aug., 1946. d. Samuel and Sarah Sitzman. c.: Judith Anne. Exp.: Fellow in Med., N. Y. Univ., 1939-41; Asst. in Med., 1946-47; Instr. in Med., 1947-49; Asst. Prof. Med., 1949-51; Dir., The May Inst. for Med. Rsch. of the Jewish Hosp. Assn., Cincinnati, Ohio, 1951—; Asst. Prof. of Med., Univ. of Cincinnati Coll. of Med., 1951—. Mem.: Phi Beta Kappa; Alpha Omega Alpha; Sigma Xi; A.S.C.I.; Soc. of Exp. Biol. and Med.; Harvey Soc.; N. Y. Acad. of Med.; A.A.A.S.; N. Y. Acad. of Sci. Contrb. to: Med. and Sci. Journs. War Record: Flight Surgeon, 1942-46, Ninth Air Force in E.T.O., Awarded Amer. Typhus Comm., 1946. Listed in: A.M.S.

SHERWOOD, Francis Webber, Rsch. Assoc. and Prof. of Animal Indus., N. C. Expt. Sta., State College, Raleigh, N. C. **ANIMAL NUTRITION.**

SHERWOOD, G. E. Foster, Prof. of Math., Univ. of Calif., Los Angeles, Calif. **MATHEMATICS.**

SHERWOOD, George Ray, Assoc. Prof. of Chem., Wayne Univ., Detroit 1, Mich. **INORGANIC CHEMISTRY. BASE STRENGTHS AND HOMOGENEOUS PHASE REACTIONS.** b. Salem, Ind., July 17, 1896. s. Benjamin R. and Elizabeth J. (Newby) S. Edn.: A.B., Ind. Univ., 1922; A.M., Univ. of Ill., 1925; Ph.D., *ibid.*, 1929. m. Blanche Crooks, Aug. 16, 1923. c.: Margaret Ann. Exp.: Grade Schl. Tchr., Okla., 1915-18; High Schl. Tchr., Parke County, Ind., 1920-23; High Schl. Tchr.,

Champaign, Ill., 1923-24; Asst., Univ. of Ill., Urbana, Ill., 1923-28; Asst. Prof., James Milliken Univ., Decatur, Ill., 1928-29; Instr., Asst. and Assoc. Prof., Wayne Univ., Detroit, Mich., 1929—. Mem.: Amer. Chem. Soc.; A.A.U.P.; Phi Beta Kappa; Phi Lambda Upsilon; Sigma Xi. Author: General and Inorganic Chem., 1939. Contrb. to: Metropolitan Sci. Review; Jour. of Amer. Chem. Soc.; Analytical Chem. Special Int.: Less Familiar Elements, Rare Earths, Zirconium, Etc.

SHERWOOD, Noble Pierce, Prof. of Bacteriol., Univ. of Kans., Lawrence, Kans. BACTERIOLOGY.

SHERWOOD, Robert F., 33 Summit Rd., Port Washington, Long Island, N. Y. CERAMICS.

SHERWOOD, T. K., Mass. Inst. of Tech., Cambridge, Mass. CHEMICAL ENGINEERING.

SHETRONE, Henry Clyde, Dir. Emer., Ohio State Museum, 3038 Crescent Dr., Columbus, Ohio. ARCHAEOLOGY, MUSEUM ADMINISTRATION.

SHEWART, Walter Andrew, Rsch. Engr., Bell Telephone Lab., Murray Hill, N. J. RESEARCH ENGINEERING.

SHIBLEY, Gerald S., 2469 Kenilworth Rd., Cleveland Hgts., Cleveland, Ohio.

SHIDELER, William Henry, Prof. of Geol., Miami Univ., Oxford, Ohio. PALEONTOLOGY, STRATIGRAPHY.

SHIELDS, Warren, Deaconess Hosp., Boston, Mass. PATHOLOGY.

SHIPLEY, Walter Cleveland, Prof. of Psychol., Wheaton Coll., Norton, Mass. PSYCHOLOGY.

SHIPPY, William Byron, Tropical Agriculturalist, Private Enterprise, Sanford, Fla.

SHIRES, Luke B., Prof. of Chem. Engrng., N. Mex. Coll. A. and M., State College, N. Mex. CHEMICAL ENGINEERING.

SHIRK, Claude Joseph, Prof. of Biol., Nebr. Wesleyan Univ., Lincoln, Nebr.

SHIRK, James Abram Garfield, Prof. of Math., Kans. State Tchrs. Coll., Pittsburg, Kans. MATHEMATICS.

SHIRLEY, Hardy Lomax, Dean, State Univ. of N. Y., Coll. of Forestry, Syracuse Univ., Syracuse, N. Y. FORESTRY. b. Orleans, Ind., Nov. 20, 1900. s. Charles H. and Maud (Hardy) S. Edn.: B.A., Ind. Univ., 1922; Ph.D., Yale Univ., 1928. m. Mary H. Connard, Apr. 22, 1930. c.: Frank C.; Jon H.; Emily K. Exp.: Tchr., Kendallville H. S., Ind., 1922; Instr. and Asst. Prof. of Math., Univ. of Nev., Reno, Nev., 1922-25; Tchr., Yale Schl. of Forestry, Milford, Pa., 1926; Asst. in Biochem., Boyce Thompson Inst. for Plant Rsch., Yonkers, N. Y., 1927-29; Assoc. Silviculturist, Silviculturist and Sr. Silviculturist, Lake State Forest Expt. Sta., St. Paul, Minn., 1929-39; Dir., Allegheny Forest Expt. Sta., Philadelphia, Pa., 1939-42; Dir., Northeastern Forest Expt. Sta., ibid., 1942-45; Asst. Dean, State Univ. of N. Y., Coll. of Forestry, Syracuse, N. Y., 1945-51; Dean, ibid., 1952—. Mem.: Soc. of Amer. Foresters; Ecol. Soc. of Amer.; Botanical Soc. of Amer.; Amer. Soc. for Public Admin.; A.A.A.S.; Sigma Xi; Phi Beta Kappa; Gamma Alpha. Contrb. to: Jour. of Forestry; Amer. Jour. of Botany; Ecol.; Plant Physiol.; Sci.; Botanical Rev., etc. Author: Forestry and Its Career Opportunities, 1952. Special Int.: Caribbean Area. Recommendations Led to Organization of the Tropical Forest Expt. Sta. in Puerto Rico, Forest Policy, Education in Forestry.

SHIRLEY, Mary Connard, 324 Ostrom Ave., Syracuse, N. Y. PLANT PHYSIOLOGY.

SHIVE, John Wesley, Prof. Emer. Plant Physiol., Rutgers Univ., 1 Rutgers St., New Brunswick, N. J. PLANT PHYSIOLOGY.

SHIVELY, R. R., Box 519, Washington, Pa. CERAMICS.

SHIVELY, Samuel Burdette, Prof. of Biol., Nebr. Wesleyan Univ., Lincoln, Nebr. BOTANY. b. Laurel, Nebr., May 19, 1895.



s. Albert B. and Dora H. (Loveland) S. Edn.: A.B., Univ. of Nebr., 1924; A.M., ibid., 1930; Ph.D., ibid., 1940. m. Edna A. Tuttle, May 19, 1917. c.: Wanda Lucille; Robert William. Exp.: Prin. and Supt., Nebr. Schls., 1916-37; Prof. of Biol., State Tchrs. Coll., Wayne, Nebr., 1942-46; Prof. of Botany, Superior State Coll., Superior, Wis., 1946-48; Prof. of Biol., Nebr. Wesleyan Univ., Lincoln, Nebr., 1948—. Hon. Pos.: Pres., Nebr. Acad. Sci., 1951-52.

Mem.: A.A.A.S.; Nebr. Acad. Sci., Inc.; Ecol. Soc. Amer.; Sigma Xi; Phi Delta Kappa; Theta Nu; Phi Kappa Phi; Amer. Interprofessional Inst. Special Int.: Amount of Underground Plant Material in Different Grassland Climates; Historical Approach to the Tchng. of Biological Sciences.

SHOCK, Nathan W., Chf., Section on Gerontology Natl. Inst. of Health, U. S. P. H. S., Baltimore City Hospitals, Baltimore 24, Md. GERONTOLOGY. b. Lafayette, Ind., Dec. 25, 1906. s. Joseph H. and Blanche V. (Stults) S. Edn.: B.S., Purdue Univ., 1926; M.S., ibid., 1927; Ph.D., Univ. of Chicago, 1930. m. Margaret B. Truman, Sept. 9, 1928. c.: J. Baird; J. Howard. Exp.: Rsch. Assoc. and Instr. Physiol., Univ. of Chicago, 1930-32; Asst. Prof. of Physiol., Univ. of Calif. Med. Schl. and Rsch. Assoc., Univ. of Calif. Inst. of Child Welfare, Berkeley, Calif., 1932-41; Chf., Section on Gerontology, U. S. Public Health Service and the Baltimore City Hosp., 1941—. Hon. Pos.: Asst. Editor, Jour. of Gerontology. Mem.: Amer. Physiol. Soc.; Amer. Psychol. Assn.; Soc. Exptl. Biol. and Med.; Amer. Heart Assn.; Gerontological Soc. Author: Trends in Gerontology, 1951; A Classified Bibliography of Gerontology and Geriatrics, 1951. Contrb. to: Amer. Jour. Physiol.; Jour. Gerontology; Jour. Exptl. Psychol.; Jour. Clinical Investigation; Circulation; Jour. Applied Physiol.; Jour. Biol. Chem. Special Int.: Gerontology; Physiol. and Psychol. Aspects of Aging.

SHOCKLEY, William, Bell Telephone Labs., Murray Hill, N. J.

SHOEMAKER, Clarence Jay, Rsch. Supvr., A. B. Dick Co., 5700 West Touhy Ave., Chicago 31, Ill. ORGANIC RESEARCH. b. Zeeland, Mich., July 15, 1916. s. John and Gertrude (Vaden Bosch) S. Edn.: A.B., Hope Coll., 1938; Ph.D., Ind. Univ., 1942. m. Mary K. Morris, 1942. c.: Jay; Jan Philip. Exp.: Rsch. Asst., Ind. Univ.; Bloomington, Ind., 1938-42; Rsch. Supvr., A. B. Dick Co., Chicago, Ill., 1942—. Mem.: Amer. Chem. Soc.; Phi Lambda Upsilon; Sigma Xi; Ednl. Adv. Council. Contrb. to: Jour. Amer. Chem. Soc.; War Record; Lt., U. S. Navy. Special Int.: Color Reactions; Stabilized Diazo Compounds.

SHOEMAKER, Clarence Raymond, Assoc. in Zool., Smithsonian Inst., U. S. Natl. Museum, Washington, D. C. CARCINOLOGY.

SHOEMAKER, Hurst Hugh, Asst. Prof. of Zool., Univ. of Ill., Urbana, Ill. ECOLOGY OF FISHES.

SHOEMAKER, Lois Meier, Prof. Sci., State Tchrs. Coll., 515 Ewingville Rd., Trenton 8, N. J. BIOLOGY. b. Oct. 20, 1899, Ipava, Ill. d. W. H. D. and Lizzie (Campbell) Meier. Edn.: A.B., Wellesley Coll., 1921; M.A., Columbia Univ., 1924; Ph.D., ibid., 1930. m. Morris B. Shoemaker of Bridgeton, N. J., 1931. s. W. E. and M. H. Shoemaker. c.: Robert M., William Elmer, Mary Elizabeth, Alice Catherine. Exp.: Framingham, Mass., H. S., 1921-23; White Plains, N. Y., H. S., 1924-26; Rsch. Asst., Columbia Univ., 1926-27; Amer. Ger. Exch. Fellow at Frank-

furt-am-Main, 1927-28; State Tehrs. Coll., Trenton, N. J., 1929—; Leader of Sci. Field Trips to Germany, summers, 1931-32. Mem.: Kappa Delta Pi; Natl. Assn. Adv. Sci.; Natl. Assn. for Rsch. in Sci. Tchng. Author: Essentials of Biol. (with Meier), 1947; Conservation Manuals, 1937-44; Wonder-world of Sci., Books 7, 8, 9 (with Meister and Keirstead), 1944-52. Ph.D. Dissertation: Sci. Edn. in the German Elem. Schls. Travel: Europe.

SHOJI, Kobe, Asst. Plant Physiologist, Coll. of Agri., Univ. of Hawaii, Honolulu, Hawaii. **PLANT HORMONES, POST HARVEST STORAGE.** b. Upland, Calif., July 27, 1920. s. Gohei and Tune (Makino) S. Edn.: B.A., Pomona Coll., 1947; Ph.D., Univ. of Calif. at Los Angeles, 1950. m. Chizuko Fujiwara, Mar. 21, 1944. c.: David; Thomas; Kelvin. Exp.: Tchng. Asst., Univ. of Calif. at Los Angeles, 1947-48; Rsch. Asst., *ibid.*, 1948-50; Storage Physiologist, Univ. of Hawaii, Honolulu, Hawaii, 1950-51; Asst. Plant Physiologist, *ibid.*, 1951—. Mem.: Sigma Xi; Amer. Botanical Soc.; Amer. Soc. of Plant Physiologist. Contrb. to: Plant Physiol. War Record: Army, 1943-45. Special Int.: Plant Hormones; Storage Physiol. Respiration.

SHOPE, Richard Edwin, Mem., Rockefeller Inst. for Med. Rsch., 66th St. and York Ave., N. Y., 21, N. Y. **VIROLOGY.** b. Des Moines, Iowa, Dec. 25, 1901. s. Charles Cornelius and Mary (Hast) S. Edn.: M.D., Univ. of Iowa, 1924. Hon. Deg.: M.S., Yale Univ., 1936; V.M.D., Utrecht, 1951. m. Helen Madden Ellis, July 28, 1925. c.: Richard Edwin, Jr.; Robert Ellis; Nancy Helen; Thomas Charles. Exp.: Instr. in Pharmacol. and Materia Medica, State Univ. of Iowa, 1924-25; Asst., Dept. of Animal Pathol., Rockefeller Inst., 1925-30; Assoc., *ibid.*, 1930-34; Assoc. Mem., *ibid.*, 1934-40; Mem., *ibid.*, 1940-49; Assoc. Dir., Merck Inst. for Therapeutic Rsch., 1949-52; Mem., Rockefeller Inst., 1952—. Mem.: Amer. Philos. Soc.; Natl. Acad. Sci.; Assn. Amer. Physicians. Contrb. to: Jour. Biol. Chem.; Jour. Exptl. Med. War Record: U. S. Navy, 1943-46. Special Int.: Viruses.

SHOVER, Jayne, **SPEECH AND HEARING.**

SHOWALTER, Donald F., Assoc. Prof. of Psychol., Kan. State Coll., Manhattan, Kan. **PSYCHOLOGY.** b. May 4, 1891, Davenport, Neb. s. B. W. Showalter and Anne (Fox). Edn.: A.B., Univ. of Neb., 1916; M.A., *ibid.*, 1917; Ph.D., Kan. Univ., 1931. m. Ruth S. Stephenson of Clay Center, Neb., 1917. (dec.) d. Mr. and Mrs. Crit Stephenson. c.: Alan B., Ronald D. Exp.: Supt. of Schls., 1917-30; Hd., Dept. of Edn. and Psychol., Ark. State Coll., 1931-47; Dean, *ibid.*, 1937-47; Acting Pres., 1945-46; Asst. Prof. of Psychol., Kans. State Coll., Manhattan, Kans., 1947-49; Assoc. Prof., *ibid.*, 1949—. Mem.: N.E.A.; Soc. for Psychol. Study of Soc. Issues; A.A.A.S.; Amer. Psychol. Assn.; Sigma Xi; Phi Delta Kappa; Phi Beta Kappa; Pi Gamma Mu; Psi Chi. Ph.D. Dissertation: A Qualitative Study of Human Maze Learning.

SHPINER, Leonard Benjamin, Physician, Arcade Bldg., Kankakee, Ill.



INTERNAL MEDICINE; PSYCHOSOMATIC MEDICINE. b. Tulchien, Russia, July 24, 1904. s. Benjamin and Rebecca (Schwartz) S. Edn.: B.S., Univ. of Chicago, 1925; M.S., *ibid.*, 1927; Ph.D., *ibid.*, 1929; M.D., Rush Med. Coll., Univ. of Chicago, 1931. m. Maxine Roski, Aug. 3, 1930. c.: Larry Elliott; Nancy Ross. Exp.: Rsch. Physiol., 1925-29; Billings Club Fellowship, Physiol., 1927; Intern., Michael Reese Hosp. and Kankakee State Hosp., 1930-31; Rsch., Michael Reese Hosp., 1931-34; City Physician, Chicago.

1931-32; Asst. to Dr. Jirka, Chf. of Ill. State Bd. of Health, 1933; Rsch., Dr. Shields Warren, New England Deaconess Hosp., 1936-37; Collaborator, Jour.

of Endocrinol., 1937, 1939; Military Service, 1942-46; Consultant, Ill. Div. of Rehabilitation, 1946—; Consultant in Endocrinol., Manteno State Hosp., 1946—; Chf. of Med. Staff, St. Mary's Hosp., 1948-49; Collaborator, Therapeutic Trials Com. on Steroids in Cancer, A.M.A., 1948-49. Mem.: A.M.A.; Ill. Med. Assn.; Acad. Internal Med.; World Med. Soc.; Amer. Heart Assn.; Assn. for the Study of Internal Secretions; Miss. Valley Med. Assn.; A.A.-A.S.; Amer. Geriatric Soc.; Amer. Writers Assn.; Phi Delta Epsilon; Sigma Xi; Elks; Kankakee C. of C.; Amer. Legion; B'ma Brith. Contrb. to: Amer. Jour. Phys.; Arch. Internal Med.; Biol. Abstracts; Jour. A.M.A.; etc. War Record: Major, Med. Corps, U. S. Army, 1942-46. Special Int.: Physiol.; Endocrinol.; Psychosomatic Med.

SHRUM, Gordon Merritt, Prof. and Hd., Dept. of Physics, Univ. of British Columbia, Vancouver, B. C., Can. **PHYSICS.**

SHUEY, Henry Miller, Hd., Ballistics Section, Rohm and Haas Co., Redstone Arsenal Rsch. Div., Huntsville, Ala. **PHYSICAL CHEMISTRY, CHEMICAL ENGINEERING.** b. Louisville, Ky., Aug. 13, 1920. s. Arthur Ferguson and Mary Willis (Miller) S. Edn.: B.S., Centenary Coll., 1941; M.S., Univ. of Wis., 1944; Ph.D., *ibid.*, 1949. m. Eudore B. Schocke, Sept. 1, 1945. c.: Henry Miller, Jr. Exp.: Grad. Asst., Phys. Chem., Univ. of Wis., Madison, Wis., 1941-43; Rsch. Asst., N.D.R.C., *ibid.*, 1942-44; Rsch. Assoc., Explosives Rsch. Lab., 1944-45; Natl. Rsch. Council Predocrical Fellow, Univ. of Wis., Madison, Wis., 1945-47; Phys. Chemist, Rohm and Haas Co., Philadelphia, Pa., 1947-49; Hd., Ballistics Section, *ibid.*, Redstone Arsenal Rsch. Div., Huntsville, Ala., 1949—. Mem.: Amer. Chem. Soc.; Amer. Ordnance Assn.; Sigma Xi; Alpha Chi Sigma; Kappa Alpha. Special Int.: High Temp. Heat Capacities of Organic Vapors; Rsch. and Development of Rocket Propellants; Interior Ballistics of Solid Fuel Rockets; Polymolecularity Studies of Cellulose Nitrate.

SHUGART, Thomas R., Supvr., Geotechnical Corp., P. O. Box 7166, 1702 Tower Petroleum Bldg., Dallas, Tex. **SEISMIC PROSPECTING.**

SHUGER, Leroy W., Gen. Partner in Chg. of Tech. Activities, Baltimore Paint and Color Works, 2325 Annapolis Ave., Baltimore 30, Md. **CHEMISTRY.** b. Baltimore, Md., Jan. 11, 1910. s. Morris and Sophia (Kristul) S. Edn.: B.S., Johns Hopkins Univ., 1930; Ph.D., *ibid.*, 1934. m. Joyce Tramer, Dec. 25, 1939. c.: Jill; Maura Jacquilan. Exp.: Chemist, du Pont Cellophane Co., Tenn., 1930-31; Chemist, Baltimore Paint and Color Works, Baltimore, Md., 1934-38; Technical Director, *ibid.*, 1938-42; General Partner in Charge of Tech. Activities, *ibid.*, 1942—. Mem.: Hy. Rsch. Bd., 30-AA; Chem. Soc.; Soc. Test Mat.; Fellow, Inst. of Chem.; Oil Chem. Soc.; Fed. Paint and Varnish and Prod. Clubs. Special Int.: Chem. of Paints, Varnishes, Waxes, Emulsions and Synthetic Resins.

SHULDENER, Henry L., Pres. and Tech. Dir., Water Service Lab., Inc., 423 W. 126th St., N. Y. 27, N. Y. **CHEMICAL ENGINEERING SPECIALIZING IN WATER CHEMISTRY.** b. N. Y. C., Feb. 12, 1898. s. Joseph L. and Lena (Yelbon) S. Edn.: B.S. in Ch.E., N. Y. Univ., 1920. m. Grace Soman, Sept. 11, 1924. c.: Betty Joan and Henry L., Jr. Exp.: Tech. Dept., Permutit Co., N. Y. C., 1920-28; Pres. and Tech. Dir., Water Service Labs., Inc., N. Y. C., 1928—. Mem.: Assn. Cons. Chem. and Ch. Engrs.; Amer. Chem. Soc.; Natl. Assn. Corr. Engrs.; Amer. Inst. of Chem. Engrs.; Amer. Soc. for Testing Materials; Amer. Water Works Assn.; Electrochem. Soc.; Amer. Coordinating Com. on Corrosion; Amer. Public Health Assn.; C. of C.; Lions Club. Contrb. to: Jour. of Amer. Water Works Assn.; Engrs. Soc. of Western Pa.; Yale Sci. Mag.; Progressive Architecture; Corrosion, Metals Tech.; Jour. of Property Mgr. Special Int.: Corrosion by Water, Water Chem., Automatic Feeding of Chem. to Liquids.

SHULER, Ellis W., Hamilton Prof. of Geol. and Dean, Grad. Schl., Southern Methodist Univ., Dallas, Tex. **GEOLOGY.**

SHULL, A. Franklin, Prof. Emeritus of Zool., Univ. of Mich., 431 Highland Rd., Ann Arbor, Mich.

EVOLUTION; GENETICS; GENERAL BIOLOGY. b. Miami Co., Ohio, Aug. 1, 1881. s. Harrison and Catharine (Ryman) S. Edn.: A.B., Univ. of Mich., 1908; Ph.D., Columbia Univ., 1911. m. Margaret Jeffrey Buckley, Dec. 23, 1911. c.: Elizabeth Buckley; Franklin Buckley. Exp.: Instr. in Zool., Univ. of Mich., Ann Arbor, Mich., 1911-12; Asst. Prof., *ibid.*, 1912-14; Assoc. Prof., *ibid.*, 1914-21; Prof., *ibid.*, 1921-51; Prof. Emeritus, *ibid.*, 1951—. Mem.: Genetics Soc. Amer.; Amer. Soc. Zool.; Amer. Soc. Naturalists; A.A.A.S.; Soc. for Study of Evolution; Amer. Genetic Assn.; Mich. Acad. Sci. Co-author: Principles of Animal Biol., 1920. Author: Heredity, 1926; Evolution, 1936. Contrb. to: Genetics; Amer. Naturalist; Jour. Heredity; Jour. Exptl. Zool.; Biol. Rev.; Biol. Bull.; Ohio Jour. Sci.; etc. Special Int.: Genetics; Evolution; Control of Embryonic Processes.

SHULL, George Harrison, Prof. Emer. Botany and Genetics, Princeton Univ., 60 Jefferson Rd., Princeton, N. J. **GENETICS, PLANT BREEDING, PLANT PHYSIOLOGY.** b. Pike Twp., Clark Co., Ohio, Apr. 15, 1874. s. Harrison and Catharine (Ryman) S. Edn.: B.S., Antioch Coll., 1901; Ph.D., magna cum laude, Univ. of Chicago, 1904. Hon. Deg.: Sc.D., Lawrence Coll., 1940; LL.D., Antioch Coll., 1940; Sc.D., Iowa State Coll., 1942. m. Ella Amanda Hollar, July 8, 1906 (dec.). 2nd m. Mary Julia Nicholl, Aug. 26, 1909. c.: Elizabeth Ellen (dec.); John Coulter; Georgia Mary; Frederick Whitney; David Macauley; Barbara Weaver; Harrison. Exp.: Student Asst., U. S. Bureau of Forestry, 1901; Bot. Asst., U. S. Natl. Museum, 1902; Bot. Expert, U. S. B. P. L., 1902-04; Asst. in Plant Physiol., Univ. of Chicago, 1903-04; Staff Mem., Carnegie Inst. of Wash., Sta. for Exp. Evol., 1904-15; Prof. of Botany and Genetics, Princeton Univ., Princeton, N. J., 1915-42; Emer., *ibid.*, 1942—. Hon. Pos.: Mem., Princeton Borough Bd. of Edn., 1928-44. Mem.: Hon. Mem., John Torrey Club of Princeton; Swedish Seed Assn.; Fellow, A.A.A.S.; Botanical Soc. of Amer.; Amer. Soc. Naturalists; Ecol. Soc. Amer.; Amer. Genetic Assn.; Amer. Soc. Plant Physiol.; Genetics Soc. Amer.; Sigma Xi; Amer. Philos. Soc. Contrb. to: Botanical Gazette; Amer. Naturalist; Torreyia; Science; etc. War Record: Mem., Food Panel of Princeton War Price and Rationing Bd., 1944-45, Certificate of Award from Pres. Truman. Gen. Int.: Invention of Hybrid Corn and the Importance of Heterosis in Practical Breeding; Study of Sex in *Lychnis* (Melandrium), Polyploidy and Duplicate Factors in *Shepherdia Purse*; Gene Mutations in *Oenothera*, Self-Sterility; Founder of Genetics (Mag.) in 1916 and its Managing Editor for its first Ten Years, also Organizer of the Galton and Mendel Memorial Fund in 1922, in celebration of the Centenary of Mendels and Galton's Births; Founder and Chmn. of Island Beach Natl. Monument Com., 1945-50; Five Yrs. Survey of Mr. Burbank's Operations. Special Int.: Plant Morphol., Ecology, Plant Physiology, Genetics, and Plant Breeding



SHULMAN, Emanuel V., Owner, Eastern Pharmacy, 400 13th St., N. E., Washington, D. C. **PHARMACOLOGY.**

SHUMWAY, Waldo, Stevens Inst. of Tech., Hoboken, N. J. **ZOOLOGY.**

SHUNK, Ivan Vaughan Detweiler, Prof. of Botany, N. C. State Coll., Raleigh, N. C. **BACTERIOLOGY.**

SHURCLIFF, William Asahel, Sr. Physicist, Supvr. of Dosimeter Rsch. and Development, Polaroid Corp., 19 Appleton St., Cambridge, Mass. **DOSIMETERS (FOR MEASURING GAMMA RADIATION); ABSORPTION SPECTROPHOTOMETRY; SPECTROSCOPY; ULTRAVIOLET MICROSCOPY.** b. Boston, Mass., Mar. 27, 1909. s. Arthur Asahel and Margaret Homer (Nichols) S. Edn.:

A.B., Harvard Coll., 1930; M.S., Harvard Univ., 1931; Ph.D., *ibid.*, 1934. m. Joan Hopkinson, Jan. 18, 1941. c.: Arthur Asahel; Charles Hopkinson. Exp.: Rsch. Physicist, Calco Chem. Div., Amer. Cyanamid Co., Bound Brook, N. J., 1935-42; Technical Aide in the Office of Scientific Rsch. and Development, Washington, D. C., 1942-45; In Chg. of OSRD's Liaison Office Group A, 1943-44; Scientific Adviser to N. Y. State Dept. of Commerce, 1945-46; Technical Historian of Operation Crossroads at Bikini, 1946-47; U. S. Atomic Energy Comm. Program Analyst, 1947-48; Sr. Physicist, Polaroid Corp., Cambridge, Mass., 1948—. Mem.: Amer. Phys. Soc.; Amer. Optical Soc.; A.A.A.S.; Soc. for Applied Spectroscopy Author: Bombs at Bikini, 1947; Pictorial Record of Operation Crossroads, 1947. Contrb. to: Phys. Rev.; Jour. Optical Soc. Amer.; Nucleonics; Lab. Investigations. Special Int.: Measurement of Gamma Radiation; Dosimetry; Ultraviolet Microscopy; Absorption Spectrophotometry; Writing Technical Histories.

SHUPE, Verna Irene, Admin. and Math. Tehr., Lacona, Ia., Lock Box S. **METAPHYSICS.** b. June 13,



1889, Lacona, Iowa. d. Arthur David and Mary Ellen (Morris) S. Edn.: Simpson Coll., 1913; State Univ. of Idaho, 1920; State Univ. Ia., 1942; Tehrs. Coll., Columbia Univ., N. Y. City, 1943, 44, 45, 46, Summer Sessions; Lady Margaret Hall, Oxford Univ., Eng., Good Will Representative for Inst. of Internatl. Edn., 1947. Exp.: Supt., Yorktown, Ia., H. S., 1915-16; Supt., Patterson, Ia., H. S., 1917-18; Supt., Kirmville, Ia., H. S., 1918-19; Prin. Schls., Bayview, Idaho, 1919-20; Math. Grade and Junior High Schl., Soda Springs, Idaho, 1920-23; Superintendent, Bentley, Iowa High Schl., 1942-43; Prin., Orleans, Calif., 1945-46; Supt., Soda Springs, Ida., 1920-23; Supt., Bentley, Ia., H. S., 1942-43; Prin., Orleans, Calif., 1945-46; Supt., Crookston, Neb., 1946-47; Math. Tehr., Eureka, Nev. Co. H. S., 1947-48. Mem.: Life Mem., N.E.A. and A.A.S.A.; Columbia Alumni; Amer. Legion Auxiliary; Natl. Coun. of Tehrs. of Math.; 1940 Willkie Club. Author: Seeing Amer. (A Forty Niner's Diary and a 1915 Tourist's Diary), 1916; Caribou Co. Chronology, 1930; Argonauts and Pioneers, 1931; Warren Co. Sect., Who's Who in Ia., 1940. Contrb. to: Idaho Farmer. Travel: N. Amer.; England; Scotland. Gen. Int.: Collecting Hist. Books, Genealogy; Quaint Dishes; Philately. Hobbies: Ice Skating; Poetry; Genealogy; Newspaper Writing; Landscape Pastel Painting; Gardening.

SHURRAGER, P. S., PSYCHOLOGIST.

SHUSTER, Carl Nathaniel, Prof. Math. and Hd. of Math. Dept., State Tehrs. Coll., Trenton, N. J.



MATHEMATICS. b. Frenchtown, N. J., February 16, 1890. s. Nathaniel Rittenhouse and Catherine (Draucker) S. Edn.: B.S., Columbia Univ., 1915; A.M., *ibid.*, 1918; Ph.D., *ibid.*, 1940; Grad., N. J. State Nor. Schl., Trenton, N. J., 1913. m. Edith Gilman of Bethel, Vt., June 5, 1918. d. Frank and Lucy Whitaker Gilman. c.: Carl N., Jr.; John Gilman; Jean Shirley. Exp.: Tehr., Country Schl., 1907-10; Tehr., Dover H. S., 1913; Westfield H. S., 1918 (All in N. J.); Hd., Math. Department, Clark Schl., N. Y., 1918-19; U. S. Navy, 1918-20; Tehr., Summer Session, Bowling Green Univ., 1920-21; Sr. Cost Accountant, U. S. Civil Serv., 1920; Hd. Math. Dept., Orange, N.

J. H. S., 1921-28; Tehr., Tehrs. Coll., Columbia Univ., 1926—; Prof. and Hd. of Math. Dept., State Tehrs. Coll., Trenton, N. J., 1929—; Tchng. Aerial Navigation, 1940—; Hon. Pos.: Chmn., Com. on Defense, Natl. Coun. Tehrs. of Math., Pres., 1946-48. Mem.: Amer. Math. Soc.; Math. Assn. of Amer.; Natl. Coun. Tehrs. of Math.; Phi Delta Kappa; Torch Club; 32° Mason; A.M.S.; Ed. Bd. Natl. Math. Mag.; Pres., Assn. Math. Tehrs. of New Jersey. Author: Field Work in Math., 1935; Co-author: Real Life Series of Arith., 1939; Problems in Teaching the Slide Rule, 1940 (Ph.D. Dissertation); Computation Approximate Data, 1947; Functional Mathematics, Grades IX, X, XI, XII, Plane Geometry, 1938. Contbr. to: The Math. Teacher; Education; The Ed. Digest; Amer. Mathematical Monthly; etc. War Record: World War No. 1, U. S. Navy C.P.O. Gen. Int.: Originated Project Method, 1907; examined it to numerous classes in Tehrs. Coll., 1911-18. Leader in Field Work Movement in Math. Studies; Plant and Animal Breeding.

SHUTE, Evan Vere, Med. Dir., Shute Inst., London, Ont., Can. OBSTETRICS AND GYNECOLOGY.



b. Lion's Head, Ont., Can., Oct. 21, 1905. s. Richard James and Elizabeth Jane (Treadgold) S. Edn.: B.A., Univ. of Toronto, 1924; M.B., ibid., 1927. m. Marian Miller, Sept. 10, 1932. c.: James; Roberta; Barry; Mary; Vere. Exp.: Rsch. Asst., Dept. of Obs. and Gynecol., Univ. of W. Ont., Can., 1933-39; Medical Dir., Shute Inst., London, Ont., Can., 1948—. Mem.: Can. Physiol. Soc.; British Soc. of Endocrinol.; Amer. Soc. for Study of Sterility. Contbr. to: 70 Scientific

papers. Special Int.: Oestrogens, Vitamin E, Pregnancy Toxaemias, Congenital Anomalies.

SHUTT, Donald Bethune, Lectr., Dept. of Bacteriol., Ont. Agri. Coll., Guelph, Ont., Can. DAIRY BACTERIOLOGY.

SHUTTLEWORTH, Frank K., Asst. Prof., City Coll. of N. Y., N. Y., N. Y. PSYCHOLOGY.

SHWARTZMAN, Gregory, Hd., Dept. of Microbiol., Mount Sinai Hosp., 1 East 100th St., N. Y. 29.

N. Y. MICROBIOLOGY. b. Odessa, Russia, May 26, 1896. s. Samuel and Bertha (Axelrod) S. Edn.: Dr. of Med. and Surgery, Univ. of Brussels, Belgium, 1920. Hon. Deg.: Recipient of Gold Medal, Class 1, for original investigations, Amer. Med. Assn., 1938. m. Vera Saphir, Oct. 19, 1919. c.: Ella Elizabeth (Mrs. Niels Haugaard). Exp.: Rsch. Worker, Lister Inst., London, 1921-22; Prof. of Bacteriol. and Public Health, Chmn. of Dept., N. Y. Med. Coll., 1923-27; Hd., Dept. of Microbiol., Mount Sinai Hosp., N. Y. City, 1926—; Prof. of Microbiol., Columbia Univ., Coll. of Physicians and Surgeons, 1940—. Hon. Pos.: Chmn., Section of Microbiol., N. Y. Acad. Med., 1947-49 and 1953—; Chmn., Natl. Membership Com., Soc. Exptl. Biol. and Med., 1952—. Mem.: A.A.A.S.; Amer. Assn. Immunol.; Amer. Assn. Pathol. and Bacteriol.; Amer. Soc. Bacteriol.; Amer. Soc. Exptl. Pathol.; Fed. Biol. Sci.; Soc. Exptl. Biol. and Med.; Harvey Soc.; Electron Microscope Soc. Amer.; N. Y. Pathol. Soc.; N. Y. Acad. Med.; N. Y. Acad. Sci.; Internatl. Soc. Microbiol.; Hon. Mem., Soc. Cubana de Microbiolog.; Hon. Mem., N. Y. Allergy Soc.; N. Y. State Soc. for Med. Rsch. Author: Phenomenon of Local Tissue Reactivity and Its Immunological, Pathologi-

cal and Clinical Significance, 1937. Contbr. to: Amer. Jour. Digestive Diseases; Amer. Jour. Pathology; Annals Internal Med.; Annals N. Y. Acad. Sci.; Arch. Biochem.; Proc. Soc. Exptl. Biol. and Med.; Sci.; etc. Special Int.: Vitamins in Bacterial Growth; Bacteriophage; Immunological Reactions in Tissue Cultures; Phenomenon of Local Skin Reactivity to Bacterial Filtrates, (Shwartzman phenomenon); Electron Microscopy; Antibiotics; Animal and Bacterial Nutrition; Viruses.

SHYBEKAY, Derso Sebeok, Pres., Indus. Rsch. Council of Amer., Box 1202, Washington 13, D. C. RESEARCH, DEVELOPMENT AND UTILIZATION OF BASIC PRODUCTS. b. Budapest, Hungary, June 8, 1896. s. Albert and Johanna (Smith-Fausser) S. Edn.: LL.D., Univ. of Budapest, 1918; Ph.D., Univ. of Berlin, 1921. c.: Thomas A. Exp.: Tage latt, Berlin, 1919-33; Indus. Engr., Erie Basin Metal Prod., 1937-39; Prof., Univ. of Ala., Tuscaloosa, Ala., 1939-42; Faculty, Purdue Univ., 1942-44; Indus. Rsch. Coun. of Amer., Washington, D. C., 1944—. Mem.: Natl. Coun. of Prof. Indus. Engrs.; Fellow, Royal Soc. of Engrs. of England; Sigma Iota Epsilon; Phi Beta Epsilon; Rotarian; Mason. Special Int.: Peat, Lignite, Taconite, Low Grade Iron Ores and by products; Elec. and Combustion.

SICHER, Harry, Prof. and Hd. of Dept. of Anatomy, Loyola Univ., Dental Schl., Northwestern Univ., Dental Schl., 1757 W. Harrison St., Chicago 12, Ill. ANATOMY, BIOLOGY OF BONE. b. Vienna, Austria, Sept. 11, 1889. s. Ignatz and Johanna (Frommer) S. Edn.: M.D., Vienna Univ., 1913. Hon. Deg.: D.Sc., Loyola Univ., 1952. m. Lydia Sicher, 1913. Exp.: Instr. in Anatomy, Vienna Univ., Vienna, Austria, 1909-13; Asst. Prof. of Dentistry, ibid., 1920-33; Assoc. Prof., ibid., 1933-39; Assoc. Prof. of Anatomy, Chicago Med. Schl., Chicago, Ill., 1939-42; Assoc. Prof. of Anatomy, Loyola Univ., Chicago, Ill., 1942-45; Prof. and Hd. of Dept., ibid., 1945—. Mem.: Amer. Assn. of Anatomists; Internal Assn. of Dental Rsch.; Fellow, A.A.A.S.; Amer. Soc. of Mammalogists; Lepidopterist Soc.; Sigma Xi. Author: Bone and Bones, with J. P. Weinmann, 1947; Oral Anatomy, 1949. Contbr. to: Anatomical Record; Jour. of Dental Rsch.; Jour. of Amer. Dental Assn.; Jour. of Periodontol., etc. Special Int.: Biol. of Bone; Applied Anatomy.

SIDWELL, Raymond, Assoc. Prof., Tex. Tehrs. Coll., Lubbock, Tex. GEOLOGY.

SIEGEL, Sidney, Assoc. Dir., Atomic Energy Rsch., North Amer. Aviation, P. O. Box 309, Downey, Calif. PHYSICS. b. New York, N. Y., Jan. 10, 1912. s. Lester and Eva (Sokoloff) S. Edn.: A.B., Columbia Univ., 1932; Ph.D., ibid., 1936. m. Lilyan, Aug. 22, 1937. c.: Maria; Anne; Laura; Gail. Exp.: Rsch. Asst., Columbia Univ., New York, N. Y., 1933-37; Rsch. Scientist to Mgr. of Physics Dept., Westinghouse, Pittsburgh, Pa., 1937-50; Chief Scientist, Oak Ridge Natl. Lab., Oak Ridge, Tenn., 1946-48; Rsch. Assoc., Calif. Inst. of Technol., Pasadena, Calif., 1951-52; Assoc. Dir., Atomic Energy Rsch., North Amer. Aviation Co., Downey, Calif., 1950—. Mem.: Amer. Phys. Soc.; Phi Beta Kappa; Sigma Xi. Contbr. to: Phys. Rev.; Jour. Chem. Phys. Special Int.: Physics of Solids, Nuclear Reactors.



SIEGLER, Samuel L., STERILITY.

SIEPLEIN, Otto Julius, Rsch. Chemist, P. O. Box 215, Coral Gables, Fla.

SIEVENPIPER, Frederic L., Rsch. Chemist, Natl. Aniline Div., 289 Wende Rd., Alden, N. Y. ORGANIC CHEMISTRY. b. New Brunswick, N. J., July 6, 1910. s. Melvin and Minnie (Sass) S. Edn.: B.A., Univ. of Buffalo, 1934. m. Pearl

Stephan, Apr. 9, 1936. c.: Timothy; Ladd. Exp.: Staff, Natl. Aniline Div., Alden, N. Y., 1934—; Chmn. of the Bd., Alden Central Schl.; Vice-Pres., Erie County Schl. Bd. Assn. Mem.: Amer. Chem. Soc.; Fellow, Amer. Inst. of Chemists; Kiwanis International. Special Int.: Vat Dyes; Anthraquinone Wool; Polycyclic Aromatic Compounds.

SIEVERS, Frederick John, Dir., Mass. Agri. Expt. Sta. and Grad. Schl., Mass. State Coll., Amherst, Mass. AGRICULTURE, EDUCATION.

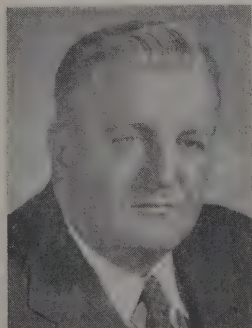
SIFTON, Harold Boyd, Prof., Dept. of Botany, Univ. of Toronto, Toronto, Ont., Can. PLANT ECOLOGY, MORPHOLOGY.

SIGEL, Mola Michael, Chf. Reference Diagnosis and Rsch. Unit, Virus and Rickettsia Section, C.D.C., U. S. P. H. S., Montgomery, Ala. MEDICAL MICROBIOLOGY. b. Poland, June 24, 1920. s. Zundel and Hinda Helen (Lubecka) S. Edn.: B.A., Univ. of Tex., 1941; Ph.D., Ohio State Univ., 1944. m. Mary Elizabeth Wynne, Dec. 22, 1941. c.: Suzanne Lea Paula; Vicki Adelaide Briena. Exp.: Bacteriologist, State Health Dept., Austin, Tex., 1938-40; Grad. Asst. and Asst. in Bacteriol., Ohio State Univ., 1941-43; Army Officer in Chg. of Bacteriol., Ser. and Vir. Sections, Service Command Lab., 1943-46; Assoc. in Virology, Univ. of Pa. Schl. of Med., 1946-50; Asst. Prof. of Virology, ibid., 1950-53; Rsch. Staff, in Chg. of Virus Diagnosis Lab., The Children's Hosp. of Philadelphia, 1946-53. Mem.: Amer. Assn. of Immunologists; Soc. Exptl. Biol. and Med.; N. Y. Acad. of Sci.; Soc. of Amer. Bacteriologists; Amer. Public Health Assn.; A.A.A.S.; Phi Beta Kappa; Sigma Xi. Contrb. to: Jour. Exptl. Med.; Jour. Immunology; Sci.; Jour. Bacteriol.; Jour. A.M.A.; Jour. Infectious Diseases; Amer. Jour. Public Health; etc. Special Int.: Diagnosis of Viral Diseases; Epidemiology of Influenza and Q Fever; Antigenic Studies on Viruses of Influenza and Psittacosis-Lymphogranuloma Venereum Group; Rsch. on Viral Multiplication and on Antibiotic Effect in Relation to the Psittacosis-Lymphogranuloma Venereum Group.

SILL, Claude Woodrow, Chf., Analysis Branch, Health Phys. Div., Idaho Operations Office, Atomic Energy Comm., P. O. Box 1221, Idaho Falls, Idaho. ANALYTICAL CHEMISTRY. b. Layton, Utah, Oct. 29, 1918. s. Joseph Albert and Marietta (Welling) S. Edn.: A.B., Univ. of Utah, 1939; M.A., ibid., 1941. Exp.: Analytical Rsch. Chemist, U. S. Bureau of Mines Intermountain Expt. Station, Salt Lake City, Utah, 1942-51; Chf., Analysis Branch, Health Phys. Div., Idaho Operations Office, U. S. Atomic Energy Comm., 1951—. Mem.: Sigma Xi; Amer. Chem. Soc. Contrb. to: Analytical Chem. War Record: U. S. Navy, 1944-46. Special Int.: Analytical Chem.

SILLER, Charles William, Rsch. Investigator, The N. J. Zinc Co. of Pa., 234

Lafayette Ave., Palmerston, Pa. PHYSICAL CHEMISTRY. b. Mt. Joy, Pa., Aug. 29, 1907. s. Lewis and Pauline (Keller) S. Edn.: B.S., Franklin and Marshall Coll., 1931; M.S., Pa. State Coll., 1934; Ph.D., ibid., 1939. m. Elizabeth Haslam, Apr. 12, 1939. Exp.: Grad. Asst., Pa. State Coll., State Coll., Pa., 1931-35; Rsch. Investigator, N. J. Zinc Co., Palmerston, Pa., 1936—. Mem.: Amer. Chem. Soc.; Phi Lambda Upsilon; Sigma Pi Sigma; Engrs. Club of Lehigh Valley; Theta Xi. Contrb. to: Jour. of



Amer. Chem. Soc.; Indus. and Engrng. Chem.; Jour. of Applied Physics; Metals Tech.; A.I.M.E. Exp.: Low Temp. Calorimetry; Catalysis; Dry Process Pigments; Inorganic Reactions at Elevated Temp.; Chem. Thermodynamics; Reactions in Fluidized Systems; Lab., Pilot Plant and Commercial Scale Development.

SILSBEE, Francis Briggs, Chf., Electrical Div., Natl. Bureau of Standards, Washington, D. C. PHYSICS.

SILVER, Arthur Elmer, Consulting Electric Engr., Elbasco Services, Inc., N. Y., N. Y. ENGINEERING, ELECTRIC POWER.

SILVER, James, Regional Dir., Fish and Wildlife Service, U. S. Dept. of the Interior, 620 Peachtree—7th Bldg., Atlanta 5, Ga. WILDLIFE AND GAME-FISH MANAGEMENT AND CONSERVATION. b. Kansas City, Mo., Mar. 9, 1890. s. James and Annie (Findlay) S. Edn.: Colo. Schl. of Agri., 1908-12. m. Hazel Mae Conklin, June 5, 1918. c.: James (dec.); Betty Jean. Exp.: Staff, U. S. Biol. Survey and Fish and Wildlife Service, 1912—. Mem.: Wildlife Soc.; Wilderness Soc.; Amer. Forestry Assn.; Nature Conservancy; Natl. Wildlife Fed. Contrb. to: U. S. D. A.

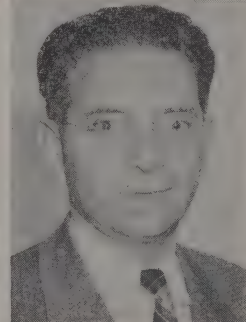


Farmers Bull.; Jour. of Agril. Rsch.; Jour. of Mammalogy; U. S. D. A. Leaflet and Tech. Bull., etc. Special Int.: U. S. in Gen.; Southeastern U. S. from an Admin. Standpoint.

SILVER, Maurice Lee, Chief, Dept. of Neurological Surgery, Miriam Hospital, Providence, R. I. NEUROLOGICAL SURGERY. b. New Britain, Conn., April 23, 1918. s. Adolph Haskell and Rebecca (Caplan) S. Edn.: B.S., City Coll. of N. Y., 1938; Ph.D., Univ. of Chicago, 1941; M.D., Loyola Schl. of Med., 1945. m. Alene, 1940. c.: Phebe; John; Ben. Exp.: Instr., Univ. of Chicago, Chicago, Ill., 1940-41; Instr., Loyola Univ., Chicago, Ill., 1943-44; Capt. M.C., A.U.S., 1946-48; Lectr. in Neuroanatomy, Johns Hopkins Univ. Schl. of Med., Baltimore, Md., 1949-50; Chf., Dept. of Neurological Surgery, Miriam Hosp., Providence, R. I., 1953—. Mem.: A. M. A.; Amer. Assn. of Neuropath.; Amer. Assn. of Anatomists; Soc. for Experimental Biol. and Med.; Sigma Xi; East. Assn. of Electroencephalographers; Dipl. Amer. Bd. of Neurol. Surgery. Contrb. to: Anatomical Record; Jour. of Comparative Neurology; Jour. of Neurosurgery; Jour. of Neuropathology and Experimental Neurology. Special Int.: Neurological Surgery; Electroencephalography; Neuropathol., Especially Lindau's Disease and Vascular Malformations of Brain. Herniation of Intervertebral Disc. Silver Staining Techniques. Experimental epilepsy.

SILVERMAN, Alexander, 1514 Denniston Ave., Pittsburgh 17, Pa. CERAMICS.

SILVERMAN, Louis B., Chf., Health Phys. Sect., Atomic Energy Project,



Univ. of Calif. at Los Angeles, Box 4164 W. Los Angeles 24, Calif. HEALTH PHYSICIST AND CHEMICAL ENGINEERING. b. Newark, N. J., Sept. 16, 1910. s. Sam and Gusie (Stoller) S. Edn.: B.A., Univ. of Calif. at Los Angeles, 1933. m. Dorothy Cohen, May 23, 1943. c.: Robert William; Donald Henry. Exp.: Chemist, Volca Products Co., Hollywood, Calif., 1934-35; Chf. Chemist and Chem. Engr., Cons. Film Indus., Inc., Developed the Improved Two-Color Motion Picture Film Process "The New Magnacolor," in 1938, Hollywood Calif., 1935-42; Chf. Chemist and Chem. Engr., U. S. Diatom Co., Rosamond, Calif., 1942; Chf. Chemist and Chem. Engr., U. S. Signal Corps, Trng. Film Prod. Lab., Wright Field, Dayton, Ohio, Designed and Dir. Constr. of Motion Picture Chem. Processing Lab. of T.F.P.L. also Instr., Signal Corps Photographic Officers in Photographic Processing Chem., 1942-43; Sr. Rsch. Chemist and Group Lead-

er for Health and Safety Div. of Units III and IV of Central Rsch. Dept., Developed and Compiled First Set of Rules and Regulations for the Handling of Radioactive Materials for this Project; Worked-Up Methods for Excretionary Analyses and Decontamination Procedures for the Radioactive Materials Used on the Manhattan Project, Monsanto Chem. Co., Dayton, Ohio, 1943-46; Chf., Health Phys. Sect., Atomic Energy Project, Various Papers on Health Phys., Chmn. of Project Safety Commn., Compiled Complete Project Safety Manual; Developed New Film Badge Method and Holder for Personnel Monitoring, Univ. of Calif. at Los Angeles, 1948—; Health Phys. Consultant and Mem. of Tchng. Staff, Med. School, U.C.L.A.; Registered as Prof. Chem. Engr., State of Calif. and Instr. for Radiol. Defense Courses, Calif., 1948—. Mem.: Amer. Chem. Soc.; A.A.A.S.; Soc. of Motion Picture Engrs.; Amer. Tech. Soc.; Amer. Indus. Hygiene Assn.; Univ. of Calif., L. A. Alumni Assn.; Calif. State Employee's Assn. Contrb. to: Sci.; Nuclear; Atomic Energy Commn. Unclassified Reports. War Record: Civilian Chem. for Signal Corps; Group Leader on Atom Bomb Project. Special Int.: Health Physics and the Application of Chem. to Health Phys. Problems; Radiation Safety and Gen. Safety; Chem. and Chem. Engrng. Problems Related to Chem. Processing of Large Amounts of Black and White and Colored Motion Picture Film.

SILVERMAN, S. Richard, SPEECH AND HEARING.

SILVERMAN, Shirleigh, Rsch. Physicist, Applied Physics Lab., Johns Hopkins Univ., 8621 Georgia Ave., Silver Spring, Md. PHYSICS.

SILVERMAN, William B., Owens-Ill. Glass Co., 1700 Westwood Ave., Toledo 1, Ohio. CERAMICS.

SILVEY, Oscar William, Prof. of Physics, A. and M. Coll. of Tex., College Station, Tex. PHYSICS.

SIMMONDS, Prye Morton, Officer in Chg., Dominion Lab. Plant Pathol., Univ. of Saskatchewan, Saskatoon, Sask., Can. PLANT PATHOLOGY.

SIMMONDS, Nina, Asst. Clinical Prof. of Nutrition, Univ. of Calif., The Med. Center, San Francisco 22, Calif. NUTRITION. b. August 11, 1893, Albany, Wis. d. John and Martha Jane (Meredith) S. Edn.: B.S., Wisconsin, 1915; M.A., Johns Hopkins Univ., 1922; Sc.D., *ibid.*, School of Public Health and Hygiene, 1924. Exp.: Univ. of Wis., Coll. of Agriculture, 1915-17; Schl. of Hygiene and Public Health, Johns Hopkins Univ., 1917-28; Univ. of Calif., U. C. of Dentistry and Medicine, San Francisco, Calif., 1934—. Mem.: Sigma Xi; Delta Omega; Epsilon Alpha. Author: (with E. V. McCollum) *The Newer Knowledge of Nutrition*, 3rd and 4th Ed., 1925, 1929; *Food, Nutrition and Health*, 1925. Contrb. to: Amer. Jour. of Pub. Health; Jour. of Amer. Dental Assn. Sc.D. Dissertation: Observations on Reproduction and Rearing of Young in the Rat as Influenced by Diet. Travel: Europe; Hawaii; Mexico. Listed in: A.M.S. Special Int.: Nutrition and Its Relation to Dental Problems, Medical Problems and Public Health.

SIMMONS, Charles Shaffer, Soils Technologist, Comp. Corps Div., Office Foreign Agri. Relations, Washington, D. C.

SIMMONS, Frederick Charles, Jr., Forester, Forest Utilization Service, N. E. Forest Expt. Station, 102 Motors Ave., Upper Darby, Pa. LOGGING AND PRIMARY PROCESSING OF WOOD. b. Waverly, N. Y., Oct. 27, 1905. s. Fred C. and LaVantia H. (Russell) S. Edn.: B.S., Cornell Univ., 1928; M.F., cum laude, Yale Univ., 1931. m. Lorene Harder, 1929. c.: Donna Sue; Beverly Jane. Exp.: Instr., Pa. State, 1931-32; Management Asst., Allegheny Natl. Forest, 1933-35; Timber Mgt. Specialist, Region 7, U. S. Forest Service, 1936-44; Forester, Forest Utilization Service, N. E. Forest



Expt. Station, 1945—. Mem.: Soc. Amer. Foresters; Forest Products Rsch. Soc.; Northeastern Wood Utilization Council. Contrb. to: Jour. Forestry; Jour. Forest Products Rsch. Soc.; Yearbook of Agri.; etc. Special Int.: Logging Equipment and Methods; Primary Processing of Wood Including Sawmilling, Veneer Cutting, Charcoal Mfg., and Prep. of Wood for Pulping, Mine Timbers, Poles and Piling, Excelsior, etc.

SIMMONS, Fred A., Jr., STERILITY.

SIMMONS, James Stevens, Dean and Prof. of Public Health, Harvard Univ. Schl. of Public Health, 55 Shattuck St., Boston, Mass. PREVENTIVE MEDICINE, PUBLIC HEALTH.

SIMMONS, Joseph E., Prof. of Bacteriol. and Bacteriologist, Expt. Sta., Ore. State Coll., Corvallis, Ore. BACTERIOLOGY.

SIMMONS, Perez, Entomologist in Chg., U. S. D. A., Bureau Entomol. and Plant Quarantine, Dried Fruit Insect Lab., 712 Elizabeth St., Fresno, Calif. ENTOMOLOGY.

SIMMONS, Samuel William, Scientist Dir., Chf., Technology Branch, Communicable Disease Center,



U. S. Public Health Service, 50 Seventh St., Atlanta, Ga. PUBLIC HEALTH BIOLOGY. b. Benton Co., Miss., June 5, 1907. s. Britt Leon and Ida (Pegram) S. Edn.: B.Sc., Honors, Miss. State Coll., 1931; A.M., George Washington Univ., 1934; Ph.D., Iowa State Coll., 1938. m. Ina Lois Grantham, Aug. 5, 1928. c.: Samuel William, Jr.; Grant Pegram. Exp.: Jr. Entomol. to Entomol., Bur. of Entomol., U. S. Dept. of Agri., Washington, D. C., 1931-44; Sanitarian (R.) Dir., Carter Memorial Lab., U. S. Public Health Service, Savannah, Ga., 1944-47; Scientist, Chf., Tech. Dev. Branch, Communicable Disease Center, *ibid.*, 1947; Sr. Scientist, *ibid.*, 1947-49; Scientist Dir., *ibid.*, 1949-53; Scientist Dir., Chief Technology Branch, *ibid.*, 1953—. Hon. Pos.: Honorary Consultant to Army Med. Library. Mem.: Amer. Soc. of Tropical Med. and Hygiene, Conclor; Amer. Assn. of Econ. Entomol., Bd. of Dir.; A.A.A.S.; Comm. on Pesticides of the Council on Pharmacy and Chem.; A.M.A.; Interdept. Com. on Pest Control, Sect. Chmn., 1953—; Expert Commn. on Insecticides of the World Health Organization, Chmn., 1952; Amer. Public Health Assn., Southern Branch; Rsch. Soc. of Amer.; Army Comm. on Insect and Rodent Control; Natl. Malaria Soc., Secy-Treas.; Sigma Xi; Phi Kappa Phi; Gamma Sigma Delta; Los Hidalgos, B.Sc. Honors; Rotary, Panama City, Fla. Author: *In Preparation, The Insecticide DDT and Its Importance*, with Dr. Paul Muller. Contrb. to: Jour. Econ. Entomol.; Entomol. News; Amer. Jour. of Surgery; Jour. Lab. and Clin. Med.; Jour. of Bacteriol.; Arch. of Surgery; Bull. of Entomol. Rsch.; Jour. of Parasitol.; Iowa State Coll. Jour. of Sci.; Jour. Amer. Vet. Med. Assn.; Annals of Entomol. Soc. of Amer.; Public Health Rep.; Pests and Their Control; Jour. Natl. Malaria Soc.; Mosquito News; Amer. Jour. of Public Health; Soap and Sanitary Chem.; Jour. of Inter-Amer. Assn. of Sanitary Engrng.; Amer. Jour. of Trop. Med. War Record; Comm. Officer, U. S. Public Health Service, 1944—. Special Int.: Public Health Biol., Particularly with Reference to Animal Vectors and Reservoirs of Communicable Diseases.

SIMMONS, Victor L., Assoc. Animal Husbandman, Sheep and Goat Investigations, U. S. D. A., Beltsville, Md. ANIMAL HUSBANDRY.

SIMMS, B. T., U. S. Bureau Animal Indus., Washington, D. C. MEDICAL SCIENCES.

SIMMS, Henry S., Asst. Prof. of Biochem., Dept. of Pathol., Med. Schl., Columbia Univ., 630 West 168th St., N. Y., N. Y. GERONTOLOGY.

SIMON, Clarence T., SPEECH AND HEARING.

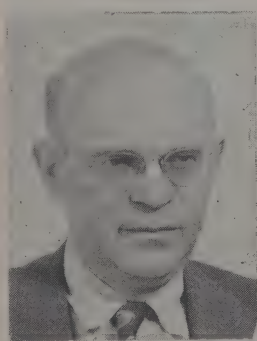
SIMON, Webster Godman, Prof. of Math., Ednl., Vice-Pres., Western Reserve Univ., Cleveland, Ohio. MATHEMATICS.

SIMONDS, Austin Oneil, Assoc. Prof. of Botany and Plant Pathol., Colo. A. and M. Coll., Fort Collins, Colo. PLANT MORPHOLOGY.

SIMONS, Joseph H., Coordinator of Fluorine Rsch., Prof. of Chem. Engrng. and Chem., Coll. of Engrng., Univ. of Fla., Gainesville, Fla. CHEMISTRY, PHYSICS AND ENGINEERING. b. Chicago, Ill., May 10, 1897. s. David and Esther S. Edn.: B.S., Univ. of Ill., 1919; M.S., *ibid.*, 1922; Ph.D., Univ. of Calif., 1923. m. Eleanor Whittaker, 1936. c.: Dorothy E. and Robert W. Exp.: Prof. of Chem. and Physics, Univ. of Puerto Rico, 1925-26; Asst. Prof. of Chem., Northwestern Univ., 1926-32; Prof. of Phys. Chem. and Dir. of Fluorine Labs., Pa. State Coll., State Coll., Pa., 1934-50; Coordinator of Fluorine Rsch., Prof. Chem. Engrng. and Chem., Univ. of Fla., Gainesville, 1950. Mem.: Amer. Chem. Soc.; Amer. Inst. Chem. Engrs.; A.A.A.S.; Electrochem. Soc.; A.A.U.P.; N. Y. Acad. of Sci.; Phi Lambda Upsilon; Sigma Xi; Sigma Pi; Sigma Alpha; Phi Sigma. Contrb. to: Jour. Amer. Chem. Soc.; Jour. Physical Chem.; Jour. Chem. Physics; Jour. Electrochem.; Jour. Indus. Engrng. Chem.; Sci.; Jour. Sci. Instruments; Jour. Applied Physics. Special Int.: Molecular Physics; Fluorocarbons and Fluorocarbon Derivatives; Chem. Kinetics.

SIMONS, May Wood, Instr. Emer. Econ., Northwestern Univ., 1141 E. 14th St., Brooklyn, N. Y. ECONOMICS.

SIMONSON, Ernst, Assoc. Prof. Physiological Hygiene and Physiology, Lab. Physiol. Hygiene, Univ. of Minn., Minneapolis.



APPLIED PHYSIOLOGY AND ELECTROCARDIOGRAPHY. b. Tiegendorf, Germany, June 26, 1898. s. Max and Kathe (Paechter) S. Edn.: M.D., Univ. of Greifswald, Germany, 1924. m. Sophie Schemel, Frankfurt, Germany, July 19, 1931. d. Johan and Franziska Schemel. c.: Walter E. Exp.: Rockefeller Scholarship, Dept. of Pharmacology, Univ. of Greifswald, 1924-26; Hd. of Lab. of Hygiene of Inst. of Soc. Hygiene, Frankfurt, 1927-30; Prof. of Industrial Physiology, Univ. of Frankfurt, 1928-30; Scientific Dir., of Inst. of Labor, Kharkov, Russia, 1930-35; Prof. of Physiol. Med. Schl., Univ. of Kharkov, 1935-37; Hd. of Dept. of Industrial Physiol., Central Inst. of Psycho-technics, Prague, Czechoslovakia, 1937-39; Rsch. Assoc., Mt. Sinai Hosp., Milwaukee, Wis., 1929-44; Assoc. Prof. of Physiol. Hygiene and Physiology, Labor. of Physiol. Hygiene, Univ. of Minn., 1944—; Consulting Biophys., V. A. Hosp., Minneapolis, 1949—; Dept. of Internal Med., Univ. Hosp., *ibid.*, 1952—; Mt. Sinai Hosp., *ibid.*, 1952—. Mem.: Editorial Bd., Jour. of Applied Physiol.; Amer. Physiol. Soc.; Soc. for Exp. Biol. and Med.; A.A.U.P.; Campus Club, Univ. of Minn. Contrb. to: Ann. Rev. of Physiol.; Amer. Jour. of Physiol.; Amer. Heart Jour.; Jour. of Industrial Hygiene; Amer. Jour. of Ophthalmol.; Med.; Jour. of Applied Physiol.; Occupational Med.; Circulation, Travailhumain; Arbeitsphysiol; Ergebn. d. Physiol.; Ergebn. d. Hygiene; Zeitschro exper. Medizin. Special Int.: Clin. Physiol.; Electrocardiography; Indus. Physiol. and Vision.

SIMONSON, Roy Walter, Prin. Soil Scientist, U. S. D. A., 209 Kern Bldg., c/o Tenn. Valley Authority, Knoxville, Tenn. SOIL SCIENCE.

SIMPSON, Benjamin Roy, Prof. of Ednl. Psychol., Western Reserve Univ., Cleveland, Ohio. EDUCATIONAL PSYCHOLOGY.

SIMPSON, F. M., Hd., Agri. Rsch. Dept., Swift and Co., Union Stock Yards, Chicago, Ill. ECONOMICS.

SIMPSON, Frank M., Prof. Emer. Physics, Bucknell Univ., 21 S. Fourth St., Lewisburg, Pa. PHYSICS.

SIMPSON, Geddes W., Assoc. Entomologist, Maine Agri. Expt. Sta., Univ. of Maine, Orono, Maine. ENTOMOLOGY.

SIMPSON, George Eaton, Hd. Dept. of Sociol. and Anthropol., Oberlin Coll., Oberlin, Ohio. SOCIOLOGY AND CULTURAL ANTHROPOLOGY. b. Oct. 4, 1904, Knoxville, Iowa. s. Lawrence E. and M. Grace (Curtis) S. Edn.: B.S., Coe Coll., 1926; M.A., Univ. of Mo., 1927; Ph.D., Univ. of Pa., 1934. m. Eleanor Brown of Nickerson, Kans., Sept. 4, 1930. d. Mr. and Mrs. Lucian C. Brown. c.: Jon E.; A. Louise; Nancy B.; G. Curtis. Exp.: Instr., S.T.C., Superior, Wis., 1927-28; Instr., Asst. Prof., Temple Univ., Phila., Pa., 1928-39; Assoc. Prof., Prof., Hd., Pa. State Colle., 1939-47; Prof. and Md. Dept. Soc. and Anthropol., Oberlin Coll., 1947—. Mem.: Pres. Phila. Anthropol. Soc., 1928-39; Coun. Mem., Amer. Folklore Soc., 1941—; Fellow, Amer. Anthropol. Soc.; Amer. Folklore Soc.; Ohio Acad. of Sci., Fellow; Ohio Valley Soc. Soc.; Sigma Xi. Author: Workbook in Sociol. (with C. H. Schettler), 1931; The Negro in the Philadelphia Press, 1936; Racial and Cultural Minorities (with J. M. Yinger), 1953. Contrb. to: Amer. Sociological Review; Amer. Anthropologists; Jour. Amer. Folklore; Social Forces; Jour. Negro History. Ph.D. Dissertation: The Negro in the Philadelphia Press. Travel: Haiti; Jamaica. Gen. Int.: Post-doctoral Fellow, Soc. Sci. Rsch. Coun., 1937-37; Co-Dir., Inst. of Race Relations; Grantee, Amer. Philosophical Society, 1953. Listed in: A.M.S.; Dir. of Amer. Scholars; Who Knows and What. Special Int.: Race Relations; Haiti; Jamaica; Acculturation in West Indies.

SIMPSON, George Gaylord, Chmn. and Curator of Fossil Birds and Mammals, Dept. of Geol. and Paleontol., The Amer. Museum of Natural History, N. Y. 24, N. Y. PALEONTOLOGY. b. Chicago, Ill., June 16, 1902. s. Joseph Alexander and Helen Julia (Kinney) S. Edn.: Ph.B., Yale Univ., 1923; Ph.D., *ibid.*, 1926. Hon. Deg.: Sc.D., Yale Univ., 1946; Sc.D., Princeton Univ., 1947; Sc.D., Durham, 1951; Sc.D., Oxford, 1951; LL.D., Glasgow, 1951. m. Anne Roe. c.: Helen; Gay; Joan; Elizabeth. Exp.: Asst. Curator, Amer. Museum of Natural History, 1927; Assoc. Curator, *ibid.*, 1928-42; Curator, *ibid.*, 1942—; Dept. Chmn., Dept. of Geol. and Paleontol., *ibid.*, 1944—.



Mem.: Natl. Acad. Sci.; Amer. Philosophical Soc.; Amer. Acad. Arts and Sci.; Geol. Soc. Amer.; Linnaean Soc. of London; Zool. Soc. London; Soc. for the Study of Evolution; Soc. Vertebrate Paleontology; Phi Beta Kappa; Sigma Xi. Author: Attending Marvels, 1934; Los Kamaokotos, 1940; Tempo and Mode in Evolution, 1944; The Meaning of Evolution, 1949; Horses, 1951; etc. Contrb. to: Amer. Jour. Sci.; Bull. and Novitates of the Amer. Museum Natural History; Bull. Geol. Soc. Amer.; etc. War Record: Capt., U. S. Army, 1942-43; Major, 1943—. Special Int.: Paleontol.; Mammalogy; Stratigraphy; Evolution.

SIMPSON, Harold E., N. Y. State Coll. of Ceramics, Alfred, N. Y. CERAMICS.

SIMPSON, Jennie L. S., Assoc. Prof., Hunter Coll., N. Y., N. Y. BOTANY.

SIMPSON, Stephen Gershom, Assoc. Prof. of Analytical Chem., Mass. Inst. of Tech., Cambridge, Mass. CHEMISTRY.

SIMPSON, Thomas McNider, Jr., Prof. of Math., and Dean Randolph-Macon Coll., Ashland, Va. MATHEMATICS.

SIMPSON, Jean Irwin, Prof. of Foods, Coll. of Home Econ., Syracuse Univ., Syracuse, N. Y.



FOOD RESEARCH. b. Buffalo, N. Y. d. Irwin and Mary (Segsworth) S. Edn.: B.A., Univ. of Toronto, 1921; S.M., Univ. of Chicago, 1927; Ph.D., *ibid.*, 1939. Exp.: Instr. in Foods and Nutrition, MacDonald Coll., McGill Univ., Montreal, Can., 1923-26; Instr. in Foods and Nutrition, Coll. of Home Econ., Cornell Univ., Ithaca, N. Y., 1927-30; Ed. Staff of Curtis Pub. Co., Philadelphia, Pa., 1930-34; Lectr. and Asst. Prof., Dept. of Household Sci., Univ. of Toronto, Canada, 1939-41; Assoc. Prof. and Assoc. Chf. in Expt. Sta., Univ. of Ill., Urbana, Ill., 1941-45; Asst. with Frozen Food Foundation, Syracuse, N. Y., 1945-49; Prof. of Foods, Coll. of Home Econ., Syracuse Univ., Syracuse, N. Y., 1949—. Mem.: Inst. of Food Tech.; Amer. Chem. Soc.; Amer. Dietetic Assn.; Amer. Home Econ. Assn.; Fellow, A.A.A.S.; Sigma Xi; Sigma Delta Epsilon; Natl. Leag. of Amer. Pen Women; Corinthian Club of Syracuse. Author: The Frozen Food Cook Book, 1948. Contrb. to: Food Rsch.; Jour. of Amer. Dietetic Assn.; Proc. of Inst. of Food Tech. Special Int.: Chem. and Histol. Studies of Cell Membrane Mat. in Vegetables During Cooling; Frozen Foods.

SIMPSON, Thomas Marshall, Consultant in Gen. Education, Henderson State Teachers Coll., Arkadelphia, Ark. **MATHEMATICS.** b. February 19, 1881, Addison, Maine. s. John Emery and Orrie Vesta (Drisko) S. Edn.: A.B., Harvard, 1905; A.M., Univ. of Wis., 1910; Ph.D., Univ. of Wis., 1916. m. Frances Louise Schulte, August 17, 1911. d. Francis and Katherine Armstrong Schulte. c.: Robert Schulte, (dec.); John Richard; Ruth Winifrid. Exp.: Tchr. in Private Schl., Boston, 1905-07; Baltimore, 1907-08; Instr., Math., Univ. of Wis., 1908-18; Hd. Prof. of Math., Univ. of Fla., 1918; Acting Dean of Grad. Schl., 1933-40; Dean, *ibid.*, 1940-52; Dean Emeritus and Head Prof. of Math., *ibid.*, 1951—; Consultant in Gen. Edn., Henderson State Teachers Coll., Arkadelphia, Ark., 1952—. Mem.: Amer. Math. Society; Math. Assn. of Amer.; Gamma Alpha; Phi Kappa Phi; Sigma Xi; Kappa Sigma; Masonic Order; Kiwanis. Author: Plane Trigonometry and Logarithms, 1930, Rev., 1944. Co-author: Elem. Commercial Algebra (with B. M. Crenshaw and Z. M. Pirenian), 1930, 3rd ed., 1950; Mathematics of Finance (with B. M. Crenshaw and Z. M. Pirenian), 1930; rev. 3rd ed., 1950. Ph.D. Dissertation: On A Functional Equation of Abel.

SIMPSON, Walter Malcolm, Physician, 435 Cress St., Laguna Beach, Calif.



MEDICAL RESEARCH. b. Lynn, Mass., Dec. 25, 1895. s. Alexander Robert and Mary Elizabeth (Whiteway) S. Edn.: B.S., Univ. of Mich., 1922; M.S., *ibid.*, 1923; M.D., *ibid.*, 1924. m. June Alexandra Knisley, Aug. 9, 1924. c.: Mary June; Richard Bruce; James Michael. Exp.: Tchng. Asst. in Anatomy and Histol., Univ. of Mich., Ann Arbor, Mich., 1920-22; Instr., Sr. Instr. of Pathol., *ibid.*, 1922-26; Instr. in Surgery, Johns Hopkins Univ., Baltimore, Md., 1926-27; Organizer and Dir., Kettering Inst. for Med. Rsch. and Diagnostic Labs., Miami Valley Hosp., Dayton, Ohio, 1927-47; Collaborator with Charles F. Kettering in Inventon of Kettering-Simpson-Sittler Hypertherm for Prod. of Artificial Fever Therapy, 1931-42; Dir., Dept. of Cancer-Chemotherapy, Div. Cancer Rsch., Barnard Free

Skin and Cancer Hosp. and Washington Univ., St. Louis, Mo., 1947-48; Visiting Lectr. in Internal Med., Ohio State Univ., Columbus, Ohio, 1933—; Retired from Navy by Reason of War-incurred Physical Disability, Now Consultant in Cancer Rsch., 1948. Founder and Fellow, Coll. Amer. Pathol.; Fellow, A.C.P.; Fellow, Mich. Acad. Sci.; Fellow, Ohio Acad. Sci. Mem.: Amer. Soc. for Clinical Pathol.; A.M.A.; Amer. Assn. Cancer Rsch.; Ohio Soc. Pathol.; Amer. Venereal Diseases Soc.; A.A.A.S.; Alpha Omega Alpha; Sigma Xi; Phi Sigma; Phi Kappa Sigma. Author: Tularemia, 1929; Fever Therapy, 1928. Contrb. to: Tice's Practice of Med.; Piersol's Cyclopaedia of Med.; Barr's Mod. Therapy in Med. Practice; and 135 other publications.

SIMS, Ivan Henry, Forester, Southeastern Forest Expt. Sta., Franklin, Va. **SILVICULTURE.**

SINCLAIR, James Huntly, Prof. of Edn., Occidental Coll., Los Angeles, Calif. **EDUCATION.**

SINCLAIR, Robert Gordon, Prof. of Biochem., Queen's Univ., Kingston, Ont., Can. **BIOCHEMISTRY.**

SINDEN, James Whaples, Prof. of Botanical Rsch., Pa. State Coll., State College, Pa. **BOTANY.**

SINGER, Willard E., Assoc. Prof. of Physics, Bowling Green State Univ., Bowling Green, Ohio. **PHYSICS.**

SINGEWALD, Joseph Theophilus, Jr., Chmn., Dept. of Geol. and Prof. of Econ. Geol., Johns Hopkins Univ., Baltimore, Md. **ECONOMIC GEOLOGY.**

SINGEWALD, Quentin D., Administrative Geologist, U. S. Geol. Survey, 1900

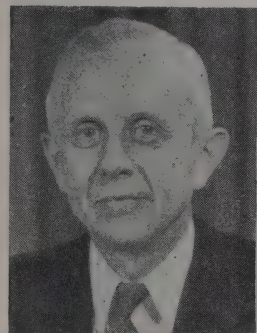


Kimberly Rd., Silver Spring, Md. **ECONOMIC GEOLOGY.** b. Baltimore, Md., Sept. 28, 1902. s. Joseph T. and Magdalena J. (Dreyer) S. Edn.: A.B., Johns Hopkins Univ., 1922; Ph.D., *ibid.*, 1926. m. Mary E. Boardman, June 28, 1952. Exp.: Geol. Asst., Midwest Refining Co., Sun Oil Co., and U. S. Geol. Survey, summers 1919-25; Geologist, Standard Oil Co., Mex., 1926-27; Asst. Prof. of Geol., Colo. Schl. of Mines, 1927-29; Asst. Prof. and Assoc. Prof. of Geol., Univ. of Rochester, 1929-42; Geologist, U. S. Geol. Survey, 1929-42; Geologist, *ibid.*, 1942—. Mem.: Fellow, Geol. Soc. Amer.; Mineralogical Soc. Amer.; A.A.A.S.; Soc. Econ. Geologists; Amer. Assn. Petroleum Geologist; Amer. Inst. Mining and Metallurgical Engrs.; Phi Beta Kappa; Sigma Xi; Phi Gamma Delta. Contrb. to: Bull. Geol. Soc. Amer.; Econ. Geol.; Jour. of Geol.; Jour. Sci.; Econ. Geography; Colo. Sci. Soc. Special Int.: Structural, Stratigraphic, and Igneous Controls of Ore Deposition in Colo.; Mineral Resources of Colombia; Tin Industry of Bolivia; Mineral Deposits of Japan and of Europe.

SINGLETARY, B. Henry, Prof., Hd. Dept. of Horticulture, La. State Univ., Baton Rouge, La. **HORTICULTURE.** b. Grant, La., June 20, 1890. s. Archie Calhoun and Minnie Elizabeth (Loflin) S. Edn.: M.S., La. State Univ., 1927; B.S., *ibid.*, 1925. m. Margaret Ann Emerson, Aug. 28, 1919. c.: Charles Emerson Beams (foster son). Exp.: Prin., Rural Schl., La., 1913-18; Parish Treas., Jefferson Davis Parish, 1918-20; Tchr., Consolidated Schl., Blox, Tex., 1920-21; Tchr., Roanoke H. S., La., 1923-24; Instr., Asst. Prof., Assoc. Prof. and Prof., La. State Univ., Baton Rouge, La., 1924—; Prof. and Hd. Dept. Horticulture, *ibid.*, 1931—; Dean of Men, *ibid.*, 1942-44. Mem.: Amer. Soc. Hort. Sci.; La. Camellia Soc.; Alpha Tau Omicron; Alpha Zeta; Omicron Delta Kappa; Mason. Gen. Int.: Patented Tobacco Pipe and Plant Remover; Found, Grew and Determined Uses of a Winter Legume named the Singletary Pea.

SINGLETON, Robert Richmond, Dev. Consultant, 404 Burd St., Pennington, N. J. **MATHEMATICS AND OPTICS.** b. Brooklyn, N. Y., Mar. 23, 1913. s. Daniel and Sarah (Dwinell) S. Edn.: A.B., Dartmouth, 1934; M.Sc., Brown Univ., 1935. m. Helen Warren, Jan. 21, 1938. c.: David; Sally. Exp.: Rsch. Assoc., Princeton Univ., Princeton, N. J., 1937-42; Mgr., Merrill Flood and Assoc., Princeton, N. J., 1942-46; Dev. Dir., Aero Service Corp., Philadelphia, Pa., 1946-52; Consultant in Dev., 1952—. Mem.: Amer. Math. Soc.; Amer. Soc. of Photogrammetry; Phi Beta Kappa; Sigma Xi. Special Int.: Optical and Electronic Instruments; Photogrammetry; Mapping.

SINNOTT, Edmund Ware, Dean, Grad. Schl., Yale Univ., Dir., Sheffield Sci. Schl., Yale Univ., Sterling Prof. of Botany, Yale Univ., New Haven, Conn. **PLANT SCIENCE.** b. Cambridge, Mass., Feb. 5, 1888. s. Chas. Peter and Jessie Elvira (Smith) S. Edn.: B.A., Harvard, 1908; M.A., ibid., 1910; Ph.D., ibid., Sheldon Fellow, 1913; D.Sc., Northeastern Univ., 1948. m. Mabel Shaw, Hopkinton, Mass., June 24, 1916. c.: Edmund Ware; Mildred Shaw; Clara Richardson. Exp.: Instr., Harvard Forestry Schl., 1913-15; Prof., Botany and Genetics, Conn. Agri. Coll., 1915-28; Prof., Botany,



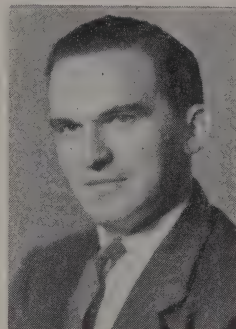
Barnard Coll., 1928-39; Prof., Botany, Columbia, 1939-40; Sterling Prof., Botany, Yale, 1940—; Chmn., Dept. of Botany, Yale, 1940-50; Dean, Grad. Schl., ibid., 1950—; Dir. Sheffield Scientific Schl., ibid., 1945—. Mem.: Natl. Acad. of Sci.; Amer. Philosophical Soc.; A.A.A.S.; Bot. Soc. of Amer.; Amer. Soc. of Naturalists; N. England Bot. Club; Torrey Bot. Club; Phi Beta Kappa; Sigma Xi; Graduates Club; Mory's. Author: Amer. Jour. Bot.; Natl. Acad. Sci.; Amer. Sci.; Sci.; Growth; Yale Review; Several books. Travel: Australasia; Europe. Hobbies: Early New England meeting houses and church arch.

SINNOTT, Edmund W., Yale Univ., New Haven, Conn. **PLANT MORPHOLOGY.**

SIPE, H. Craig, Prof. of Physics, State Tchr. Coll., Florence, Ala. **SCIENCE EDUCATION.** b. Flushing, Ohio, Nov. 22, 1917. s. Harry Cleveland and Edith (Goff) S. Edn.: A.B., Bethany Coll., 1937; M.A., Univ. of Va., 1938; Ph.D., George Peabody Coll. for Tchr., 1952. m. Elizabeth Sprouse, June 9, 1946. Exp.: Tchr., Handley High Schl., Winchester, Va., 1938-40; Dev. Chemist, O'Sullivan Rubber Co., ibid., 1940-41; Instr., Bethany Coll., Bethany, W. Va., 1942-43; Master in Physics, Woodberry Forest Schl., Woodberry Forest, Va., 1943-46; Assoc. Prof., Mars Hill Coll., Mars Hill, N. C., 1946-47; Asst. Prof., State Tchr. Coll., Florence, Ala., 1947-52; Prof., ibid., 1952—. Mem.: Amer. Assn. of Physies. Tchr.; Amer. Chem. Soc.; N. E. A.; Natl. Sci. Tchr. Assn.; Ala. Acad. of Science; Alpha Sigma Phi; Kappa Delta Pi; Phi Delta Kappa. Contrb.: Ed.; Jour. of the Ala. Acad. of Sci.; Schl. Sci. and Math. Special Int.: Philosophy of Sci. Edn.; Certification of Sci. Tchr., Guidance of Sci. Tchr.

SISK, Augustus, Prof. Mathematics, Maryville Coll., Maryville, Tenn. **MATHEMATICS.** b. June 5, 1889, Marion, North Carolina. s. Marion M. and Rachel Catherine (Patton) S. Edn.: A.B., Maryville Coll., 1917; M.A., Univ. of Kentucky, 1923; Ph.D., Cornell Univ., 1932. m. Florence S. Steelman of Williamstown, N. Y., Aug. 3, 1916; d. Rev. I. N. and Mrs. C. Steelman. c.: Margaret C.; Frances E.; Catherine S. Exp.: Tchr. and Prin., H. S., 1917-21; Instr. and Asst. Prof. of Math., Univ. of Tenn., 1923-38; Prof. of Math., Maryville Coll., 1938—. Mem.: A.M.A.; Pi Mu Epsilon. Ph.D. Dissertation: The Plane Symmetric Quintic Cremona Involutions. Listed in: A.M.S.

SISLER, Harry Hall, Assoc. Prof. of Inorganic Chem., Ohio State Univ., Columbus 10, Ohio. **IN-ORGANIC CHEMISTRY.**



b. Mar. 13, 1917, Iron-ton, Ohio. s. Harry C. and Minta Anne (Hall) S. Edn.: B.S., Ohio State Univ. (with distinction), 1936; M.S., Univ. of Ill., 1937; Ph.D., ibid., 1939. m. Helen Elizabeth Shaver of Orlando, Fla., June 29, 1940. d. Mr. and Mrs. B. F. Shaver. c.: Elizabeth Ann; David Franklin; Raymond Keith. Exp.: Instr. Phys. Sci., Wright, Jr. Coll., Chicago, Ill., 1939-41; Instr., Asst. Prof., Assoc. Prof. Chem., Univ. of Kans., 1941-46; Asst. Prof. of Chem., Ohio State Univ., Columbus, Ohio, 1946-48; Assoc. Prof. Chem., ibid., 1948—. Mem.: Chmn. Kans. City Sect., A.C.S., 1945-46; Sigma Xi; Phi Lambda Upsilon; A.C.S.; Ohio Acad. of Sci.; Alpha Chi Sigma; Phi Delta Kappa. Co-author: Gen. Chem.—A Systematic Approach, 1949; A Systematic Lab. Course in Gen. Chem., 1950; Semimicro Qualitative Analysis, 1951; Essentials of Chem., 1951; Essentials of Experimental Chem., 1951; Coll. Chem.—A Systematic Approach, 1953. Contrb. to: Jour. Amer. Chem. Soc.; Jour. Chem. Edn.; Chem. Reviews; other scientific journals. Ph.D. Dissertation: A Study of Some Sulfur-Nitrogen Compounds. Hobbies: Photography; Singing. Listed in: A.M.S.; Who's Who in the Midwest. Special Int.: Inorganic Nitrogen Compounds, Molecular Addition Compounds, Liquid Ammonia Reactions, Hydrazine, Oxides of Nitrogen, Boron Hydrides.

SISON, Agérico B.M., Prof. of Clin. Med. and Hd. Dept. of Med., Dean, Coll. of Med. and Dir., Philippine Gen. Hosp., Univ. of the Philippines, Manila, Philippines. **INTERNAL MEDICINE.** b. Lingayen, Pangasinan, Philippines, Dec. 1, 1898. s. Jose B. and Josefa (Ungson) S. Edn.: A.B., Ateneo de Manila, 1916; M.D., Univ. of the Philippines, 1921. m. Francisca N. Chanco, May 31, 1924. c.: Francisco Tomas Vicente; Milagros Teresita Engracia. Exp.: Intern, Philippine Gen. Hosp., Manila, Philippines, 1921; Resident in Med. and Instr. in Med., ibid., and Univ. of Philippines, 1921-25; Asst. Prof. in Med., ibid., 1926-46; Assoc. Prof. of Med., ibid., 1946-50; Prof. of Clin. Med., ibid., 1950—; Dean, Coll. of Med. and Hd. Dept. of Med., ibid., 1951—; Dir., Philippine Gen. Hosp., ibid., 1951—; Consultant in Internal Med., Armed Forces of the Philippines, 1949—; Chf. Physician to Pres. of Philippines, 1948—. Hon. Pos.: Govt. Delegate to 6th Congress of Far Eastern Assn. of Tropical Med. in Tokyo, 1925; Govt. Delegate to 2nd Internatl. Gerontol. Congress at St. Louis, Mo., 1951; Philippine Delegate to 5th Gen. Assembly of the Worlds Med. Assn., Stockholm, Sweden, 1951. Mem.: A.A.A.S.; Natl. Geographic Soc.; Gerontol. Soc., Inc.; Acad. of Internal Med.; Natl. Rsch. Council of the Philippines; Philippine Med. Assn.; Manila Med. Soc.; Phi Kappa Phi; Knights of Rizal; Knights of Columbus. Contrb. to: Acta Medica Philippina; Jour. of Philippine Med. Assn.; Jour. of Amer. Med. Assn. Special Int.: Internal Med.

SITNEY, Massey, Marine Engr., More Island Naval Shipyard, 1608 Oxford St., Berkeley, Calif.

SITTERLY, Bancroft Walker, Astronomer, U. S. Naval Observatory, Washington, D. C. **ASTRONOMY.**

SITTERLY, Mrs. Charlotte Moore, Physicist, Natl. Bureau of Standards, Washington, D. C. **SPECTROSCOPY.**

SITZ, Earl LeRoy, Prof. of Elec. Engrng., Kans. State Coll., Manhattan, Kans. **ELECTRICAL ENGINEERING.** b. Davenport, Iowa, Feb. 28, 1904. s. Theodore G. and Katie (Passig) S. Edn.: B.S., Iowa State Coll., 1927; M.S., Kans. State Coll., 1932. m. Sarah Golda, Nov. 24, 1927. c.: Carol Ann. Exp.: Instr., Dept. of Machine Design, Kans. State Coll., Manhattan, Kans., 1927; Dept. of Elec. En-

grng., *ibid.*, 1928-40; Design Engr., Westinghouse Elec. Corp., 1940-41; Dept. Elec. Engrng., Kans. State Coll., 1941-45; Design Engr., Westinghouse Electric Corp., 1945-46; Dept. of Elec. Engrng., Kans. State Coll., 1946-47; Dept. of Elec. Engrng., Michigan Coll. of Mining and Technology, 1948—; Dept. Elec. Engrng., Kans. State Coll., 1948—. Mem.: Amer. Inst. of Elec. Engrs.; Amer. Soc. for Engrng. Edn.; Eta Kappa Nu; Sigma Tau; Phi Kappa Phi.

SJOSTROM, Loren Birger, Hd. Flavor Labs., Arthur D. Little, Inc., 30 Memorial Drive, Cambridge



42, Mass. **CHEMICAL ENGINEERING**. b. North Andover, Mass., July 21, 1912. s. Waldemar L. and Alice M. (Barstow) S. Edn.: B.S., Northeastern Univ., 1935. m. Bernice Whitehead, Aug. 20, 1938. c.: Jean; Lois; Betty. Exp.: Staff, Arthur D. Little, Inc., Cambridge, Mass., 1936—. Mem.: A.A.A.S.; Amer. Chem. Soc.; Amer. Inst. of Chemists; Chemists' Club; Inst. of Food Tech.; Sigma Delta; Mason. Contrb. to: Food Engrng.; Food Tech.; The Confectioner; Indus.

and Engrng. Chem.; The Bakers Digest. Special Int.: Foods, Pharmaceuticals; Cosmetics; Flavor Measurement.

SKARSTEDT, Marcus, Librarian, San Francisco Jr. Coll., Ocean and Phelan Aves., San Francisco, Calif. **MATHEMATICS**.

SKEELS, Harold Manville, Asst. Br. Chf. Clinical Psychologist, Veterans Admin. Branch Office, 13, P. O. Box 1260, Denver, Colo. **CLINICAL PSYCHOLOGY**.

SKEEN, John R., Prin. Chem. Engr., Bureau Internal Revenue, Treasury Dept., 313 Manheim St., Philadelphia, Pa. **CHEMISTRY**.

SKEHAN, Rev. James William, S. J., Asst. Prof. of Geol., Boston Coll., Weston Observatory, Weston



93, Mass. **GEOLOGY**; **STRUCTURAL GEOLOGY AND PETROLOGY**. b. Houlton, Maine, Apr. 25, 1923. s. James William and Mary Effie (Coffey) S. Edn.: A.B., Boston Coll., 1946; A.M., *ibid.*, 1947; Ph.L., Weston Coll., 1947; A.M., Harvard Univ., 1950; Ph.D., *ibid.*, 1953. Exp.: Asst. Prof. of Geol., Dept. of Geophys., Boston Coll., 1951—. Mem.: Geol. Soc. of Amer.; Sigma Xi; Boston Geol. Soc.; New England Intercollegiate Geol. Conf.; Amer. Assn. Jesuit Scientists; Amer.

Geol. Tehrs. Soc. Contrb. to: Bull. Geol. Soc. Amer.; Bull. Amer. Assn. Jesuit Scientists; etc. Special Int.: Quadrangle Mapping of Metamorphics of Green Mountains and Eastern Mass.; Structure and Genesis of Domes and Anticlines; Detailed Geologic Mapping of Quarries and the Relation of Structure to Quarry Problems.

SKILLING, Hugh Hildreth, Prof. and Exec. Hd., Dept. of Elec. Engrng., Stanford Univ., Stanford, Calif. **ELECTRICAL ENGINEERING**.

SKINNER, Burrhus Frederic, Prof. of Psychol., Psychol. Labs., Memorial Hall, Harvard Univ., Cambridge, Mass. **PSYCHOLOGY**. b. Susquehanna, Pa., Mar. 20, 1904. s. William Arthur and Grace (Burrhus) S. Edn.: A.B., Hamilton Coll., 1926; M.A., Harvard Univ., 1930; Ph.D., *ibid.*, 1931. Hon. Deg.: ScD., Hamilton Coll., 1951. m. Yvonne Blue, Nov. 1, 1936. c. Julie; Deborah.

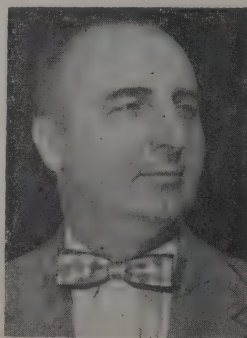
Exp.: Rsch. Fellow, Natl. Rsch. Coun., Harvard, Cambridge, Mass., 1931-33; Jr. Fellow, Harvard Soc. Fellows, 1933-36; Instr. in Psychol., Univ. of Minn., Minneapolis, Minn., 1936-37; Asst. Prof., *ibid.*, 1937-39; Assoc. Prof., *ibid.*, 1939-45; Prof. of Psychol. and Chmn. of Dept., Ind. Univ., Bloomington, Ind., 1945-48; Prof. of Psychol., Harvard Univ., Cambridge, Mass., 1948—. Hon. Pos.: Chmn., Dept. of Psychol., Ind. Univ., 1945-48; Received, Howard Crosby Warren Medal, 1942; Guggenheim Fellow, 1944-45; William James Lectr., Harvard, 1947—. Mem.: Amer. Psychol. Assn.; A.A.A.S.; Eastern Psychol. Assn.; Soc. of Exptl. Psychol.; Natl. Acad. of Sci.; Amer. Phil. Soc.; Phi Beta Kappa; Sigma Xi; Amer. Acad. of Arts and Sci.; Swedish Psychol. Soc. Author: Behavior of Organisms, 1938; Walden Two, 1948; Sci. and Human Behavior, 1953. War Record: Conducted War Rsch. Sponsored by Gen. Mills, Inc., 1942-43. Special Int.: Animal Behavior, Verbal Behavior; Human Behavior.

SKINNER, Charles Henry, Acting Prof. of Math., Purdue Univ., W. Lafayette, Ind. **PHYSICS, MATHEMATICS**.

SKINNER, H. Clay, Hd., Dept. of Psychol., Ariz. State Coll., Tempe, Ariz. **PSYCHOLOGY**.

SKINNER, Henry T(homas), Dir., U. S. Natl. Arboretum, Washington 25, D. C. **BOTANY AND HORTICULTURE**. b. September 24, 1907, East Sutton, England. s. William and Gertrude (Pitman) S. Edn.: B.S., 1936, M.S., 1938, Cornell Univ., Ph.D., Univ. of Pa., 1952. m. Anna Mildred Wood, Nov. 10, 1951. Exp.: Asst. Propagator, Hillier Nurs., Winchester, Eng., 1927-29; Asst. Arnold Arboretum, Harvard, 1929-31; Propagator and Instr., Ornamental Hort., Cornell Univ., 1931-40; Curator, Morris Arboretum, Univ. of Pa., 1940-52; Dir., U. S. Natl. Arboretum, Washington, D. C., 1952—. Hon. Pos.: Awarded Jackson-Dawson Memorial Medal, Massachusetts Horticultural Soc., 1943. Mem.: Amer. Soc. Hort. Sci.; Chmn., 1947, Amer. Assn. Bot. Gardens and Arboretums; Pa. Hort. Soc.; Phila. Botanical Club; Bot. Soc. of Pa.; Acacia; Sigma Xi; Pi Alpha Xi; Phi Kappa Phi. Contrb. to: Proc. Amer. Soc. Hort. Sci. War Record: U. S. Army, 1943-45. Listed in: A.M.S. Special Int.: Propagation of Woody Plants with emphasis on Rhododendrons and Azaleas; Control of Insect Pests of Boxwood; Growth Conditions for Woody Plants; Hybridization, Genetics and Taxonomy of Ericaceous Plants with emphasis upon the native American Azaleas.

SKINNER, Homer L., Med. Dir., U. S. Public Health Service, Retired, Attending Surgeon, Richmond

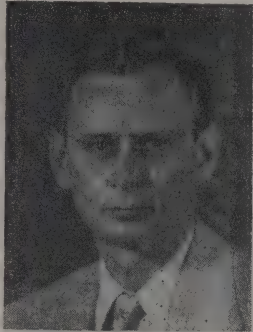


Memorial Hosp., Consultant Surgeon, U. S. Public Health Service Hosp., Staten Island and Willow Brook State Schl., 100 Central Ave., Staten Island 1, N. Y. **SURGERY**. b. Ohio, May 10, 1901. s. William A. and Floy (Lucas) S. Edn.: A.B., Ohio Univ., 1922; M.D., Univ. of Cincinnati, Med. Schl., 1925. m. Nina M. Osborn, 1924. c.: Homer, Jr.; Elizabeth Ann; Donald Osborn; Robert J.; John J. Exp.: Internship, U. S. Pub. Health Service Hosp., Norfolk, Va.,

1925-26; Asst. Surgeon, *ibid.*, Ellis Island, N. Y. 1926-27; Chf. of Surgery, *ibid.*, Savannah, Ga., New Orleans, La., Baltimore, Md., Stapleton, N. Y., 1927-50; Retired, 1951—. Hon. Pos.: Chmn., Surgeon Gen. Res. Trng. Couraette; Mem., Surgical Study Sect. Mem.: Richmond Co. Med. Assn.; N. Y. State Med. Soc.; A.M.A.; Milit. Surgeons; Fellow, Amer. Coll. Surgeons; Phi Kappa Tau; Phi Chi. Contrb. to: N. Y. State Med. Jour.; Annals of Surgery; Surgical Clinics of N. Amer.; Va. State Med. Jour.; Pub. Health Reports; Jour. of Bone Surgery; Jour. of Thoracic Surgery; Amer. Jour. of Surgery; Jour. of Tuteurational Coll. of Surgeons. Special Int.: Surgery of Esophages; Chest Surgery; Low Back Pain; Inguinal Hernia; Varicocele; Dupuytren's Contractures.

SKINNER, John Taylor, Chf. Chemist, Grappette Co., Camden, Ark. **BIOCHEMISTRY.**

SKINNER, William James, Hd., Hydropropulsion Branch, Dev. Dept., U. S. Naval Underwater Ord. Sta., 93 Eustis St., Newport, R. I. **MECHANICAL ENGINEERING.**



b. Alliance, Ohio, July 10, 1920. s. Charles Edward and Mary Ethel (Shuman) S. Edn.: B.S., Lehigh Univ., 1942; M.S., Ore. State Coll., 1947. m. Gertrude McAllister, Dec. 20, 1941. c.: William James, Jr.; Suzanne. Exp.: Instr. in Aeronautical Engrng., Ore. State Coll., Corvallis, Ore., 1942 and 1946; Asst. Prof. of Mech. Engrng., Cornell Univ., Ithaca, N. Y., 1947-51; Mech. Engr., U. S. Naval Underwater Ord. Sta., Hd. Hydropropulsion Branch, Dev. Dept., Newport, R. I., 1951—. Mem.: A.R.S.; Pi Tau Sigma. Author: Econ. of Personal Airplane Operation, 1947. War Record: Rsch. and Dev. Officer, Wright Field, U. S. A. F. Special Int.: Internal Combustion Engines; Hydropropulsion; Guided Missiles.

SKITSKY, Vsevolod Lawrovitch, Former Editor, Geophys. Abstracts, 1657 31st St., N. W., Washington 7, D. C. **PHYSICS; PSYCHOLOGY.**



b. Romny, Russia, Dec. 6, 1893. s. Lawr C. and Lydia C. (Miller-Galiatsky) S. Edn.: Inst. Ways Com., Petrograd; M.A., Columbia Univ., 1926; Sorbonne, Paris; Ph.D., Univ. of Mich., 1940. m. Evangeline Peters, Sept. 5, 1951. Exp.: Rsch. Assoc., Legislative Reference Service, Library of Congress, Washington, D. C., 1926-29; Instr. in Psychol., Mich. Univ., Ann Arbor, Mich., 1932-33; Editor, Geophysical Abstracts, 1943-49; Ref. Librarian, 1943-49. Mem.: Amer. Geophys. Union; Phi Beta Kappa; Sigma Xi. Contrb. to: Geophys. Abstracts. Special Int.: Phys.; Psychol.; Philos.

SLACK, Charles Morse, Asst. Dir. of Rsch., Westinghouse Electric Corp., Lamp Div., Bloomfield, N. J. **PHYSICS, ELECTRONIC LAMPS.**

SLACK, Francis Goddard, Prof. and Chmn., Dept. of Physics, Vanderbilt Univ., Nashville, Tenn. **PHYSICS.**

SLACK, Harry Richmond, Jr., Asst. Prof. of Otolaryngology, Med. Schl., Johns Hopkins Univ., Baltimore, Md. **OTOLARYNGOLOGY.**

SLADE, J. J., Coll. of Engrng., Rutgers Univ., New Brunswick, N. J. **ENGINEERING MATHEMATICS.**

SLADEN, Frank Joseph, Physician-in-Chf. Chg. Med. Dept., Henry Ford Hosp., Detroit, Mich. **INTERNAL MEDICINE.**

SLATCHARD, George, Prof., Dept. of Chem., Mass. Inst. of Tech., Cambridge, Mass. **SOLUBILITY THEORY OF SOLUTIONS OF NON-ELECTROLYTES.**

SLATE, William Lorenzo, Dir., Conn. Agri. Expt. Sta., New Haven, Conn. **AGRONOMY.**

SLATE, Floyd, Assoc. Prof. of Engrng. Materials, Thurston Hall, Cornell Univ., Ithaca, N. Y. **ANALYTICAL CHEMISTRY AND CHEMISTRY APPLIED TO ENGINEERING AND GEOLOGICAL PROBLEMS.**



b. Carroll Co., Ind., July 26, 1920. s. Ora G. and Gladys M. (Miller) S. Edn.: B.S., Purdue Univ., 1941; M.S., ibid., 1942; Ph.D., ibid., 1944. m. Margaret Magley, 1939. c.: Sally Lee; Sandra Kay; Rex Owen. Exp.: Rsch. Chemist and Chf. Chemist, Joint Hwy. Rsch. Project, Purdue Univ., Lafayette, Ind., 1941-44; Chem. Supvr., Manhattan Project, Columbia Univ., N. Y. C., 1944; Asst. Chf. Chemist, Manhattan Project, Houdaille-Hershey Co., Decatur, Ill., 1944-46; Chf. Chemist and Asst. Prof. of Civil Engrg., Joint Hwy. Rsch. Project, Purdue Univ., Lafayette, Ind., 1946-49; Assoc. Prof. of Engrng. Materials, Cornell Univ., Ithaca, N. Y., 1949—. Mem.: Amer. Chem. Soc.; Amer. Concrete Inst.; A.S.T.M.; Hwy. Rsch. Bd. of Natl. Acad. of Sci.; Chi Epsilon; Delta Kappa Rho. Contrb. to: Amer. Soc. for Testing Materials; Jour. Chem. Edn.; Proc. Hwy. Rsch. Bd. Special Int.: Anal. Chem.; Chem. of Cement, Concrete and Soils; Soil Stabilization; Petrography; Tech. Writing; Mineral Prospecting.

SLATER, James Rodenburg, Hd. and Prof., Dept. of Biol., Coll. of Puget Sound, Tacoma, Wash. **HERPETOLOGY.**

SLATER, John Clarke, Mass. Inst. of Tech., Cambridge 39, Mass.

SLAUGHTER, Donald, Dean and Prof. of Pharmacol., Univ. of S. Dak., Vermillion, S. Dak. **PHARMACOLOGY.**

SLAVIN, Abraham, Consulting Civil Engr. and Architect, 30 Church St., New York 7, N. Y.



CONSULTING CIVIL ENGINEER AND ARCHITECT; ADJUNCT PROFESSOR OF CIVIL ENGINEERING AT POLYTECHNIC INSTITUTE OF BROOKLYN. b. New York City, N. Y., Oct. 16, 1894. s. Joseph and Anna Slavin. Edn.: C.E., Polytechnic Institute of Brooklyn, 1920; M.C.E., ibid., 1941; Eng. Sc.D., N. Y. Univ., 1948. m. Jeanette B. Brunner, June 24, 1923. c.: Thelma Naomi; Martin Joseph. Exp.: Designer with Architects and Engineers, N. Y. C., 1910-11; Consulting Engr. and Architect, N. Y. C., 1911-38; Official Mem. and Chf. Engr. of Bd. of Standardization of N. Y. C., 1938-41; Chief Civilian Engr., Engr. Corps, U. S. Army, Construction Division, N. Y. C., 1941-43; Consulting Engr., Manhattan District Engr. Corps, U. S. Army, Oak Ridge Plant, N. Y. C., 1943-45; Consulting Civil Engr. and Architect, 30 Church St., N. Y. C., 1945-51; Assoc. of D. B. Steinman, Consulting Engr., N. Y. C., 1951—. Mem.: Amer. Soc. of Civil Engr.; N. Y. Soc. of Architects; Amer. Assn. Engrng. Edn.; N. Y. State Soc. of Architects; Amer. Soc. of Military Engr.; N. Y. Acad. of Sci.; Int. Assn. of Navigation Congresses; Past Dir. of Bronx Soc. Architects; Past Dir. of N. Y. Soc. Architects; Past Dir. of Bronx Soc. Professional Engrs.; Organizer and First Chmn. of Math. and Engrng. Sect. of N. Y. Acad. of Sci.; Honors and Awards: Mem. of Sigma Xi; and Chi Epsilon; Morrison Prize of N. Y. Acad. of Sciences; Silver Emblem of Amer. Soc. of Military Engrs. Internatl. Honors: Knight and Commander—Gold Cross of Military Order of Cy-

prus and Jerusalem (Rome), 1952; Cross of Commander, Grand Prix Humanitaire De Belgique (Belgium) 1952; Cross of Knight—Chevaliers De La Croix De Lorraine (Paris) 1952; Honorary Companion of the Resistance of The Chevaliers De La Croix De Lorraine (Paris) 1952; Life Fellow of Royal Society of Arts (London) 1952; Hon. Mem., Free French War Veterans (N. Y.) 1952; Hon. Mem. of Internatl. Faculty of Univ. of Andhra, India, 1953; Memorial Cross of Natl. Legion of Creek-Amer. War Veterans in Amer. (N. Y.) 1953; Chevalier of The Order of Merite Scientifique—Institut Humaniste, (France) 1953; Fellowship in Emerson Univ. Rsch. Council, (U. S. A.), 1953; Publication: In Transactions of A.S.C.E., Transactions of N. Y. Acad. of Sci., Municipal and Public Works Magazines, Bauingenieur of Germany. Special Interests: Rsch. and designs of Structures. Coordination of functional engrng. with architectural designs. Standard designs of military bridges. Stability analysis. Effective modulus of elasticity. Original methods in structural analysis.

SLAYTER, Games, Owens-Corning Fiberglas Corp., Newark, Ohio. CERAMICS.

SLAYTER, Russell Games, Vice-Pres. in Chg. Rsch. and Development, Owens-Corning Fiberglas Corp., Newark, Ohio. GLASS PRODUCTS.

SLEATOR, William Warner, Assoc. Prof. of Physics, Univ. of Mich., Ann Arbor, Mich. GENERAL PHYSICS.

SLEETH, Clark K., Assoc. Prof. of Med., Schl. of Med., W. Va. Univ., Morgantown, W. Va. INTERNAL MEDICINE.

SLEIGHT, Edwin Roscoe, Emeritus Prof. of Math., Albion Coll., 1517 Elmwood Ave., Wilmette, Ill.



MATHEMATICS. b. Clinton Co., Mich., Aug. 21, 1877. s. James Duane and Louisa Elvira (Reed) S. Edn.: B.S., Albion Coll., 1901; M.A. ibid., 1902. Hon. Deg.: Sc.D., Albion Coll. m. Anna Gilberta Squire, June 3, 1902. c.: Norma Gilberta; Margaret Rae; James Duane; Anna Justine. Exp.: Tchr., Rural Schls., 1894-97; Tchr., N. Amer. Acad. for Boys, Montevideo, Uruguay, 1902-04; Tchr., Mich. Military Acad., 1904-06; Hd. of Dept. of Math., Carthage Coll., Carthage, Ill., 1906-08.

Hd. Dept. of Math., Albion Coll., Albion, Mich., 1908-48; Emeritus Prof., ibid., 1948—; Lectr. in Math., Univ. of Richmond, Richmond, Va., 1948-52. Mem.: Amer. Math. Assn.; A.A.U.P.; Kappa Mu Epsilon; Pi Mu Epsilon; Fellow, Amer. Men Sci.; Omicron Delta Kappa; Alpha Tau Omega. Contrb. to: Math. Monthly; Math. Tchr.; Natl. Math. Mag.; Pentagon. Special Int.: Hist. of Arithmetic.

SLESSER, Charles, Dir., Div. of Tech. Information and Classification Service, Atomic Energy Commn., N. Y. Operations Office



P. O. Box 30, Ansonia Sta., N. Y. 23, N. Y. CHEMICAL ENGINEERING AND CHEMISTRY. b. Lafayette, Ind., Nov. 10, 1915. s. Carl and Esther (Krushen) S. Edn.: B.S., Purdue Univ., 1937; M.S. ibid., 1940; Ph.D., ibid., 1944. m. Ruth Lee Shapiro, Aug. 20, 1940. c.: Carolyn; Robert; Sharon; Dianne. Exp.: Rsch. Chem., Evaluated the factors determining the adhesion of tars and asphalts to aggregates; studied the general physical

characteristics of rock asphalt and the performance

of this material under different conditions of curing, to determine those inherent properties of asphaltic sandstone that contribute to the construction of strong, durable pavements. Traced the movement of calcium chloride and sodium chloride in various soils and evaluated the important variables governing such movement; determined the practicability of treating subgrades with these chemicals in order to reduce or eliminate frost heave. Developed an economical method of stabilizing fine-grained soil by a chemical method, Purdue Univ., Engrng. Expt. Sta., Joint Highway Rsch. Project, Lafayette, Ind., 1937-44; Rsch. Asst., Coordinator and editor of the Monthly Technical Report on barrier (gas diffusion membrane) rsch. and development; Rsch. and development work on barrier preparation, Columbia Univ., Div. of War Rsch., N. Y. C., 1944-45; Rsch. Sci., Developed improved methods for preparing the barrier used to separate uranium isotopes by gaseous diffusion; prepared and edited periodic and topical reports on barrier investigations, Carbide and Carbon Chemical Corp., N. Y. C., 1945-46; Dir., Div. of Tech. Information and Classification Service, responsible for publication, classification, declassification, and dissemination of scientific and tech. proj. information, including reviewing, editing, and reproduction functions; for prep. and dist. of internal information such as periodic reports and special reports; for document accountability and control of research and development reports; and for supvn. over tech. libr., U. S. Atomic Energy Commn., Operations Office, N. Y. C., 1946—. Hon. Pos.: Mem., Tech. Information Panel, a com. recommending policy in the tech. information field of the AEC. Mem.: Amer. Chem. Soc.; A.I.Ch.E.; Phi Lambda Upsilon; Sigma Xi. Author: Migration and Effect on Frost Heave of Calcium Chloride and Sodium Chloride in Soil, 1943 (Purdue Univ. Eng. Bul.); Natural Sandstone Rock Asphalt, with O. R. Tyler and W. H. Goetz, 1941 (Purdue Univ. Eng. Bul.); Editor: Prep., Properties and Tech. of Fluorine and Organic Fluoro Compounds, NNES, Div. VII, Vol. 1, 1951 (McGraw-Hill). Contrb. to: Proc. of the Hwy. Rsch. Bd.; Abstractor for Chem. Abstracts. Special Int.: Adhesion of Bitumen to Aggregates; Natural Sandstone Rock Asphalt as a Paving Material; Salt Migration in Soil; Frost Heave in Soil; Chem. Stabilization of Soil; Barrier Preparation for Gas Diffusion Separations; Fluorine and Fluorocarbon Tech.

SLEMONS, Josiah Morris, retired, 309 S. Westmoreland Ave., Los Angeles, Calif. MEDICAL SCIENCE.

SLEPIAN, Joseph, Westinghouse Electric Corp., E. Pittsburgh, Pa.

SLICHTER, Louis Byrne, 1446 N. Amalfi Dri., Pacific Palisades, Calif.

SLICHTER, Walter L., Prof. Emer. Elec. Engrng., Engrng. Bldg., Columbia Univ., N. Y., N. Y. ELECTRICAL ENGINEERING.

SLIFER, Eleanor Heist, Asst. Prof., Dept. of Zool., State Univ. of Iowa, Iowa City, Iowa. ENTOMOLOGY.

SLIPHER, E. C., Box 1640, Flagstaff, Ariz. ASTRONOMY.

SLIPHER, Vesto Melvin, Lowell Observatory, Flagstaff, Ariz.

SLIPP, Albert Wiswell, Acting Asst. Prof. Forest Pathol., Schl. of Forestry, Univ. of Idaho, Moscow, Idaho. ECOLOGY OF FOREST FUNGI.

SLOAT, Charles Allen, Assoc. Prof. of Chem., Gettysburg Coll., Gettysburg, Pa. CHEMISTRY.

SLOCUM, Geo. Kellogg, Assoc. Prof., Forestry, 226 Woodburn Road, Ralieggh, N. C. FOREST MANAGEMENT. b. Scranton, Pa., November 16, 1907. s. George W. and Clara (Kellogg) S. Edn.: B.S., N. C. State Coll., 1931; M.S., ibid., 1932. m. Thelma Shank of Waynesboro, Pa., February 27, 1930. d. Mr. and Mrs. Adin S. Shank. c.: Shirley Lee. Exp.: 1931-32, Tchng. Fellow, N. C. State Coll.; 1933, Cultural Foreman, U. S. Forestry Service; 1934, Instr., Forestry, N. C. State Coll.;

1935-40, Asst. Prof., *ibid.*; 1940-44, Assoc. Prof., *ibid.*; 1944, St. Dir., Forest Res. Appraisal; 1945—, Assoc. Prof., N. C. State Coll. Mem.: Phi Kappa Phi; Soc. of Amer. Foresters; N. C. Forestry Assn.; Amer. Forestry Assn.; Xi Sigma Pi. Hobbies: Gardening; Gun Collecting. Special Int.: Wood Anatomy.

SLOCUM, Lois Tripp, Asst. Prof. of Astron. and Math., Wilson Coll., Chambersburg, Pa. **ASTROPHYSICS.**

SLOSS, Laurence Louis, Lectr. in Geol., Northwestern Univ., Evanston, Ill. **STRATIGRAPHIC GEOLOGY.**

SLOWTER, Edward Eugene, Asst. Secy., Asst. Treas., Battelle Memorial Inst., 505 King Ave., Columbus 1, Ohio. **CHEMICAL ENGINEERING; ADMINISTRATION OF RESEARCH.** b. Columbus, Ohio, Nov. 1, 1912. s. William W. and Nellie L. (Burt) S. Edn.: B.Ch. Engrng., Ohio State Univ., 1934; M.Sc., *ibid.*, 1935; Ch.E., *ibid.*, 1939. m.: Elizabeth R. Turner, Aug. 16, 1941. c.: Elizabeth L.; William J. Exp.: Rsch. Fellow, Battelle Memorial Inst., Columbus, Ohio, 1934-35; Development Engr., Columbia Chem. Div., Barberton, Ohio, 1935-36; Rsch. Engr. and Asst. Supvr., Battelle Memorial Inst., Columbus, Ohio, 1936-42; U. S. Army, 1942-45; Asst. Secy. and Asst. Treas., Battelle Memorial Inst., 1945—. Mem.: Amer. Inst. Chem. Engrs.; Tau Beta Pi; Sigma Xi; Phi Lambda Upsilon; Soc. Professional Engrs. Contrb. to: Metals and Alloys; Metal Progress; Trans. Amer. Inst. Chem. Engrs. Special Int.: Controlled Atmospheres for Heat Treatments; Inorganic Chem. Engrng.; Admin. of Rsch.

SLYE, Maud, Assoc. Prof. of Pathol., Emeritus Univ. of Chicago, 5822 Drexel Ave., Chicago 37, Ill. **CANCER RESEARCH; MEDICAL RESEARCH.** b. Minneapolis, Minn., Feb. 8, 1879. d. James Alvin and Florence Alden (Wheeler) S. Edn.: A.B., Univ. of Minn., Univ. of Chicago, 1899; D.S., Univ. of Chicago, Brown Univ., 1937. Exp.: Prof. of Psychol. and Pedagogy, R. I. State Normal Schl., 1899-1905; Member, Sprague Memorial Inst., Chicago, Ill., 1911-43; Instr. in Pathol., Univ. of Chicago, 1919-22; Asst. Prof., *ibid.*, 1922-26; Assoc. Prof., *ibid.*, 1926-45; Prof. Emeritus, 1945—. Mem.: Amer. Radiol. Soc.; Amer. Assn. Cancer Rsch.; Chicago Inst. Med. Rsch., former vice-pres.; Ill. Acad. Sci.; A.M.A.; Amer. Assn. Scientific Workers; A.A.A.S.; Phi Beta Kappa; Sigma Xi; Sigma Delta Epsilon; Delta Kappa Gamma. Contrb. to: Amer. Jour. Cancer Rsch. in the Subjects of the Nature and Inherited Susceptibility of Cancer; etc.



1926-45; Prof. Emeritus, 1945—. Mem.: Amer. Radiol. Soc.; Amer. Assn. Cancer Rsch.; Chicago Inst. Med. Rsch., former vice-pres.; Ill. Acad. Sci.; A.M.A.; Amer. Assn. Scientific Workers; A.A.A.S.; Phi Beta Kappa; Sigma Xi; Sigma Delta Epsilon; Delta Kappa Gamma. Contrb. to: Amer. Jour. Cancer Rsch. in the Subjects of the Nature and Inherited Susceptibility of Cancer; etc.

SMAKULA, Alexander, Assoc. Dir. of Lab. Ins. Rsch., Mass. Inst. of Tech., Cambridge, Mass. **SOLID STATE PHYSICS AND SPECTROSCOPY.** b. Dobrowody, Austria, Sept. 9, 1900. s. Theodor and Maria (Juzwa) S. Edn.: Ph.D., Univ. of Goettingen, 1927. m. Erika E. Bunde, 1932. c.: Ilse A.; Elli O.; Peter H.; Fritz K. Exp.: Asst., Physics Dept., Univ., Goettingen, Germany, 1927-30; Hd. of Opt. Lab., Kaiser Wilhelm Inst., Heidelberg, Germany, 1930-34; Hd. of Rsch. Lab., Carl Zeiss, Jena, 1934-45; Consultant, Engrng. Rsch. Dev. Lab., Ft. Belvoir, Va., 1946-51; Assoc. Dir., Lab. Ins. Rsch., Mass. Inst. of Tech., Cambridge, Mass., 1952—. Mem.: Optical



Soc. of Amer. Author: Phys. Properties of Optical Crystals, 1952. Contrb. to Zs. Phys.; Phys. Zs.; Zs. Phys. Chem.; Zs. Instrum.; Glasstech. Ber.; Goett. Nachr.; Jour. of Optical Soc. of Amer.; Phys. Rev.; Jour. of Chem. Phys. Special Int.: Crystal Growing; Crystal Imperfections; Plastic Deformation; Elec. and Optical Properties of Crystals; Mix Crystals; Ultraviolet and Infrared Spectroscopy.

SMADDEL, Joseph E., Army Med. Service Graduate Schl., Washington 12, D. C. **PATHOLOGY.**

SMALL, Lloyd L., Prof. of Math., Lehigh Univ., 1131 W. North St., Bethlehem, Pa. **MATHEMATICAL SERIES.**

SMALL, James C., Physician, Instr. in Med., Grad. Schl. of Med., Univ. of Pa., Philadelphia, Pa.

SMALL, Walter Madison, Chf. Geologist, Dominican Seaboard Oil Co., Trujillo, Dominican Republic, Rm. 2150, 30 Rockefeller Plaza, N. Y., N. Y. **PETROLEUM GEOLOGY.**

SMALL, Lyndon Frederick, Chf., Lab. of Chem., Natl. Inst. of Arthritis and Metabolic Diseases, Natl. Institutes of Health, Bethesda 14, Md. **CHEMISTRY OF ALKALOIDS.** b. Boston, Mass., Aug. 16, 1897. s. Frederick Eugene and Amanda Edmunds (Corey) S. Edn.: B.S., Dartmouth Coll., 1916-20; A.M., Harvard Univ., 1922; Ph.D., *ibid.*, 1926. m. Marianne Clayton Brown, Dec. 30, 1921. c.: Donald Clayton; Ruth Farren. Exp.: Rsch. Assoc., Univ. of Va., 1928-39; Rsch. Dir., Natl. Rsch. Council, Wash., D. C., 1929-39; Hd. Chemist, Natl. Inst. of Health, Bethesda, Md., 1939-48; Scientist-Dir., *ibid.*, 1948—. Hon. Pos.: Consultant to Army Chem. Center, Md.; Technical Advisor to League of Nations; Editor, Jour. Organic Chem., 1938-51. Mem.: Sigma Xi; Amer. Chem. Soc.; Natl. Acad. Sci.; Wash. Acad. Sci.; Alpha Chi Sigma; Phi Beta Kappa. Contrb. to: Jour. Organic Chem.; Jour. Amer. Chem. Soc.

SMEDBERG, George Elmer Tech. Repr., Peroxygen Products Development, DuPont Co., 8423 Witkop Ave., Niagara Falls, N. Y. **MECHANICAL ENGINEERING AND PHYSICS.** b. Ishpeming, Mich., Dec. 3, 1909. s. Andrew and Emma (Olsen) S. Edn.: B.S., Mich. Coll. of Mining and Tech., 1931; M.S., *ibid.*, 1934; Ph.D., Univ. of Wis., 1942. m. Evelyn Whetsell, Apr. 4, 1937. c.: Marion Claire; Richard Scott. Exp.: Design Engr., Lake Shore Engrng. Co., Marquette, Mich., 1929; Const. Engr., Levine Brothers, Marquette, Mich., 1931-33; Dist. Engr., Sullivan Mach. Co., Tulsa, Okla., 1935-40; Indus. Engr., Sales Service Engr. and Tech. Repr., Peroxygen Prod. Dev., DuPont, Niagara Falls, N. Y., 1942—. Mem.: Sigma Xi; Tau Beta Pi; Pi Tau Sigma. Special Int.: Air and Fluid Flow; Mach. and Plant Design; Electrochem.; Corrosion; Heat Transmission; Pulp Bleaching; Application Active Oxygen Chemicals.



SMIGEL, Erwin O., Asst. Prof. of Sociol. Ind. Univ., Bloomington, Ind. **SOCIOLOGY.** b. New York, N. Y., Nov. 3, 1917. s. Joseph O. and Ida (Sacks) S. Edn.: B.A., Univ. of N. C., 1939; M.A., N. Y. Univ., 1942; Ph.D., *ibid.*, 1949. m. Marilyn Miller, Aug. 25, 1948. Exp.: Instr., N. Y. Univ., N. Y. C., 1946-48; Instr., Ind. Univ., Bloomington, Ind., 1948-50; Asst. Prof., *ibid.*, 1950—. Mem.: Amer. Sociol. Soc.; Industrial Relations Rsch. Assn.; Ohio Valley Sociological Soc.; Alpha Kappa Delta. Contrb. to: Amer. Sociological Review; Amer. Jour. of Sociol.; Sociol. and Soc. Rsch. Occupations. Spec. Int.: Industrial Sociol., Occupational Soc.

SMILEY, Charles Hugh, Prof. of Astron. and Dir., Ladd Observatory, Brown Univ., Providence, R. I. **ASTRONOMY.**

SMITH, Alan Percival, Jr., Chf., Reception and Out-Patient Service, Veterans Admin. Hosp., Tuskegee, Ala. **PSYCHIATRY.**

SMITH, Albert Charles, Curator Herbarium, Arnold Arboretum, Harvard Univ., Jamaica Plain, Mass. **BOTANY.**

SMITH, Albert F., Dir., Carothers Lab., Du Pont Co., 2006 Woodbrook Dr., Westwood Manor, Wilmington, Del. **CHEMISTRY AND PHYSICS OF HIGH POLYMERS AND SYNTHETIC FIBERS.** b. Mulhall, Okla., June 16, 1913. s. M. L. and Mary (Wall) S. Edn.: B.S., Okla. A. and M. Coll., 1932; Ph.D., Univ. of Ill., 1936. m. Mildred Harton, June 10, 1934. c.: Patricia Ruth. Exp.: Tchnng. Asst., Okla. A. and M., Stillwater, Okla., 1932-33; Asst., Univ. of Ill., Urbana, Ill., 1933-36; Chemist, Chem. Dept., Du Pont and Co., Wilmington, Del., 1936-39; Rsch. Supv'r., Chem.



Dept., *ibid.*, 1939-52; Dir., Carothers Lab., Textile Fibers Dept., *ibid.*, 1952—. Mem.: Amer. Chem. Soc.; Amer. Phys. Soc.; Soc. of Rheol.; T.A.P.P.I.; Phi Lambda Upsilon; Sigma Xi; Sigma Tau; Phi Beta Kappa; Phi Kappa Phi; Sigma Alpha Epsilon. Contrb. to: Jour. Phys. Chem.; Sci. Instruments; Jour. Polymer Sci.; Trans., A.S.T.M. Special Int.: Fine Structure of Fibers as Determined by X-Ray, Optical and other Phys. Methods; Synthetic Fibers Tech.

SMITH, Alexander H., Assoc. Prof. and Botanist, Univ. Herbarium, Univ. of Mich., Ann Arbor, Mich. **MYCOLOGY.**

SMITH, Alpheus Wilson, Prof. of Physics, and Dean Grad. Schl., Ohio State Univ., Columbus, Ohio. **SPECTROSCOPY.**

SMITH, Alva Wellington, Prof. of Physics, Ohio State Univ., Columbus, Ohio. **PHYSICS.**

SMITH, Arthur Henry, Prof. of Physical Chem., Wayne Univ. Coll. of Med., 1512 St. Antoine, Detroit 26, Mich. **PHYSIOLOGICAL CHEMISTRY.** b. Sandusky, Ohio, Jan. 27, 1893. s. Norman T. and Mary (Appell) S. Edn.: B.Sc., Ohio State Univ., 1915; M.S., *ibid.*, 1916; Ph.D., Yale Univ., 1920. m. Adeline C. Thomas, Apr. 8, 1922. c.: Caroline T. Exp.: Jr. Chemist, U. S. Bureau of Mines, 1917-18; Rsch. Asst., Rockefeller Inst. for Med. Rsch., 1919; Instr., Yale Univ., 1920; Asst. Prof., *ibid.*, 1925-30; Assoc. Prof., *ibid.*, 1930-37; Prof., Wayne Univ., Detroit, Mich., 1937—.



Hon. Pos.: Secy., Amer. Inst. of Nutrition; Pres., Amer. Inst. of Nutrition. Mem.: Amer. Soc. of Biological Chemists; A.A.A.S.; Amer. Inst. of Nutrition; Amer. Chem. Soc.; Soc. for Exptl. Biol. and Med.; Sigma Xi; Phi Lambda Upsilon; Alpha Chi Sigma. Contrb. to: Jour. Biol. Chem.; Jour. Nutrition; Amer. Jour. Physiol.; Jour. Exptl. Med. War Record; 2nd Lt., Chem. Warfare Service, World War I. Special Int.: Nutritional Biochem.; Metabolism.

SMITH, Arthur Whitmore, Prof. Emer. Physics, Randall Lab. Physics, Univ. of Mich., Ann Arbor, Mich. **PHYSICS, ELECTRICAL MEASUREMENTS.**

SMITH, Austin Edward, Secy., Council Pharm. and Chem., Amer. Med. Assn., 535 N. Dearborn St., Chicago, Ill. **PHARMACOLOGY.**

SMITH, Ben H., Prof. of Botany, Ind. State Tchrs. Coll., Terre Haute, Ind.

SMITH, Benjamin Warfield, Assoc. Prof. of Agron., Cytogenetics Forage Plants, N. C. State Coll., Raleigh, N. C. **CYTOGENETICS.**

SMITH, Burke, 5802 Blackstone Ave., Chicago, Ill. **ASTRONOMY, ENGINEERING.**

SMITH, Burnett, W. Lake St., Skaneateles, N. Y.

SMITH, Carl H., Asst. Prof. Clinical Pediatrics, Cornell Med. Coll., N. Y., N. Y. **PEDIATRICS.**

SMITH, Charles Egan, Hd. Dept. Entomol. Rsch. and Entomologist, La. Agri. Expt. Sta., Baton Rouge, La. **ENTOMOLOGY.**

SMITH, Charles Grover, Physicist, Raytheon Mfg. Co., Waltham, Mass. **GASEOUS CONDUCTION.**

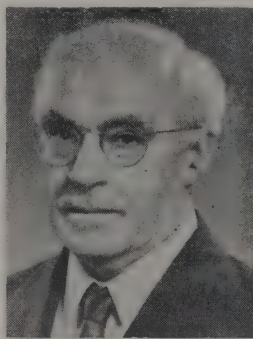
SMITH, Charles Linton, Physiologist, U. S. Pecan Field Sta., P. O. Box 589, Brownwood, Tex. **PLANT PHYSIOLOGY.**

SMITH, Chester Warren, Technical Adviser, Aircraft Gas Turbine Engrng. Div., General Electric Co., 920 Western Ave., Lynn, Mass. **MECHANICAL ENGINEERING, ESPECIALLY GAS TURBINES.** b. Everett, Mass., Jan. 17, 1896. s. Joseph Warren and Rose Agnes (Kelly) S. Edn.: A.B., Harvard Coll., 1919; B.S., Harvard Engrng. Schl., 1921; M.S., Mass. Inst. of Tech., 1929. Hon. Deg.: LL.B., Suffolk Law Schl., 1935; Sc.D., Mass. Inst. of Tech., 1940. Exp.: Rsch. and Development at General Electric Co., 1922—; Adjunct Prof. of Aeronautical Engrng., N. Y. Univ., 1946—. Mem.: Inst. of Aeronautical Sciences. Contrb. to: A.S.M.E. Trans.; Jour. Aeronautical Sciences. Special Int.: Aircraft Gas Turbines.

SMITH, Clarence A., Technical Dir. Agri. Dept., Strong-Cobb Div., Standard Brands, Inc., 595 Madison Ave., N. Y., N. Y. **CHEMISTRY, MEDICAL SCIENCE.**

SMITH, Clarence Raymond, Prof. of Physics, Aurora Coll., Aurora, Ill. **LIGHT.**

SMITH, Clayton O., Retired, Rsch. Assoc. in Phytopathol., 4291 12th St., Riverside, Calif. **PLANT DISEASES.** b. Willsboro, N. Y., July 18, 1871. s. Orville A. and Martha (Hawley) S. Edn.: B.S., Middlebury Coll., 1899; A.M., Cornell Univ., 1902. m. Ada Garlick, Sept., 1907. c.: Robert; Donald; Allen; Kathryn and Martha. Exp.: Tchr., Dist. Schl., Wooster Hill, Vt., 1900; Grad. Stud. and Asst. Bot. Instr., Cornell Univ., Ithaca, N. Y., 1901-1902; Asst. Phytopathol., Univ. Lab., Whittier, Calif., 1907-17; Rsch. Assoc., *ibid.*, 1917-20; Junior Plant Assoc., *ibid.*, 1926-30; Assoc. in Citrus Expt. Sta., Riverside, Calif., 1931-41; Pres., Western Pathol. Soc., 1914.



SMITH, Clifford Edward, Prof. of Astron., San Diego State Coll., San Diego, Calif. **ASTRONOMY.**

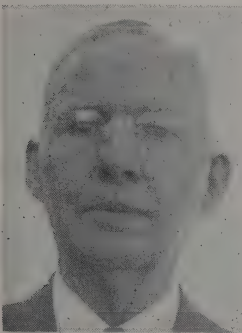
SMITH, Cornelia Marshall, Chmn. and Prof. Biol. Dept., Baylor Univ., Waco, Tex. **ZOOLOGY, BOTANY.**

SMITH, Cyril Stanley, Inst. for the Study of Metals, Univ. of Chicago, Chicago 37, Ill. **METALLURGY.**

SMITH, Dietrich Conrad, Assoc. Prof. of Physiol., Med. Schl., Univ. of Md., Baltimore, Md. **PHYSIOLOGY.**

SMITH, Donald Pritchard, Chemical Lab., Princeton Univ., Princeton, N. J.

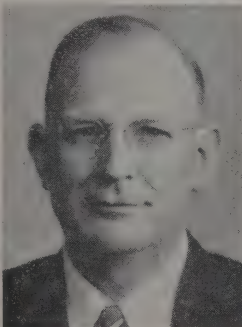
SMITH, Earl Brenton, Mech. Engr., Natl. Bureau of Standards, 3 Pooks Hill, Bethesda, Md. ME-



CHANICAL ENGINEERING. b. Iowa, June 13, 1878. s. Rev. William C. and Mary L. (Williams) S. Edn.: B.S., Univ. of Mo., 1903; Prof. M.E., ibid., 1905. m. Catharine Corbin, June 8, 1905. c.: Earl Dillon. Exp.: Designer, Struthers-Wells, Warren, Pa., 1903; Test Engr., Philadelphia Transit, Philadelphia, Pa., 1904; Prof. Mech. Engrng., Drexel Inst., Philadelphia, Pa., 1905-14; Designer, Tinius Olsen, Philadelphia, Pa., 1907; Design

World's Largest Testing Mach., 1907; Mech. Engr., U. S. Public Roads Admin., Washington, D. C., 1914-25; Prof. of Grad. Mech. Engrng., Iowa State Coll., Ames, Iowa, 1925-31; Prof. of Mech. Engrng., C.C.N.Y., N. Y. C., 1931-48; Mech. Engr., Inst. Design and Rsch., Natl. Bureau of Standards, Washington, D. C., 1952—. Hon. Pos.: Chmn., Impact Comm., A.S.T.M. Mem.: A.S.M.E.; A.S.E.E.; A.S.T.M.; N.S.P.E.; Sigma Xi; Pi Tau Sigma; Phi Kappa Phi; QEBH; Scabbard and Blade. Author: Mech. Engrng. Lab. Manual, 1910. Contrb. to Jour. A.S.M.E.; Trans. of A.S.T.M.; Public Roads Mag. War Record: Capt. Engrs., W. W. I. Special Int.: Power Plants; Strength of Materials; Mech. Shops; Mech. and Inst. Design; Rsch. Admin.

SMITH, Earl Davis, Assoc. Prof. of Chem., 2309 Coventry Ave., Lakeland,



Fla. CHEMICAL ENGINEERING AND PHYSICAL CHEMISTRY. b. Longview, Tex., Aug. 25, 1900. s. John and Nannie (Skaggs) S. Edn., B.S. in Ch.E., Univ. of Tex., 1922; M.S. in Ch.E., ibid., 1924. m. Luella Welch of Longview, Tex., June 10, 1924. d. Mr. and Mrs. W. M. Welch. Exp.: Tutor of Phys. Chem., Univ. of Tex., 1923-24; Rsch. Chemist, Aluminum Co. of Amer., 1924-28; Pilot Plants Supvr., Hercules Powder Co., 1928-40; Supt. of Production, U. S. Govt. Ordn. Plants, 1940-48;

Asst. Prof. of Chem., Fla. Southern Coll., 1948-52; Assoc. Prof. of Chem., ibid., 1952—. Mem.: Amer. Inst. of Chem. Engrs.; Natl. Soc. of Prof. Engrs.; Fla. Engrng. Soc.; Fla. Academy of Sci.; Amer. Chemical Soc.; Kans. and Fla. Professional Engr.; Tau Beta Pi; Phi Lambda Upsilon; Sigma Xi. War Record: U. S. Army. Travel: U. S.; Can.; Mex. Hobbies: fishing, home movies. Listed in: Who's Who in Engrng.; A.M.S.; Chem. Who's Who. Special Int.: Reduction of Aluminum, Nitric Acid by Ammonia Oxidation, Chlorination of Rubber, Hydrogen by Catalytic Cracking of Hydrocarbons, High Pressure Catalytic Hydrogenation. Two U. S. Patents.

SMITH, Earl Westley, Asst. Chf. of Rsch., Nitrogen Div., Allied Chem. and Dye Corp., c/o Solvay Process Div., Syracuse 1, N. Y. ORGANIC CHEMISTRY. b. Cleveland, Ohio, July 26, 1908. s. Archie Westley and Pearl Z. (Doan) S. Edn.: B.A., Univ. of Utah, 1930; M.A., ibid., 1932; Ph.D., Iowa State Coll., 1936. m. Helen M. Carlson, Dec. 6, 1940. Exp.: Rsch. Chemist, Solvay Process Div., Allied Chem. and Dye, Syracuse, N. Y., 1936-48; Rsch. Supvr., ibid., 1948-51; Asst. Chf. of Rsch., ibid., 1951-52; Asst. Chf. of Rsch., Nitrogen Div., ibid., 1952—. Mem.: Amer. Chem. Soc.; A.A.A.S.; Sigma Xi; Syracuse Tech. Club; Alpha Chi Sigma. Gen. Int.: Parke, Davis Scholar, 1932-34; State of Iowa Rsch. Scholar, 1934-36. Special Int.: Rsch. and Development, Heavy Organic Chems.

SMITH, Edwin Virginus, Dean, Schl. of Agri., and Dir., Agri. Expt. Sta., Ala. Poly. Inst., Auburn,



Ala. b. Ozark, Ala., Aug. 7, 1905. s. James and Ida Belle (Mizell) S. Edn.: B.S., Ala. Poly. Inst., 1928; M.S., Ia. State Coll., 1931; Ph.D., ibid., 1938. m. Martha North Watson of Auburn, Ala., Nov. 10, 1937. d. Mr. and Mrs. J. W. Watson. c.: Edwin Watson; James North; Martha Mizell. Exp.: Instr., Asst. Prof., Assoc. Prof., Asst. Dean and Dir., Assoc. Dean and Dir., Dean and Dir., Jan. 1, 1951—. Hon. Pos.: Sec., Ala. Acad. of Sci.; Sec., Expt. Sta. Sect., Land-Grant Coll. Assn.; Chmn., Expt. Sta. Sect., Land-Grant Coll. Assn.; Sec., Sou. Expt. Sta. Mem.: A.A.A.S.; Alpha Gamma Rho; Sigma Xi; Gamma Sigma Delta; Alpha Zeta; Kiwanis. Contrb. to: Amer. Soc. of Agron.; Transactions of the Amer. Fisheries Soc. Ph.D. Dissertation: Use of Creosote-Kerosene for the Control of Wild Onion (Allium vineale L.). Travel: Guatemala; Honduras. Hobbies: Fishing; Gardening. Listed in: A.M.S.

SMITH, Elizabeth Louise Knapp, Asst. Prof., Dept. of Obstetrics and Gynecology, B-526 Health Sciences



Bldg., Univ. of Wash., Seattle 5, Wash. BIOCHEMISTRY; PHYSIOLOGY; ENDOCRINOLOGY. b. Coraopolis, Pa., Dec. 15, 1917. d. Ismond E. and Ruth (Brace) Knapp. Edn.: B.S., Fla. State Coll. for Women, 1938; M.S., Univ. of Mich., 1939; Ph.D., State Univ. of Iowa, 1943. m. George E. Smith, July 21, 1951. Exp.: Rsch. Asst., Dept. of Pediatrics, State Univ. of Iowa, 1939-43; Rsch. Asst., Rackham Arthritis, Rsch. Unit, Univ. of Mich., 1943-44; Rsch. Assoc., Dept. of Pediatrics, State Univ. of Iowa, 1944-47; Rsch. Asst., Prof. of Pediatrics, ibid., 1947-50; Asst. Prof., Dept. of Obstetrics and Gynecology, Univ. of Wash., Seattle, Wash., 1950—. Mem.: Amer. Chem. Soc.; A.A.A.S.; Phi Beta Kappa; Phi Kappa Phi; Iota Sigma Pi; Sigma Xi; etc. Contrb. to: Jour. Pharmacol. and Exptl. Therapy; Jour. Clinical Investigation; Jour. Pediatrics; Pediatrics; Amer. Jour. Obstetrics and Gynecology. Gen. Int.: Natl. Editor, IOTA Sigma Pi, 1951—. Special Int.: Calcium Metabolism, especially Factors Regulating Urinary Calcium Excretion; Electrophoresis of Plasma Proteins in Normal Children, Nephrosis, Rheumatic Fever, Toxemia of Pregnancy; Obstetric and Gynecologic Endocrinol.

SMITH, F. G. Walton, Dir., Marine Lab., Univ. of Miami, Coral Gables, Fla. MARINE ZOOLOGY,



OCEANOGRAPHY, MARINE ECOLOGY. b. Bristol, England, Jan. 28, 1909. s. Frederick George and Nelly Maud (Belton) S. Edn.: B.S., Royal Coll. of Sci., London, 1931; Ph.D., ibid., 1934. m. Florence May Walker, Jan. 22, 1939. c.: Alexandra. Exp.: Biologist, Sponge Fishery Investigations, Bahamas Govt., 1936-40; Asst. Prof. of Zool., Univ. of Miami, 1940-42; Dir., Marine Lab., ibid., 1942—; In Chg., Marine and Aeronautical Navigation Trng.; In Chg., Tropical Field Sta.,

Woods Hole Oceanographic Inst.; Dir., Deterioration Lab., Centro, Inc., 1943-45; Assoc. Prof. of Zool., Univ. of Miami, 1943-45; Prof. of Marine Biol., Univ. of Miami, 1948—; Dir., Oyster Div., Fla. State Conservation Bd., 1949—. Hon. Pos.: Fisheries Consultant to British Honduras Govt., 1944; Fisheries Consultant to Bahamas Govt., 1947; Mem., Marine Borer Panel, U. S. Joint Army-Navy Deterioration Bd.; Technical Advisor, Atlantic States Marine Fisheries Commn.; Technical Advisor, Gulf Fisheries Commn.; Special Collaborator, U. S. Fish and Wildlife Service; Chmn., Gulf and Caribbean Fisheries Inst.; Chmn., Saltwater Resources Section, 14th Annual N. Amer. Wildlife Conf., 1949. Mem.: A.A.A.S.; Amer. Geographical Soc., Fellow; Amer. Geophysical Union; Amer. Soc. for Limnology and Oceanography; Amer. Soc. Zoologists; Bermuda Biol. Station Assoc.; Fla. Acad. Sci.; Marine Biol. Assn. of the United Kingdom; Assn. Southeastern Biologists. Author: Atlantic Reef Corals, 1948; The Spiny Lobster Industry of the Caribbean and Fla., 1949; Sea Turtles and the Turtle Indus., co-author, 1949; The Ocean River, co-author, 1952. Special Int.: Oceanography, Marine Zool. and Marine Ecology.

SMITH, Elmer Gillam, Prof. of Physics, Tex. A. and M. Coll., College Station, Tex. **MECHANICS.**

SMITH, Emil L., Assoc. Rsch. Prof. Biochem. and Physiol., Schl. of Med., Univ. of Utah, Salt Lake City, Utah. **CHEMISTRY.**

SMITH, Ernest Rice, Prof. and Hd., Geol. Dept., DePaul Univ., Greencastle, Ind. **GEOLOGY.**

SMITH, F. Janney, Physician-in-Charge, Cardio-Respiratory Div., Henry Ford Hosp., Detroit 2, Mich. **CARDIOVASCULAR AND PULMONARY DISEASES.**



b. Baltimore, Md., Nov. 18, 1888. s. B. Holly and Frances Gist (Hopkins) S. Edn.: A.B., Johns Hopkins Univ., 1909; M.D. *ibid.*, 1913. m. Jeanie W. Smart (dec.), Feb. 14, 1917; 2nd m. Colleen F. Forney, May 22, 1948. c.: Martha J.; Virginia C.; Robert G.; Steven J.; Holly. Exp.: Med. House Officer, Johns Hopkins Hosp., 1913-14; Asst. Resident in Med. and Instr. in Med., Johns Hopkins Med. Schl., 1913-15; Resident Physician in Henry Ford Hosp., Detroit, Mich., 1915; Physician-in-Chg., Cardio-Respiratory Div., *ibid.*, 1919—. Hon. Pos.: Pres., Mich. Heart Assn., 1952-53; Vice-Pres., Amer. Clin. and Climatological Assn., 1952-53. Mem.: Phi Beta Kappa; Alpha Omega Alpha; Fellow, Amer. Coll. Physicians; Central Soc. for Clinical Rsch.; Amer. Clinical and Climatological Assn.; Amer. Heart Assn.; Amer. Trudeau Soc.; Mich. State and Wayne County Med. Soc.; Johns Hopkins Med. and Surgical Assn.; Phi Gamma Delta. Contrb. to: Jour. Mich. Med. Soc.; Annals Clinical Med.; Jour. Lab. and Clin. Med.; Amer. Rev. of Tuberculosis; Trans. Amer. Clin. and Climatological Assn.; Amer. Heart Jour.; Amer. Jour. Med. Sci.; Arch. Internal Med. War Record: 1st Lt. and Capt., Medical Corps, First World War. Special Int.: Cardiac and Pulmonary Diseases.

SMITH, F. Raymond, Assoc. Prof. of Physics, Pa. State Coll., State College, Pa. **X-RAY DIFFRACTION.**

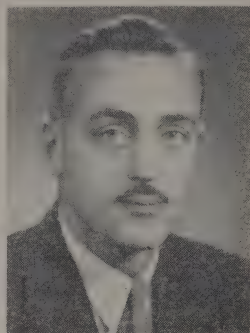
SMITH, Francis Albert, Physical Chemist, Gas Section Chem. Div., Natl. Bureau of Standards, Washington, D. C. **GAS CHEMISTRY.**

SMITH, Francis Ferdinand, Prof. of Edn., Fresno State Coll., Fresno, Calif. **EDUCATIONAL PSYCHOLOGY.**

SMITH, Fred, Univ. of Minn., St. Paul, Minn. **BIOCHEMISTRY AND ENZYMES.**

SMITH, Frederic Franklin, Prof. of Biol., Buena Vista Coll., Storm Lake, Iowa. **MARINE INVERTEBRATES.**

SMITH, Frederick Gordon, Asst. Prof. of Geol., Dept. of Geol. Sci., Univ. of Toronto, Toronto, Ont., Can. **GEOCHEMISTRY.**



b. Toronto, Can., Mar. 27, 1914. s. John B. and Christine W. (Marshall) S. Edn.: B.Sc., Univ. of Manitoba, 1937; M.Sc., *ibid.*, 1939; Ph.D., Univ. of Toronto, 1942. m. Mary I. Closs, Sept. 19, 1942. c.: Marshall; Donald; Susan; Bruce; Christina. Exp.: Chemist, Int. Mickle Co. of Can., 1942-43; Phys. Chemist, Geophys. Lab., Washington, D. C., 1943-44; Lectr., Univ. of Toronto, Toronto, Ont., Can., 1944-48; Asst. Prof., *ibid.*, 1948—. Mem.: Fellow, Geol. Assn. of Can. Contrb. to: Econ. Geol.; Amer. Mineralogist; Can. Inst. of Mining and Metal. Engrs.; Amer. Inst. of Mining Engrs.; Royal Soc. of Can.; Univ. of Toronto Studies. Special Int.: Chem. of Formation of Mineral Deposits; Synthesis of Minerals; Phase Relations in Silicate Systems; Petrogenesis.

SMITH, G. F., Univ. of Ill., Urbana, Ill. **CHEMISTRY, ANALYTICAL.**

SMITH, Gail Preston, Sr. Rsch. Assoc., Corning Glass Works, Corning N. Y., **PHYSICS.**



b. Rochester, Pa., Jan. 25, 1915. s. Daniel C. and Sarah (Ketterer) S. Edn.: B.S., Geneva Coll., 1934; M.A., Syracuse Univ., 1936; Ph.D., Univ. of Mich., 1941. m. Martha Cameron, June 8, 1937. c.: Daniel Preston; Martha Marian. Exp.: Instr., Physics and Math., Battle Creek Coll., Battle Creek, Mich., 1936; Instr., Physics and Math., Geneva Coll., Mich., 1936-37; Asst., Physics, Univ. of Mich., Ann Arbor, Mich., 1937-41; Physicist, Corning Glass Works, Corning, N. Y., 1941—. Hon. Pos.: First Pres., Sigma Xi Club, Corning Glass Works, 1946; Chmn., Amer. Phys. Soc., N. Y. State Sect., 1951-53. Mem.: Amer. Phys. Soc.; A.A.A.S., Fellow; Amer. Ceramic Soc.; Amer. Optical Soc.; Sigma Pi Sigma; Sigma Xi. Contrb. to: Phys. Rev. Special Int.: Dielectric Breakdown of Gases; B-Ray Spectroscopy; Solid Dielectrics; Application of Glass as Dielectric Material; Rsch. and Dev. of Glass Capacitors.

SMITH, George Edson Philip, Irrigation Engr., Ariz. Agri. Expt. Sta., Univ. of Ariz., Tucson, Ariz. **ENGINEERING.**

SMITH, George Milton, Exec. Dir., Natl. Advisory Cancer Council, Bethesda, Md. **SURGERY.**

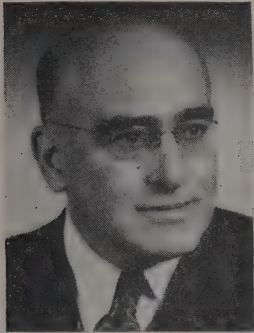
SMITH, Gertrude, Prof. Emer., Vassar Coll., Poughkeepsie, N. Y.; Rt. 1, Box 191, Cumberland Center, Maine. **MATHEMATICS.**

SMITH, Gilbert Morgan, Stanford Univ., Stanford, Calif.

SMITH, Gordon L., Assoc. Entomol., Agri. Expt. Sta., Univ. of Calif., Berkeley, Calif.

SMITH, H. M., Univ. of Ill., Urbana, Ill. **HERPETOLOGY.**

SMITH, Guy-Harold, Prof. and Chmn., Dept. of Geog., Ohio State Univ., Columbus 10, Ohio. GEOGRAPHY; CARTOGRAPHY. b. LaFarge, Wis., Jan. 1, 1895. s. John William and Harriet (Waddell) S. Edn.: Ph.B., Univ. of Wis., 1921; Ph.D., Univ. of Wis., 1927. m. Elizabeth Baker of London, England, Aug. 5, 1926.



d. George and Alice Baker. c.: John Waddell. Exp.: Grad. Asst., Univ. of Wis., 1921-22; Instr., Univ. of Pa., 1922-23; Instr., Univ. of Wis., 1923-27; Asst. Prof., Ohio State Univ., 1927-28, 1929-34; Assoc., Univ. of Ill., 1928-29; Assoc. Prof.

and Chmn. of Dept. of Geog., Ohio State Univ., 1934-37; Prof. and Chmn., Ohio State Univ., 1937-; Lectr., Summers: Peabody Coll., 1929, 1930; Univ. of Wash., 1935; Western Res. Univ., 1937; Buffalo S. T. C., 1938; Columbia Univ., 1939, 41, 42, 1944. Hon. Pos.: Ohio George Wash. Bicentennial Comm., 1932. Mem.: Fellow, Amer. Assn. Adv. Sci.; Fellow, Amer. Geog. Soc.; Fellow, Ohio Acad. Sci.; Assn. Amer. Geog.; Natl. Coun. of Geog. Tchrs.; Arctic Inst. of N. Amer.; Amer. Polar Soc.; Phi Beta Kappa; Sigma Xi; Beta Gamma Sigma; Faculty Club, Ohio State Univ. Author: Physiographic Diagram of S. Amer.; (with Dorothy Good), Japan: A Geographic View, N. Y., 1943; (Editor), Conservation of Nat. Resources, N. Y., 1950. Contrb. to: Annals Assn. of Amer. Geog.; Geog. Rev. War Record: 15 Mos. in U. S. Army, 1917-18; 2nd Lt., Inf.; Consultant, Milit. Intelligence Serv., G-2, U. S. Army Gen. Staff, 1943-45. Travel: U. S.; Canada. Listed in: Who's Who in Amer.; A.M.S.

SMITH, Harold Duncan, Pres., N. S. Rsch. Foundation, Dennis Bldg., Halifax, N. S., Can. PHYSICS. b. Port Hood, N. S., Aug. 30, 1906. s. Ernest Lynnwood and Mary Florence (Wyatt) S. Edn.: B.A., Univ. of B. C., 1927; M.A., ibid., 1929; M.A., Univ. of Toronto, 1930; Ph.D., ibid., 1933. m. Jean Urquhart Matheson, Aug. 15, 1934. Exp.: Lectr., Univ. of Toronto, Toronto, Ont., Can., 1933-35; Dir. of Rsch. and Plant Supt., Carbo-Ice, Ltd., Toronto, Ont., Can., 1935-38; Lectr. in Physics, Univ. of B. C., Can., 1938; Asst. Prof., ibid., 1939; Assoc. Prof., ibid., 1943-46; Prof., ibid., 1946-47; Pres., N. S. Rsch. Foundation, Halifax, N. S., Can., 1947—. Mem.: Amer. Phys. Soc.; Optical Soc. of Amer.; A.A.A.S.; Engrng. Inst. of Can.; Prof. Engrs., N. S. Contrb. to: Phil. Mag.; Jour. Optical Soc. of Amer.; Proc. Royal Soc. of Can.; Can. Jour. of Rsch. Special Int.: Low Temp. Spectroscopy; Synthetic Rubber Phys. Properties; Radar; Guided Missile.

SMITH, Harold Hill, Assoc. Prof., Dept. of Plant Breeding, Cornell Univ., Ithaca, N. Y. GENETICS.

SMITH, Harold Theodore Uhr, Assoc. Prof. of Geol., Univ. of Kans., Lawrence, Kans. GEOMORPHOLOGY, AEROGEOLOGY.

SMITH, Harry Scott, Prof. of Entomol. and Hd., Div. Beneficial Insect Investigations, Univ. of Calif., Riverside, Calif. ENTOMOLOGY.

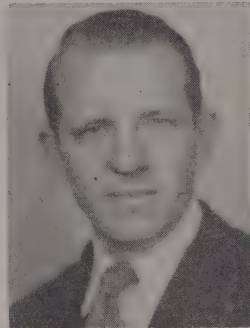
SMITH, Harvey McKinley, Dir., Microscope Slide Dept., General Biol. Supply House, 761 E. 69th Pl., Chicago, Ill. MICROTÉCHNIQUE.

SMITH, Henry Monmouth, retired, 25 Cotswold Rd., Brookline, Mass. CHEMISTRY.

SMITH, Homer William, Prof. of Physiol., N. Y. Univ. Coll. of Med., 447 First Ave., N. Y. 16, N. Y. RENAL PHYSIOLOGY. b. Denver, Colo., Jan. 2, 1895. s. Albert C. and Margaret E. (Jones) S. Edn.: A.B., Univ. of Denver, 1917; Sc.D., Johns Hopkins Univ., 1921. Hon. Deg.: M.S., Yale Univ., 1937. m. Margaret Wilson, Mar. 19, 1949. c.: Homer Wilson. Exp.: Rsch. Pharmacologist, Hygienic Lab., Wash., D. C., 1919-21; Rsch. Chemist,

Eli Lilly & Co., 1921-23; Natl. Rsch. Council Fellow in Physiol., Harvard Med. Schl., 1923-25; Prof. of Physiol., Univ. of Va., 1925-28; John Simon Guggenheim Memorial Fellow in Physiol., 1928-30; Prof. of Physiol. and Dir. of Physiol. Lab., N. Y. Univ. Coll. of Med., 1928—. Hon. Pos.: Chmn., A.E.C. Postdoctoral Fellowship Bd. in Med. Sci. Mem.: Amer. Acad. Arts and Sci.; Natl. Acad. Sci.; Amer. Physiol. Soc.; Amer. Soc. Biol. Chemists; Assn. Amer. Physicians; Amer. Soc. Ichthyologists and Herpetologists; Soc. for Exptl. Biol. and Med.; Harvey Soc.; Bermuda Lab. for Biol. Rsch.; Sigma Xi; Alpha Omega Alpha; Phi Beta Kappa. Author: Kamongo, 1932; The End of Illusion, 1935; The Physiol. of the Kidney, 1937; Lectures on the Kidney, 1943; The Kidney: Structure and Function in Health and Disease, 1951; Man and His Gods, 1952; From Fish to Philosopher, 1953. War Record: Presidential Medal of Merit, 1948; Div. Mem., Natl. Defense Rsch. Com.

SMITH, Herschel LeRoy, Jr., Rsch. Physicist, Naval Rsch. Lab., Washington, D. C. 30 Greenwood Place,



Indian Head, Md. FUNDAMENTAL STUDIES RESULTING IN THE FORMULATION OF DYNAMIC CONCEPTS OF THE STRENGTH OF MATERIALS. b. Oklahoma City, Okla., Apr. 18, 1921. s. Herschel LeRoy and Minnie (Erickson) S. Edn.: A.A., Okla. City Jr. Coll., 1940; B.S., Okla. Univ., 1943. m. Ina Fowler, Jan. 23, 1943. c.: Herschel Larry; Alan Wayne. Exp.: Lab. Instr. in Physics, Univ. of Okla., Norman, Okla., 1942-43; Physicist, Ballistic Studies, Naval

Rsch. Lab., Washington, D. C., 1943-45; Physicist Armor Penetration Studies, ibid., 1945-46; Physicist, Plastic Flow and Fracture, ibid., 1946-50; Physicist, Dynamic Aspects of Fracture, ibid., 1950—. Mem.: Amer. Phys. Soc.; Sigma Pi Sigma. Contrb. to: The Phys. Rev. Gen. Int.: Patent on a Micro-Tensile Machine to be Used on the Stage of a Microscope. Contrb. to: Energy Criterion Theory for Propagation of Fracture. Special Int.: Ballistic Penetration of Armor Materials; Size, Shape, Temp. and Strain Rate Effects in Steel and Non-Ferrous Alloys; Fundamental Rsch. in the Field of Strength of Solids in Regard to Mech. Aspects of Plastic Flow and Fracture; High Speed, Self Propagation of Cracks in Materials due to Strain Energy.

SMITH, Howard Dexter, Chf. Chemist, Carleton and Hovey Co., Lowell, Mass. CHEMISTRY.

SMITH, Isabel Fothergill, Prof. of Geology and History of Science, Scripps Coll., Claremont, Calif. HISTORY OF SCIENCE. b. November 15, 1890. Greeley, Colorado. d. Frederic Elias and Margaret (Emerson) S. Edn.: A.B., Bryn Mawr Coll., 1915; M.A., 1919, ibid.; Ph.D., ibid., 1922; Student, Univ. of Paris, 1920-21; M. Carey Thomas European Fellow, 1918. Exp.: Tch. of Eng., Mary C. Wheeler Schl., Providence, R. I., 1915-17; Tch. of Sci., Concord Acad., Concord, Mass., 1922-23; Instr., Geol., Smith Coll., Northampton, Mass., 1923-26; Asst. Prof., Geol., 1926-29; Assoc. Prof., 1929—; Class Dean, Smith Coll., 1928-29; Dean and Prof. of Geol., Scripps Coll., 1929-35; Prof. of Geol. and Hist. of Sci., 1935—. Mem.: Fellow, A.A.A.S.; Hist. of Sci. Soc. Contrb. to: Pan Amer. Geol.; Amer. Mineralogist; Bull. Acad. of Sci. Ph.D. Dissertation: Anorthosite in the Piedmont Province of Pa. Travel: Student, Univ. of Paris, 1920-21. Listed in: A.M.S.

SMITH, J. Frank, Assoc. Prof. of Chem., Univ. of Southern Calif., Los Angeles, Calif. CHEMISTRY.

SMITH, J. Frederick, Univ. of Ill., Urbana, Ill. CHEMISTRY.

SMITH, James Hollingsworth, Staff Mem., Div. Plant Biol., Carnegie Inst. of Wash., Stanford Univ., Calif. BIOCHEMISTRY.

SMITH, Jesse William, Assoc. Prof. of Physics and Chmn. Dept., Roosevelt Coll. of Chicago, 430 S. Michigan Ave., Chicago, Ill. **THEORETICAL PHYSICS AND MATHEMATICS.** b. Cantrall, Ill., Apr. 23, 1901. s. Stuart H. and Jennie A. (Young). S. Edn.: B.S., Ill. Wesleyan Univ., 1923; M.A., Univ. of Colo., 1928; Ph.D., Univ. of Calif., 1949. Exp.: Instr. of Math. and Physics, Central Wesleyan Coll., 1928-30; Instr. of Physics, Univ. of Tenn., 1930-36; Asst. Prof. of Physics, Univ. of Ariz., 1944-46; Instr. of Electronics, Officers Trng. Program, Harvard Univ., 1944-45; Assoc. Prof. of Physics and Chmn., Dept. of Physics, Roosevelt Coll., Chicago, Ill., 1945—. Mem.: Amer. Physical Soc.; Amer. Math. Soc.; Phi Kappa Phi; Sigma Xi. Special Int.: Wave Mechanics and Quantum Theory; Linear Transformations in Spaces of an Infinite Number of Dimensions.

SMITH, Joe Fred, Jr., Geologist, Geologic Branch, U. S. Geol. Survey, Box 2858, Denver, Colo. **STRUCTURAL AND STRATIGRAPHIC GEOLOGY.**

SMITH, John Blackmer, Prof. of Agri. Chem., R. I. State Coll., Kingston, R. I. **AGRICULTURAL CHEMISTRY.**

SMITH, John Earl, Hd., Dept. of Physics, N. Mex. Military Inst., Roswell, N. Mex. **PHYSICS.**

SMITH, John Eliphalet, 2751 Orchard St., Corvallis, Ore. **AGRICULTURE, GEOLOGY.**


SMITH, John Jeffrey, Prof. of Psychol., Muskingum Coll., New Concord, Ohio. **PSYCHOLOGY.**

SMITH, Joseph Russell, Prof. Emer. Econ. Geography, Columbia Univ., N. Y., N. Y.: 550 Elm Ave., Swarthmore, Pa. **ECONOMIC GEOGRAPHY.**

SMITH, Julian Francis, Consultant, 201 Spring Ave., Takoma Park 12, Md., **CHEMISTRY AND CHEMICAL LITERATURE.** b. Liscumb, Iowa, Nov. 1, 1893. s. George T. and Candace (Lhamon) S. Edn.: B.S., Univ. of Ill., 1916; M.S., Univ. of Calif., 1920; Ph.D., Univ. of Chicago, 1922. m. Irene Fern Smith, Aug. 22, 1918. c.: Carl George; Celia Ann. Exp.: Rsch. Librn., Natl. Aniline and Chem. Co., 1916-19; *ibid.*, Coml. Solvents Corp., 1922-23; Tech. Librn., B. F. Goodrich Co., 1923-28; Partner, Smith and Smith Reference Service, 1928-30; Staff, Du Pont Exptl. Sta., Wilmington, Del., 1930-39; Assoc., Dir., Hooker Sci. Libr., 1939-42; Chem. Editing, 1942-47; Sci. Documents Officer, Office of Naval Rsch., 1947-52; Consultant in Chem. Documentation, 1952—. Mem.: Amer. Chem. Soc.; Fellow, A.A.A.S.; Fellow, Amer. Inst. of Chemists; Amer. Documentation Inst.; Special Libraries Assn.; Armed Forces Chem. Assn.; Sigma Xi. Contrb. to: Indus. Engrng. Chem.; Jour. Amer. Chem. Soc.; Bull. Amer. Soc. of Swedish Engrs.; Record Chem. Prog.; Wallerstein Lab. Communications; Amer. Scientist. Special Int.: Chem. Lit., Foreign Langs.

SMITH, Kenneth E., 4717 W. 16th St., Indianapolis, Ind. **CERAMICS.**

SMITH, L. I., Chem. Dept., Univ. of Minn., Minneapolis, Minn. **CHEMISTRY.**

SMITH, Lawrence Weld, Consulting Pathol., 119 E. 26th St., N. Y. 10, N. Y. **PATHOLOGY AND EXPERIMENTAL MEDICINE.** b. Newton, Mass., June 20, 1895. s. William G. and Mari-


A.B., Harvard Coll., an (Reynolds) S. Edn.: 1917; M.D., Harvard Med. Schl., 1920. m. Dorothy Matthews, 1935. c.: Shirley. Exp.: Instr. of Pathol., Harvard Med. Schl., Boston, Mass., 1920-23; Prof. of Pathol. and Bacteriol., Univ. of Philippines, 1922-23; Asst. Prof. of Pathol., Harvard Med. Schl., Boston, Mass., 1924-28; Asst. and Assoc. Prof. of Pathol., Cornell Med. Coll., N. Y. C., 1928-35; Prof. of Pathol. and Dir. of Labs.,

Temple Univ. Med. Coll. and Hosp., Philadelphia, Pa., 1935-45; Med. Dir., Commercial Solvents Corp., New York City, 1945-51; Med. Consultant, Chlorophyll Chem. Corp., New York City, Carlos Grossman, S.A., Mex., 1952—; Consulting Pathol., Proliferative Diseases Foundation and Presbyterian Hosp., Newark, N. J., 1951—. Mem.: Amer. Assn. of Pathol. and Bacteriol.; Amer. Soc. of Exptl. Pathol.; Amer. Soc. of Clin. Pathol.; Amer. Soc. for Cancer Rsch.; Soc. of Exptl. Biol. and Med.; N. Y. Pathol. Soc. Philadelphia Pathol. Soc.; N. Y. Acad. of Med.; N. Y. Acad. of Sci.; A.M.A.; N. Y. State Soc. of Pathol.; N. Y. State and Co. Med. Soc.; Harvard Club. Author: Essentials of Pathol., with Gault, 1948; Penicillin Decade, with Walker, 1951; Handbook of Poliomyelitis, with Landon, 1938; Cardiovascular-renal Disease, et al., 1940. Contrb. to: About 100 Titles in Med. Jours., Especially in Fields of Infectious Disease and Cancer. War Record: W. W. I. M.E.R.C., Consultant to Secy. of War, W. W. II. Special Int.: Cancer, Antibiotics.

SMITH, Lee Irvin, Univ. of Minn., Minneapolis 14, Minn.

SMITH, Leonard Charles, Rsch. Biochemist at Hines VA Hosp. and Instr. in Biochem., Northwestern Univ. Med. Schl., P. O. Box 2582, Hines, Ill. **BIOCHEMISTRY.** b. Spokane, Wash., Jan. 31, 1921. s. Leonard C. and Edith L. (McClellan) S. Edn.: A.B., Mont. State Univ., 1943; Ph.D., Univ. of Ill., 1949. m. Mary Elaine Rush, Oct. 1, 1945. c.: David Evan; Lynn Frederic. Exp.: Tchng. Asst., Dept. of Inorganic Chem., Univ. of Ill., Urbana, Ill., 1943-44; Rsch. Asst., Dept. of Organic Chem., *ibid.*, 1944-46; Tchng. Asst., Dept. of Inorganic Chem., *ibid.*, 1946-47; Tchng. Asst., Dept. of Biochem., *ibid.*, 1947-49; Instr., Dept. of Biochem., Northwestern Univ. Med. Schl., 1950—; Rsch. Biochemist, Hines VA Hosp., Hines, Ill., 1949—. Mem.: Phi Sigma; Pi Mu Epsilon; Sigma Xi; Kappa Tau; Alpha Chi Sigma; Amer. Chem. Soc.; F. & A.M. Contrb. to: Jour. Amer. Chem. Soc.; Jour. Biol. Chem.; Federation Proc.; Proc. Soc. Exptl. Biol. and Med. Special Int.: Electrophoresis of Plasma Proteins; Amino Acid Metabolism of Normal and Tumor Tissues.


SMITH, Letha Ann, Sci. Tch., Miss Hall's Schl., Pittsfield, Mass. **PHYSICS.**

SMITH, Lewis Wilbur, Rsch. Fellow in Edn., Univ. of Calif., 93 Alamo Ave., Berkeley, Calif. **EDUCATION.**

SMITH, Livingston Waddell, Prof. Emer. Math., Washington and Lee Univ., P. O. Box 744, Lexington, Va. **MATHEMATICS.**

SMITH, Lloyd Preston, Chmn., Dept. of Phys., Cornell Univ., Ithaca, N. Y. **PHYSICS AND**

ENGINEERING PHYSICS. b. Reno, Nev., Nov. 6, 1903. s. Preston B. and Ida (Sauer) S. Edn.: B.S., Univ. of Nev., 1925; Ph.D., Cornell, 1930. m. Florence S. Hunkin of Tahoe City, Calif., Sept. 16, 1928. d. Mr. and Mrs. Edmund E. Hunkin. Exp.: Rsch. Engr., Gen. Electric Co., 1925-26; Coffin Fellow in Phys., Cornell Univ., 1926-27; Instr. in Phys., *ibid.*, 1927-30; Natl. Rsch. Fellow, Calif. Inst. of Tech., 1930-31; Internat. Rsch. Fel., Univ. of Munich and Univ. of Utrecht, 1931-32; Asst.



Prof. of Physics, Cornell, 1932-36; Lectr. at Stanford Univ., 1935; Prof. of Phys., Cornell, 1936; Rsch. Physicist, RCA Lab., 1939; Consultant, RCA Lab., War Rsch., 1941-45; Assoc. Rsch. Dir., *ibid.*, 1945-46; Consultant on Atomic Bomb Rsch., Univ. of Calif., 1942; Prof. of Phys. and Chmn. of Dept., Cornell Univ., 1946—; Dir. of Engrng. Phys., *ibid.*, 1946—; Consultant, RCA Lab., 1946—; Consultant, Brookhaven Natl. Lab., 1947-49; Consultant, Carbide

and Carbon Chem. Corp., 1947—. Mem.: Sigma Xi; Phi Kappa Phi; Amer. Phys. Soc.; A.A.P.T.; Amer. Soc. for Engrng. Edn.; N. Y. Acad. of Sci.; Theta Chi; Rotary. Contrb. to: Phys. Rev.; Amer. Jour. of Phys.; Jour. of Applied Phys.; Rev. of Sci. Instruments; Rev. Mod. Phys. Ph.D. Dissertation: Emission of Positive Ions from Tungsten and Molybdenum. Travel: Germany; Holland; England. Hobbies: Tennis; Piano. Listed in: Who's Who in Amer.; Who's Who in the East; Who Knows—and What; A.M.S. Special Int.: Physics of the Solid State.

SMITH, Marian Wesley, Instr. in Anthropol., Columbia Univ., N. Y., N. Y. **ANTHROPOLOGY.**

SMITH, Maurice I., Chf. Pharmacologist, Natl. Inst. Health, Bethesda, Md. **PHARMACOLOGY.**

SMITH, Newbern, Natl. Bureau of Standards, Washington, D. C. **WAVE PROPAGATION.**

SMITH, Newton Dean, Staff, Mayo Clinic, Rochester, Minn. **PROCTOLOGIC DIAGNOSIS AND SURG-**



ERY. b. Buffalo, N. Y., June 28, 1898. s. Joseph E. and Elizabeth (Green) S. Edn.: B.S., Univ. of Buffalo, 1923; M.D., *ibid.*, 1923. m. Ruth Angell Turpin, Nov. 20, 1924. c.: Newton Dean, Jr.; Jean Elizabeth. Exp.: Internship, Univ. Hosp., Syracuse, N. Y., 1923; *ibid.*, Rochester Hosp., 1923-24; Resident, Infant's Summer Hosp., Rochester, N. Y., 1924; Resident, Monroe Co. T. B. Sanitarium, 1925; Fellow, Gen. Surgery, Mayo Clinic, Rochester, Minn., 1925-28; Fellow in Proctol., *ibid.*, 1928; Consultant in Dept., Proctol., *ibid.*, 1930; Assoc. Prof. of Proctol., Mayo Foundation of the Univ. of Minn., 1935; Staff of Hosp., Mayo Clinic, Rochester, Minn., 1935—. Mem.: Sigma Xi; A.A.A.S.; A.M.A.; Pres. Amer. Proctologic Soc.; Mason. Contrb. to: Numerous Papers Concerning Proctologic Subjects in Several Jours. Special Int.: Proctologic Diagnosis and Surgery.

SMITH, Olive Watkins, Assoc. in Rsch., Dept. of Gynecology, Harvard Med. Schl., Dir., Fearing Rsch.



Lab., Free Hosp. for Women, Brookline 46, Mass. **ENDOCRINOLOGY OF REPRODUCTION IN THE HUMAN FEMALE.** b. Worcester, Mass., Apr. 29, 1901. d. Royal Phillips and Cora E. (Nutting) Watkins. Edn.: A.B., Vassar Coll., 1923; Ph.D., Radcliffe Coll., 1928. Hon. Deg.: Sc.D., Smith Coll., 1951. m. George Van Sieten Smith, Oct. 11, 1930. c.: Gardner Watkins; Nancy Knorr. Exp.: Tchng. Asst. in Dept. of Chem., Wellesley Coll., 1923-25; Rsch. Asst., Dept. of Biochem., Harvard Med. Schl., 1925-29; Assoc. in Rsch., Fearing Rsch. Lab., Free Hosp. for Women, 1929-43; Assoc. Dir. of Rsch., *ibid.*, 1943-47; Dir. of Fearing Rsch. Lab., *ibid.*, 1947—; Rsch. Assoc., Dept. of Gynecology, Harvard Med. Schl., 1949—. Mem.: A.A.A.S. Contrb. to: Amer. Jour. Physiol.; Jour. A.M.A.; Arch. Internal Med.; Jour. Clinical Endocrinol.; Science; Jour. Biol. Chem.; etc.

SMITH, Orrin Harold, Joseph Boyer Prof. and Hd., Dept. of Physics, DePauw Univ., Greencastle, Ind. **EXPERIMENTAL PHYSICS.**

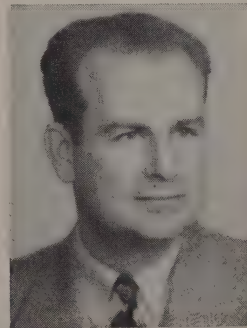
SMITH, Otto M., Dir. of Rsch. Foundation, Okla. A. and M. Coll., Stillwater, Okla. **CHEMISTRY AND WATER PURIFICATION.** b. Yates Center,

Kans., May 12, 1884. s. Mitchell Clay and Elnor May (Bixler) S. Edn.: B.S., cum laude, Drury Coll., 1907; M.S., Univ. of Ill., 1918; Ph.D., *ibid.*, 1919. m. Mary Catherine Carr, June 1, 1913. c.: Elnor Mary; Candace Catherine; Otto Joe Mitchell; Cedric Martin; Steven Emmet. Exp.: Lab. Asst. in Biol., H. S., Springfield, Mo., 1901-03; Tch. of Chem., *ibid.*, 1907; Tch. of Physics, *ibid.*, 1907-08; Chemist for Engrng. Expt. Sta. and Instr. of Chem. Engrng., Iowa State Coll., Ames, Iowa, 1910-13; Chemist and Supt. of Filtration, Amer. Water Works and Elect. Co., Little Rock, Ark., 1913-16; Grad. Asst., Univ. of Ill., Urbana, Ill., 1916-19; Chemical Supervisor, Procter & Gamble Co., Ivorydale, Ohio, 1919-21; Chief Chemist, Rossville Chemical Co., Lawrenceville, Ind., 1921-23; Asst. Prof., Iowa State Coll., Ames, Iowa, 1922-23; Prof. and Hd. Dept. of Chem., and Prof. and Hd. Dept. of Chem. Engrng., Okla. Agril. and Mech. Coll., Stillwater, Okla., 1923-49; Dir. of Rsch. Foundation, *ibid.*, 1946—. Mem.: Amer. Chem. Soc.; A.A.A.S.; Amer. Instn. of Chem. Engrs.; Amer. Soc. for Engrng. Edn.; Amer. Water Works Assn.; Okla. Acad. of Sci.; Stillwater C. of C.; Southwest Water Works Assn.; Kappa Alpha; Phi Lambda Upsilon; Sigma Tau; Sigma Xi; Mason. Contrb. to: Jour. Amer. Water Works Assn.; Jour. Southern Rsch.; Jour. Chem. Edn.; Southwest Water Works Jour.; Proc. of Okla. Acad. of Sci., etc. Author: Semimicro Qualitative Analysis, with Paul Arthur, 1952; Semimicro Lab. Exercises in Gen. Chem., with Paul Arthur and J. A. Burrows, 1952; Quantitative Chem. Methods for Engrs., with Leonard Sheere, 1943; Chem. Analysis of the Waters of Okla., 1942.

SMITH, Paul Albert, Rm. 1259, Sun Life Bldg., Montreal, Que., Can. **CARTOGRAPHY, GEODESY.**

SMITH, Paul Althaus, Columbia Univ., N. Y. 27, N. Y.

SMITH, Paul Elbert, Assoc. Prof., Agron. Dept., Univ. of Ark., Fayetteville, Ark. **AGRONOMY.** b.



Lebanon, Kans., Feb. 17, 1919. s. E. M. and Estelle (Barnett) S. Edn.: B.S., Kans. State Coll., 1941; M.S., Pa. State Coll., 1947; Ph.D., *ibid.*, 1950. m. Nydia Reed, Dec. 23, 1942. c.: Paula Sue. Exp.: Staff, Agron. Dept., Univ. of Ark., Fayetteville, Ark., 1949—. Mem.: Amer. Soc. Agron.; Amer. Genetics Soc.; Amer. Inst. Biol. Sci.; Phi Kappa Phi; Sigma Xi; Gamma Sigma Delta; Alpha Zeta. Contrb. to: Plant Breeding Abstracts. War Record: U. S. Marine Corps, 1941-46. Special Int.: Breeding Improvement, and Management of Large Seeded Legumes.

SMITH, Paul K., Prof. of Pharmacol., Schl. of Md., George Washington Univ., 1335 H St., N. W., Washington, D. C. **PHARMACOLOGY.** b. Brashear, Mo., Sept. 10, 1908. s. William Robert and Virginia (Johnston) S. Edn.: A.B., Westminster Coll., 1930; Ph.D., Yale Univ., 1934. m. Elizabeth Robinson Baker, Sept. 12, 1931. c.: Robert Kenneth; Katharine Virginia; James Calvin. Exp.: Asst. in Chem., Westminster Coll., 1926-30; Asst. in Physiol. Chem., Yale Univ., 1932-34; Rsch. Fellow in Pharmacol., *ibid.*, 1934-36; Instr., *ibid.*, 1936-38; Asst. Prof., *ibid.*, 1938-41; Chf. Pharmacol. and Biochem., Schl. Aviation Med., *ibid.*, 1942-46; Prof. of Pharmacol. and Hd. Dept., Schl. of Med., Geo. Washington Univ., Washington, D. C., 1946—. Mem.: Amer. Assn. Cancer Rsch.; Amer. Chem. Soc.; Soc. Exptl. and Biol. Med.; Amer. Soc. Biol. Chem.; Amer. Soc. Pharmacol. Exptl. Therapeutics; A.A.A.S.; Aero-Med. Assn.; Wash. Acad. Med.; Sigma Xi; Phi Chi; Cosmos. Contrb. to: Amer. Jour. Med.; Amer. Jour. Med. Sci.; Jour. Amer. Pharm. Assn.; Arch. Internal Med.; etc. War Record: Capt. to Lt. Col., U. S. A. F., 1941-46. Special Int.: Biochem.; Pharmacol.; Radiobiol.; Chemotherapy.

SMITH, Paul Laurens, Consultant, Crystal Branch, Naval Rsch. Lab., Washington 25, D. C. **CRYSTAL**

PHYSICS AND SOLID STATE. b. Bloomington, Ill., May 21, 1912. s. Paul McCorkle and Edna (Van Schoick) S. Edn.: B.S., Ill. Wesleyan Univ., 1934; M.S., Pa. State, 1935; Ph.D., *ibid.*, 1937. m. Mildred Scholer, Dec. 30, 1936. c.: Bennet Michael; Charles Anton. Exp.: Rsch. Assoc., Natl. Bur. of Standards, Washington, D.C., 1937-41; Physicist, Sound Div., Naval Rsch. Lab., 1941-43; Asst. Hd., Crystal Branch, Washington, D. C., 1943-46; Consultant, *ibid.*, 1946—. Mem.: Amer. Phys. Soc.; Acoustical Soc. of Amer.; Amer. Crystallographic Assn.; Inst. of Radio Engrng.; Amer. Assn. of Phys. Tchrs.; Alpha Chi Sigma; Phi Kappa Phi; Sigma Xi; Phi Lambda Upsilon. Contbr. to: Phys. Rev.; Jour. Amer. Ceramic Soc.; I.R.E. Special Int.: Fracture of Enamelled Metal Coatings; Piezoelectric Crystals; Photoelasticity and Electro Optics; Elastic and Plastic Properties of Crystals.

SMITH, Philip, Univ. of Ill., Urbana, Ill. **HERPE-TOLOGY.**

SMITH, Philip Edward, Coll. of Physicians and Surgeons, 630 W. 168th St., N. Y. 32, N. Y.

SMITH, Philip Mason, Prof. of Sociol., Central Mich. Coll., Mt. Pleasant, Mich. **SOCIAL SCIENCES.** b. Eastport, Maine, Feb. 25, 1901. s. Samuel Cooms and Mary M. (Brown) S. Edn.: B.S., Temple Univ., 1924; Th.B., Princeton Theol. Sem., 1928; M.Ed., Univ. of Pittsburgh, 1938; Ph.D., *ibid.*, 1942. m. Frances Elizabeth Zepp, July 3, 1928. c.: Louise Virginia. Exp.: Social Worker, Philadelphia, Pa., 1922-28; Clergyman in Ohio, Pa., and Wash., 1928-41, 1943-45; Prof. of Sociol., Greenville Coll., 1941-43; Asst. Prof. of Sociol., Whitman Coll., 1943-45; Bennett Memorial Prof. of Sociol., Hd. Dept. Social Sci., and Dean of Men, Union Coll., 1945-47; Prof. of Sociol., Central Mich. Coll. of Edn., Mt. Pleasant, Mich., 1947—. Mem.: Amer. Sociol. Soc.; Amer. Econ. Assn.; Amer. Acad. Political and Social Sci.; Amer. Political Sci. Assn.; Religious Edn. Assn.; A.A.A.S.; Mich. Edn. Assn. Contbr. to: Amer. Sociol. Rev.; Sociol. and Sociol. Rsch.; Jour. Ednl. Sociol.; Amer. Jour. Econ. and Sociol.; Religious Edn.; Proc. Pacific Sociol. Soc.; etc. Special Int.: Criminology and Delinquency; Ednl. Sociol.; Sociol. of Religion.

SMITH, Philip Sidney, retired, 3249 Newark St., Washington, D. C. **GEOLOGY.**

SMITH, Preston Roberts, Technical Advisor, Flintkote Co., 30 Rockefeller Plaza, N. Y., N. Y. **CHEMISTRY.**

SMITH, R. Elberton, Econ. Historian, Office of Military Hist., U. S. Army, 5429 24th St., N., Arlington

Va. **SCOPE AND METHODOLOGY OF SOCIAL SCIENCE.** b. Chicago, Ill., Dec. 30, 1910. s. William Henry and Nellie (Walton) S. Edn.: B.A., Coll. of Wooster, 1935; M.A., Univ. of Chicago, 1946; Ph.D., *ibid.*, 1947. m. Verna de Kraker Hamilton, Aug. 23, 1942. c.: Stanley Allan; Judith Anne. Exp.: Staff, U. S. Steel Corp. Subsidiaries, Chicago, Ill., 1927-32; Repr. and Branch Mgr., B. B. Kirkbride Bible Co., summers, 1933-38; Instr. of Econ., Univ. of Denver, Denver, Colo., 1939-41; Economist, War Production Bd., 1942; Asst. Prof. of Econ., Northwestern Univ., 1947-50; Econ. Historian, Office of Military History, U. S. Army, 1950—. Mem.: Amer. Econ. Assn.; A.A.U.P.; Life Mem., Natl. Geographic Soc. Author: Customs Valuation in the U. S.—A Study in Tariff Admin., 1948. Contbr. to: Amer. Econ. Rev.; etc. War Record: Naval Officer, Lt. (jg), Lt., and Lt. Comdr., 1942-46. Special Int.: Internatl. Econ.; Army Procurement and Econ. Mobilization. World War II; Scope and Methodology of Social Sci.

SMITH, Ralph Carlisle, Asst. Dir., Los Alamos Scientific Lab., Box 152, Los Alamos, N. Mex.

CHEMICAL ENGINEERING. b. W. N. Y., N. J., May 24, 1910. s. Alfred Thomas and Katharine (Haller) S. Edn.: Ch.E., Rensselaer Poly. Inst., 1931; J.D., George Wash. Univ., 1939. Exp.: Chem. Engr., E. I. du Pont de Nemours and Co., Inc., Parlin, N. J., 1931-35; Chem. Engr., Colgate Palmolive Peet Co., Jersey City, N. J., 1938-42; Asst. Dir., Los Alamos Sci. Labs., Los Alamos, N. Mex., 1947—. Hon. Pos.: Probate Judge, Los Alamos Co., N. Mex., 1949-54. Mem.: Amer. Chem. Soc.; Amer. Phys. Soc.; Amer. Inst. of Chem. Engrng.; Amer. Soc. of Metals; Soc. of Amer. Milit. Engrs.; Alpha Tau Omega; Phi Delta Phi; Sigma Xi; Los Alamos Civic Club. Co-Editor: Effects of Atomic Weapons; Natl. Nuclear Energy Series. War Record: Lt. Col., U. S. Army Engrs. Assigned to Manhattan Project, Los Alamos and Marshall Islands, 1942-47. Legion of Merit, U. S. Army, 1946. Special Int.: Synthetic Organics; Paints and Lacquers and Fats; Nuclear Weapons.

SMITH, Ralph Grafton, Chf., New Drug Branch, Food and Drug Admin., Dept. of Health, Edn. and Welfare, Wash. 25, D. C. **PHARMACOLOGY.** b. Oxford Co., Ont., Can., Mar. 15, 1900. s. James and Sarah Jane (Karn) S. Edn.: B.A., Univ. of Toronto, 1921; M.A., *ibid.*, 1922; M.D., *ibid.*, 1925; Ph.D., Univ. of Chicago, 1928. m. Barbara Emily Paton, Aug. 19, 1933. c.: Alan McKinley; Roger Malcolm; Robert Gordon; Eric James. Exp.: Instr. to Assoc. Prof., Univ. of Mich., Ann Arbor, Mich., 1928-43; Prof. of Pharmacol., Tulane Univ., 1943-50; Chf., New Drug Branch, Food and Drug Admin., Fed. Security Agency, Washington, D. C., 1950—. Mem.: Amer. Soc. of Pharmacol. and Therapeutics; Soc. for Exptl. Biol. and Med.; Alpha Omega Alpha; Sigma Xi; Phi Beta Phi. Contbr. to: Jour. Pharmacol. and Exptl. Therapeut.; Jour. of Biol. Chem.; Amer. Jour. of Physiol.; Proc. Soc. of Exptl. Biol. and Med.; Jour. Amer. Med. Assn.; Jour. Amer. Pharmaceutical Assn. Special Int.: Pharmacol.

SMITH, Raymond Stratton, Prof. of Soil Physics and Chf., State Soil Survey, Univ. of Ill., Urbana, Ill. **SOILS.**

SMITH, Richard A., retired, 423 N. Pine St., Lansing, Mich. **GEOLOGY.**

SMITH, Rodney Hobson, Chf. of Aircraft and Missiles Div., Operations Analysis Office, Hq. Strategic Air Command, 4840 Franklin St., Omaha, Nebr. **AERONAUTICAL ENGINEERING.** b. Calif., July 29, 1918. s. Fred W. and Grace (Hobson) S. Edn.: B.A., Pomona Coll., 1940; M.S., Mass. Inst. of Tech., 1943; Sc.D., *ibid.*, 1948. m. Janice Petit, 1946. c.: Jeffrey; Marilyn; Barbara; Gregory. Exp.: Staff Mem., Mass. Inst. of Tech., Cambridge, Mass., 1942-45; Instr. of Aeronautical Engrng., *ibid.*, 1945-46; Asst. Prof. of Aeronautical Engrng., *ibid.*, 1946-48; Operations Analyst, Hq. Strategic Air Command, Omaha, Nebr., 1948—. Mem.: Inst. of Aeronautical Sci.; Phi Beta Kappa; Sigma Xi.

SMITH, Rose, Chmn., Biol. Dept., Coll. of St. Teresa, Winona, Minn. **BOTANY.**

SMITH, Roy Harman, Pres. and General Mgr., Lamson and Sessions Co., 1971 W. 85th St., Cleveland, Ohio. **ENGINEERING.**

SMITH, S. M., Univ. of Calif., Berkeley, Calif. **ELECTRICAL ENGINEERING.**

SMITH, Samuel Schwartz, Assoc. Prof. Math., Univ. of Utah, Salt Lake City, Utah. **MATHEMATICS.** b. 1892, Franklin, Ida. s. Joseph F. and Mary Schwartz S. Edn.: B.S., Univ. of Utah, 1916; M.S., *ibid.*, 1917; Ph.D., Univ. of Chicago, 1940. m. Jeannette Whitaker of Salt Lake City, Utah, 1920. d. John M. and Ida Taylor Whitaker. c.: Avon W.; Samuel W.; Joseph W.; Hyrum W.; John W.; Esther W.; Joan W.; Gladys W. Mem.: Bishop in L.D.S. Ch.; Amer. Math. Soc.; Amer. Men of Sci. Ph.D. Dissertation: Motion of a Spheroid and a Sphere Under Mutual Gravitations. War Record: 2nd Lt., Flying Status, World War I. Hobby: Farming.

SMITH, Septima Cecilia, Prof. of Zool., Univ. of Ala., Tuscaloosa, Ala. **PARASITOLOGY.**

SMITH, Sigmund Levern, Assoc. Prof. of Metall., Colo. Schl. of Mines, Golden, Colo. **HYDRO-**

METALLURGY AND ORE-MICROSCOPY. b. Denver, Colo., Nov. 1, 1912. s. Wm. F. and Rowena (Brosseau) S. Edn.: Metallurgical Engrng., Colo. School of Mines, 1939; Metallurgical Mining, *ibid.*, 1947. m. Zelda I. Sturm of Denver, Colo., April 18, 1942. d. D. F. and Myrtle (Pruitt) Sturm. Exp.: Asst. Supt., Boulder Ore Sampler, Inc., 1939-40; Supt., Buena Vista Min. and Smelting Co., 1940-41; Asst. Supt., Rawley Mining and Smelting Co., 1941-42; Rsch. Metallurgist N. J. Zinc, 1942-43; Instr., Colo. Schl. of Mines, 1943-47; Asst. Prof. of Metallurgy, *ibid.*, 1947-51; Assoc. Prof. of Met., *ibid.*, 1951—; Metallurgist Colo. of Schl. of Mines Army Penetration Bomb Project, 1951; Consultant Metallurgist A.E.C. Sampling Proj., Colo. Schl. of Mines Rsch. Fdn., 1952. Mem.: Amer. Soc. for Metals; Colo. Metall. Soc.; Colo. Min. Assn.; Sigma Nu; Sigma Gamma Epsilon; Teknik Club. Author: Manual of Assaying and Pyrometallurgical Experiments, 1949. Hobbies: Golf; Fishing. Listed in: Who's Who in the West.

SMITH, Sybil Laura, retired, 1421 44th St., N. W., Washington, D. C. **NUTRITION.**

SMITH, Theodore Townsend, Prof. Exptl. Physics, Univ. of Nebr., Lincoln, Nebr. **PHYSICS.**

SMITH, Thomas V., Prof. of Philos., Univ. of Chicago, Chicago, Ill. **ETHICS, POLITICAL PHILOSOPHY.**

SMITH, Todd Orin, Assoc. Chemist, Agri. Expt. Sta., Univ. of N. H., Durham, N. H. **CHEMISTRY.**

SMITH, W. Sherman, Asst. Dean of Engrng., Univ. of Toledo, Toledo 6, Ohio. **TRAFFIC ENGINEERING.** b. Toledo, Ohio, Mar. 3, 1892. s. William Samuel and Agnes Pauline (Romer) S. Edn.: B.S.C.E., Purdue Univ., 1913; M.S., Univ. of Toledo, 1926; C.E., Univ. of Mich., 1934. m. Helen Louise Young, Oct. 15, 1941. Exp.: Field Engr., Ohio Power Co., Canton, Ohio, 1913-18; 2nd Lt., A.E.F., 1918-19; Instr., Univ. of Toledo, Toledo, Ohio, 1919-26; Civil Engrng. Asst. Prof., *ibid.*, 1926-37; Assoc. Prof. of Civil Engrng. and Asst. Dean of Engrng., *ibid.*, 1946—. Mem.: Amer. Soc. of Civil Engrs.; Amer. Assn. for Engrng. Edn.; Inst. of Traffic Engrs.; Theta Xi; Pi Gamma Mu; Sigma Rho Tau; Internatl. Assn. of Rd. Congresses. Author: The Cause of Motor Vehicle Accidents in Mich., 1934. Contrb. to: The Amer. City; Annual Hwy. Conf. at Univ. of Mich. Special Int.: Rsch. on Zoning and Zoning Signs on Hwys; Application of Signs on Hwy. Curves; Relation of Repeaters to Accidents; Causes of Accidents and What to do about them.

SMITH, Waldo E., **GEOPHYSICS.**

SMITH, Walter Thomas, Assoc. Prof., Chem. Dept. University of Ky., Lexington, Ky. **ORGANIC CHEMISTRY.** b. Havana, Ill., Feb. 28, 1922. s. Walter T. and Alma (Nichols) S. Edn.: B.S., Univ. of Ill., 1943; Ph.D., Indiana Univ., 1946. m. Miriam Nethery, 1945. c. Gary, Laurence. Exp.: Chem., Mallinckrodt Chemical Works, St. Louis, Mo., 1944; Eli Lilly Fellow, Ind. Univ., Bloomington, Ind., 1944-46; Fels Fund Postdoctoral Fellow, Univ. of Chicago, Chicago, Ill., 1946-47; Instr., Asst. and Assoc. Prof., State Univ. of Iowa, Iowa City, Iowa, 1947-53. Mem.: Amer. Chem. Soc.; A.A.A.S.; Iowa Acad. of Sci.; Phi Lambda Upsilon; Sigma Xi; Alpha Chi Sigma. Contrb. to: Jour. Amer. Chem. Soc.; Analytical Chem.; Jour. Biol. Chem.; Organic Syntheses; Proceedings; Iowa Acad. of Sci. Spec. Int.: Organic Syntheses; Insecticides.

SMITH, Ward Conwell, Geologist, U. S. Geol. Survey, 99 El Camino Real, Berkeley, Calif. **GEOLOGY.**

SMITH, Warren DuPre, Hd., Dept. of Geol. and Geography, Univ. of Ore., Eugene, Ore. **PACIFIC GEOLOGY AND GEOGRAPHY.**

SMITH, Warren Rufus, Prof. Emer. Chem., Ill. Inst. of Tech., Chicago, Ill., Passe and Grille Beach, Fla. **TEACHING.**

SMITH, Wilbur Cleveland, Southern Pacific General Hosp., San Francisco, Calif. **MEDICAL SCIENCE.**

SMITH, William Kenneth, Assoc. Prof. Genetics and Agron., and Agent, U. S. D. A., Univ. of Wis., Madison, Wis. **PLANT BREEDING.**

SMITH, William Sidney Tangier, retired Geologist, 1231 Hoover St., Menlo Park, Calif. **GEOLOGY AND MINERALOGY.** b. Stockton, Calif., Apr. 2, 1869. s. Charles Jeffery and Julia Ann (Spaulding) S. Edn.: B.L., Univ. of Calif., 1890; Ph.D., *ibid.*, 1896. m. Ruth Wales Hobson, 1894. c.: Ruth Tangier. Exp.: Prof. of Math. and Sci., Occidental Coll., Calif., 1894-95; Tehng. Fellow in Mineralogy, Univ. of Calif., 1895-97; Prof. of Math., Calif. State Normal Schl., Chico, Calif., 1897-98; Asst. in Chem., Univ. of Calif., 1898; Asst. in Mineralogy, *ibid.*, 1899-1900; Asst. Geologist, U. S. Geol. Survey, 1900-07; Prof. of Geol. and Mineralogy, Univ. of Nev., 1906-13; Lectr. in Geol., Bryn Mawr Coll., 1922-23; Consulting Geologist, 1912—. Mem.: Fellow, Geol. Soc. of Amer.; A.A.A.S.; Mineralogical Soc. Amer.; Amer. Geophysical Union; Soc. Econ. Geologists; Sigma Xi; Phi Kappa Phi; Phi Delta Theta. Contrb. to: Jour. Geol.; U. S. Geol. Survey; etc. Special Int.: Econ. Geol., especially of Lead and Zinc; Metasomatism; Geomorphology; Petrography; Water Resources; Graphic Methods in Geol.

SMITH, William Vick, Asst. Prof. of Physics, Duke Univ., Durham, N. C. **MICROWAVE PHYSICS.**

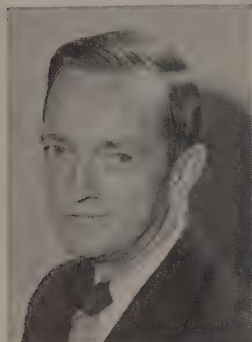
SMITH-PETERSEN, Marius N., (Died June 16, 1953), Consultant Orthopaedic Department, Mass. General Hospital, Clinical Prof., Orthopaedic Service, Harvard Medical School, 266 Beacon Street, Boston, Mass. **ORTHOPAEDIC SURGERY.** b. Grimstad, Norway, Nov. 14, 1886. s. Morten and Kaia (Ursin) S. Edn.: B.S., Univ. of Wis., 1910; M.D., Harvard Med. Schl., 1914. Hon. Deg.: M.D., Univ. of Oslo, 1946. m. Hilda Dickinson, Sept. 1, 1917. c.: Porter Cushing; Morten; Hilda Whitney. Exp.: Mem. Visiting Staff, Orthopaedic Dept., Mass. Gen. Hosp., Boston, Mass., 1917-19; Chf. of Orthopaedic Service, *ibid.*, 1929-46; Asst. Instr. and Clin. Prof., Harvard Med. Schl., Boston, Mass., 1935-46. Mem.: Phi Rho Sigma; Phi Beta Kappa; Amer. Orthopaedic Assn.; Amer. Acad. of Orthopaedic Surgeons; Amer. Coll. of Surgeons; Amer. Surgical Assn.; A.M.A.; Mass. Med. Soc.; New England Surgical Soc.; Boston Surgical Soc.; Boston Orthopaedic Club; Internatl. Soc. of Orthopaedic Surgery and Traumatol.; Internatl. Coll. of Surgeons; Internatl. Acad. of Med.; Hon. Fellow: Royal Soc. of Med.; Norwegian Surgical Soc.; British Orthopaedic Assn.; Italian Soc. of Orthopaedic Surgery and Traumatol.; Royal Med. Soc. of Edinburgh; Canadian Orthopaedic Assn. Decorations: Commander Royal Norwegian Order of St. Olaf, 1946; Grand Cross Royal Norwegian Order of St. Olaf, 1947. Contrb. to: Amer. Jour. of Orthopaedic Surgery; Jour. of Orthopaedic Surgery; Amer. Jour. of Roentgenol. and Radium Therapy; Jour. of Bone and Joint Surgery; Amer. Med. Assn. Jour.; Archives of Surgery; Dr. Christopher's Book of Surgery; Dr. Lambotte's Jubilee Volume; Surgery, Gynecol. and Obstetrics; Surgical Clinics of N. Amer. War Record; Contract Surgeon, W. W. I.; Consultant to Surgeon Gen., W. W. II. Special Int.: Orthopaedic Surgery.

SMOKE, Kenneth Ludwig, Hd. of Psychol. Dept., Gettysburg Coll., Gettysburg, Pa. **PSYCHOLOGY.** b. Lorain, Ohio, Nov. 1, 1903. s. Rev. Perry E. and Grace (Ludwig) S. Edn.: B.A., Ohio State Univ., 1924; M.A., *ibid.*, 1925; Ph.D., *ibid.*, 1931. m. Lillian Harbaugh, Dec. 27, 1943. c. Richard LeRoy. Exp.: Asst. Prof. of Phil. and Psychol., Gettysburg Coll., Gettysburg, Pa., 1927-29; Prof. of Psychol., Mary Baldwin Coll., Staunton, Va., 1931-38; Prof. of Psychol., Juniata Coll., Huntingdon, Pa., 1938-46; Prof. of Psychol. and Hd. Dept., Gettysburg Coll., Gettysburg, Pa., 1946—. Mem.: Amer. Coll. Personnel Assn.; Amer. Psychol. Assn.; Pa. Psychol. Assn.; Psi Chi; Rotary. Contrb. to: Psychol. Rev.; Jour. of Exptl. Psychol.; Encyclopedia of Psychol. Special Int.: Concept Learning; Psychol. of Personality.

SMOLUCHOWSKI, Roman, Assoc. Prof., Carnegie Inst. of Tech., Pittsburgh, Pa. **PHYSICS, METALS.**

SMYSER, Selden, Prof. Emer., Central Wash. Coll. of Edn., 309 Poplar St., Ellensburg, Wash. **SOCIAL SCIENCE.**

SMOTHERS, William Joseph, Assoc. Prof., Inst. of Sci. and Tech., Univ. of Ark., Fayetteville, Ark.



CERAMIC ENGINEERING. b. Poplar Bluff, Mo., Mar. 17, 1919. s. William and Ina (Eliot) S. Edn.: B.S., Mo. Schl. of Mines and Metallurgy, 1940; M.S. ibid., 1942; Ph.D., Univ. Mo., 1944. m. Marjorie Hunter, Sept. 5, 1943. c.: Johnny; Bonnie. Exp.: Grad. Asst. in Phys., Mo. Schl. of Mines, 1940-42; Rsch. Asst. in Mo. Expt. Station, 1942-44; Rsch. Engr., Rostone Corp., 1944-50; Asst. Prof., Univ. of Ark., 1950-52; Assoc. Prof., ibid., 1952—. Mem.: Sigma Xi; Phi

Kappa Phi; Theta Tau; Sigma Pi; Tau Beta Pi. Contrb. to: Anal. Chim. Acta; Bull. Amer. Ceramic Soc.; Jour. Chem. Edn.; Econ. Geol. Special Int.; Ceramic Rsch.; High-temperature Reactions; Differential Thermal Analysis.

SMYTH, Charles Phelps, Prof. of Chem., Frick Chemical Lab., Princeton Univ., Princeton, N. J. PHYSICAL CHEMISTRY.

SMYTH, Frederic Hastings, Superior, Soc. Catholic Commonwealth, Oratory St. Mary and St. Michael, 21 Washington Ave., Cambridge, Mass. PHYSICAL CHEMISTRY.

SMYTH, Henry DeWolf, Henry Prof. of Physics and Chmn., Dept. of Physics, Princeton Univ., Princeton, N. J. ATOMIC PHYSICS.

SMYTH, Henry Field, Consultant, Box 232, Pocatasset, Mass. PUBLIC AND INDUSTRIAL HEALTH. b.



Germantown, Philadelphia, Pa., Nov. 1, 1875. s. Isaac Scott and Catherine Comegys (Mason) S. Edn.: M.D., Univ. of Pa., 1897; Dr. P. H., ibid., 1912. m. 1st Alice E. Brackett (dec.), July 10, 1902. m. 2nd Clara F. Ellis, Oct. 17, 1931. c.: Henry F., Jr.; Catherine Mason. Exp.: Resident Physician, Philadelphia Home for Incurables, Germantown Hosp., Philadelphia, Pa., 1897-98; General Practice, Philadelphia, Pa. and Odessa, Del., 1900-11; Wood Fellow in Hygiene, Univ. of Pa., Philadelphia, Pa., 1912-13; Scott Fellow in Hygiene, ibid., 1913-14; Instr. in Bacteriol. and Hygiene, ibid., 1914-20; Asst. Prof. in Bacteriol. and Hygiene, ibid., 1920-21; Asst. Prof. of Indus. Hygiene, ibid., 1921-39; Acting Dir. of Lab. of Hygiene, ibid., 1917-18; Dir. Pro-tem, ibid., 1932-39; Prof. of Indus. Hygiene, ibid., 1939-41; Emer. Prof., ibid., 1942—; Consult. and Investigator in Pub. Health, Indus. Health, Toxicol. and Bacteriol. Probs., 1915—; Dir., Smyth Labs., Philadelphia, Pa., 1941-46. Mem.: Life Mem., Philadelphia Pathol. Soc.; Life Mem., Amer. Public Health Assn.; Mem. of Indus. Hygiene Section, ibid., 1917—; Life Mem., Fellow, Amer. Coll. of Phys.; Fellow, A.M.A.; Fellow, Mass. Med. Soc., 1944—; Sigma Xi; Pa. Public Health Assn.; Amer. Conf. on Indus. Health; etc. Contrb. to: Jour. A.M.A.; Jour. Med. Rsch.; Jour. Exptl. Med.; Med. and Surgery; Sci. Monthly; Amer. Jour. Public Health; Jour. Amer. Leather Chem. Assn.; Public Health News; Jour. Indus. and Engrng. Chem.; Annals of Otol., Rhin. and Laryng.; Indus. Med.; Occupational Med. Special Int.: Public and Indus. Health.

SMYTHE, Hugh Heyne, Prof. of Soc. Sci., Yamaguchi National Univ., Yamaguchi City, Japan. ANTHROPOLOGY AND SOCIOLOGY WITH EM-

PHASIS ON CULTURE AND MINORITY GROUP RELATIONS AND ASIATIC STUDIES, ESPECIAL-
LY JAPAN. b. Pittsburgh, Pa., Aug. 19, 1913. s. William Henry and Mary Elizabeth (Barnhardt) S. Edn.: A.B., Va. State Coll., 1936; M.A., Atlanta Univ., 1937; Ph.D., Northwestern Univ., 1945. m. Mabel Hancock Murphy, July 26, 1939. c.: Karen Pamela. Exp.: Asst. Instr. in Anthropol., Morehouse Coll., Atlanta, Ga., 1937; Field Rsch. and Admin. Asst., Amer. Youth Commn. of Amer. Coun. of Edn., Atlanta, Ga., 1938; Rsch. Asst., Fisk Univ., Dept. of Soc. Sci., Nashville, Tenn., 1938-39; Instr. in Sociol., ibid., 1938-39; Chf. Analyst, Community Survey of Negroes, Evanston, Ill., 1938-39; Rsch. Assoc., Dept. of Sociol., Atlanta Univ., Atlanta, Ga., 1942; Asst. Coordinator, Negro Land Grant Colls. Project for Cooperative Soc. Study, Atlanta, Ga., 1944; Prof. of Anthropol. and Sociol., Morris Brown Coll., Atlanta, Ga., 1945-46; Asst. Dir., Dept. of Special Rsch., NAACP, N. Y. C., 1947-49; Rsch. Dir., W. B. Graham and Assoc., N. Y. C., 1949-50; Prof. of Soc. Sci., Yamaguchi Natl. Univ., Yamaguchi City, Japan, 1951—. Mem.: Amer. Anthropol. Assn., Japan Social Soc.; Japanese Ethnol. Soc.; Sigma Xi; Alpha Kappa Delta; Iota Sigma Lambda; Alpha Pi Zeta; Alpha Phi Alpha; Hatsuakakai. Contrb. to: Soc. Forces; Sociol. and Soc. Rsch.; Amer. Jour. of Sociol.; Amer. Sociol. Rev.; Soc. Rsch.; The Nation; New Republic; The Fortnightly, London; New Zealand Weekly News; Independent Woman; Commonwealth; Phylon; Shakai Fukushi; Amer. Scholar; Crisis; Midwest Jour.; Jour. of Higher Edn.; Progressive; Jour. Ednl. Rsch.; Schl. and Soc.; United Nations World; Jour. of Education; Jour. of Negro Education, etc. Special Int.: Asiatic Studies with Emphasis on Postwar Devl. in Japan; Race Relations; Minority Group Study and Caste-Class Problems; Race and Culture Study; Cultural Problems of W. Africa; Major Rsch. at Present is an Intensive Study of the Japanese Eta, an Indigeous Caste Group in Japan.

SNADER, David L., Consulting Engr. and Hd., Dept. of Engrng., Norwich Univ., Northfield, Vt. ENGINEERING, ARCHITECTURE.

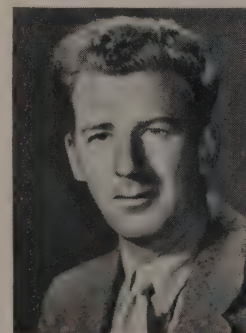
SNARELY, Benjamin Hichty, Physicist, Naval Ordnance Lab., Whiteoak, Md. PHYSICS.

SNEDECOR, George Waddell, Dir. Statistical Lab., Jackson, Memorial Lab., Bar Harbor, Maine. GENETICS.

SNEED, M. Cannon, Prof. and Chf., Div. Inorganic Chem., Univ. of Minn., Minneapolis, Minn. INORGANIC CHEMISTRY.

SNELGROVE, Alfred Kitchener, Prof. and Hd., Dept. Geol. Engrng., Mich. Coll. Mining and Tech., Houghton, Mich. ECONOMIC GEOLOGY.

SNELL, Arthur Hawley, Dir., Phys. Div., Oak Ridge Natl. Lab., Oak Ridge, Tenn. PHYSICS. b. Mon-



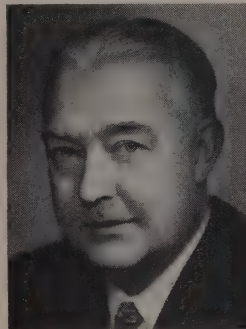
treau, Can., Mar. 10, 1909. s. John Ferguson and Evelyn (Morphy) S. Edn.: B.A., Univ. of Toronto, 1930; M.Sc., McGill Univ., 1931; Ph.D., ibid., 1933. m. Ethelyn Towner, Aug. 1941. c.: Arthur Towner; Lynn Hawley. Exp.: 1851 Exhibition Fellow, 1934-37; Rsch. Instr., Univ. of Chicago, 1938-41; Leader, Cyclotron Group, Metallurgical Lab., ibid., 1942-44; Phys. Div., Oak Ridge Natl. Lab., Oak Ridge, Tenn., 1944—. Mem.: Fellow, Amer. Physical Soc.; Fellow, Royal Soc. of Arts. Contrb. to: Physical Rev.; Amer. Jour. of Physics; Philos. Trans. of the Royal Soc. of London; Proc. Royal Soc. of London. Special Int.: Nuclear Physics; Radioactivity; Delayed Neutrons; Carbon 14 Manufacture; Photo-Disintegration; Neutron Decay.

SNELL, Cornelia Tyler, Rsch. Chemist, Foster D. Snell, Inc., 29 W. 15th St., N. Y. 11, N. Y. COLLOID CHEMISTRY AND SURFACTANTS.



b. Binghamton, N. Y., Nov. 22, 1896. d. Henry W. and Jennie E. (Bryant) Tyler. Edn.: B.S., Syracuse Univ., 1919; M.A., Columbia Univ., 1925; Ph.D., *ibid.*, 1930. m. Foster Dee Snell, June 18, 1921. c.: Barbara Anne. Exp.: Tchr. of H. S. Math., 1919-21; Lab. Asst. Chem. Dept., Columbia Univ., N. Y. C., 1929-30; Rsch. Asst., Pediatrics Dept., Fifth Ave. Hosp., N. Y. C., 1931-32; Rsch. Asst. in Pathology Dept., Coll. of Physicians and Surgeons, *ibid.*, 1933; Rsch. Chemist, Foster D. Snell, Inc., 1942—. Mem.: Amer. Chem. Soc.; A.A.U.W.; D.A.R.; A.A.A.S. Fellow; Sigma Xi; Internatl. Union of Chem.; Internatl. Congress of Chem.; Women's Univ. Club. Contbr. to: Indus. and Engrng. Chem.; Jour. of Lab. and Clin. Med.; Jour. of Chem. Edn.; Chem. Engrng. News; British Rayon and Silk Jour.; Food Tech. Special Int.: Colloid Chem. and Surfactants.

SNELL, Foster Dee, Pres., Foster D. Snell, Inc., 29 W. 15th St., N. Y. 11, N. Y. CHEMISTRY AND CHEMICAL ENGINEERING. b. Binghamton, N. Y., June 29, 1898. s. Dayton A. and Bertha V. (Hickling) S. Edn.: B.S., Colgate Univ., 1919; A.M., Columbia Univ., 1922; Ph.D., *ibid.*, 1923. m. Cornelia A. Tyler, June 18, 1921. c.: Barbara Anne. Exp.: Consulting Chemist and Chem. Engr., 1919—; Asst. Chem. Instr., Columbia Univ., Gen. Chem., N. Y. C., 1919-20; Instr. Gen. Chem., C. C. N. Y., N. Y. City, 1920-23; In Chg. of Tech. Chem., Pratt Inst., Brooklyn, N. Y., 1923-28; Pres., Foster D. Snell, Inc., N. Y. C., 1931—; Rsch. and Dev. Mem., Referee Bd., U. S. Office of Prod., 1942-45; Pres., Foster D. Snell Rsch., Inc., N. Y. C., 1946—; Dir., Cargille Scientific, Inc., N. Y. C., 1946—; Pres., Foster D. Snell Foundation, Inc., N. Y. C., 1950—. Mem.: Exec. Comm., N. Y. Sect.; Councilor; Commn. of Affiliation with Tech. Soc. Coun., Chmn., Coun. Policy Commn., Amer. Chem. Soc.; Soap Analysis Commn., Fourth Vice-Pres., Gen. Chmn., Natl. Meeting, Fat Analysis Commn., Edn. Commn., Chmn. of Short Course, Amer. Oil Chem. Soc.; Amer. Inst. of Chem. Engrs.; Mem. of Comm. D-12 and E-3, Amer. Soc. for Testing Materials; The Chem. Soc.; Fellow, A.A.A.S.; Pres. and Fellow, Amer. Inst. of Chemists, 1946-48; Armed Forces Chem. Assn.; Commn. on Advertising, Amer. Coun. of Commercial Lab., 1952; Lab. Mgmt. Commn., *ibid.*, 1952-53; Hon. Secy. Amer. Sect., Soc. of Chem. Indus., 1925-27; Vice-Chmn., *ibid.*, 1940-42; Chmn. Amer. Sect., *ibid.*, 1942-44; Vice-Pres., *ibid.*, 1937-40; Public Relations Commn., Assn. of Consulting Chemists and Chem. Engrs., 1952—; Div. of Chem. and Chem. Tech., Mem.-at-Large, Natl. Rsch. Council 1949-54; Fats and Oil Commn. Chmn., *ibid.*, 1947—; XVI Meeting, Official U. S. Delegate and Mem. of Council, Internatl. Union of Chem., 1947; Vice-Pres., Fats and Oils Commn., *ibid.*, 1947-51; Pres., *ibid.*, 1951-53; Pres., Assn. of Cons. Chem. and Chem. Engr., 1953—; XVI Conf. of Internatl. Union of Pure and Applied Chem. and XII, *ibid.*, 1948; Adv. Bd. on Organic Analysis of Intersci. Publishers; Adv. Commn., State Univ. of N. Y.; Inst. of Applied Arts and Sci.; Detergents Com., Natl. Security Indus. Assn.; Sigma Xi; Phi Lambda Upsilon; Alpha Chi Sigma; Columbia Club; The Chemists' Club; Tarrytown Boat Club. Author: Colorimetric Meth-



ods of Analysis, 1st Ed., 1921, 2nd Ed. with Cornelia T. Snell, Vol. 1, 1936; Vol. II, 1937; 3rd Ed. with Cornelia T. Snell, Vol. I, 1948; Vol. II, 1949, Vol. III, 1953; Chem. Made Easy, with Cornelia T. Snell, 4 Vols., 1948; Commercial Methods of Analysis with Frank M. Biffen, 1944; Chem. of Commerce, with Cornelia T. Snell, 1st Ed., 1939; 2nd Ed., 1952. Contbr. to: Indus. and Engrng. Chem.; Analytical Chem.; Jour. of Amer. Oil Chemists' Soc.; Chem. and Indus., England; Total Cont. Exceed 100 Articles. War Record: U. S. Navy, 1918. Gen. Int.: Honors, Awarded Medal of the Soc. of Chem. Indus., Manchester, England, 1949; Awarded Honor Scroll of the Amer. Inst. of Chemists, N. Y. Chapter, 1952. Special Int.: Numerous Fields of Chem. Over a Period of Years, Including Studies of Explosions and Their Causes, Phys.-Chem. Properties of Soap and Synthetic Detergents and Many Others.

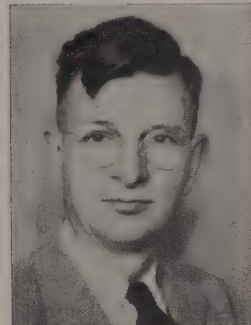
SNELL, George Davis, Rsch. Assoc., Roscoe B. Jackson Memorial Lab., Bar Harbor, Maine. GENETICS.

SNELL, John Ferguson, Prof. of Chem. Emer., Macdonald Coll., McGill Univ., Box 284, Que., Can. CHEMISTRY.

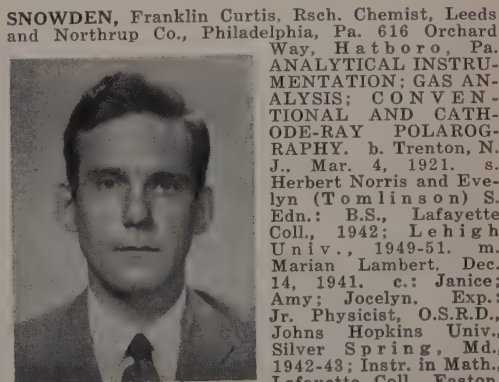
SNIDEOR, John C., SPEECH AND HEARING.

SNIESZKO, Stanislas Francis, Aquatic Biologist, U. S. Fish and Wildlife Service, U. S. Fishery Sta., Kearneysville, W. Va. BACTERIOLOGY.

SNODGRASS, Oliver Theodore, Hd. Dept. of Math., New Mexico Western Coll., Silver City, New Mexico. MATHEMATICS. b. March 14, 1902, Delta, Ia. s. Orval E. and Syrena (Smith) S. Edn.: Student, Grinnell Coll., 1920-21; B.S., Dakota Wesleyan Univ., 1924; M.S., Univ. of Ia., 1927; Ph.D., Univ. of Mo., 1936. m. Lucile Noble of Vayland, S. D., Jan. 13, 1923. d. Wm. and Alice Noble. c.: Lucile Noble, Alice Theodora. m. (2) Mrs. Ella Lassiter, July 9, 1947. Exp.: Prin., H. S., Bison, S. D., 1924-26; Prin., H. S., Wetonka, S. D., 1926-27; Instr. Math., Purdue Univ., 1927-28; Instr. Math., Montana Schl. of Mines, Butte, Mont., 1929-31; Correspondence Inst. in Math., Univ. of Mo., 1931-37; Prof. of Math., Yankton Coll., Yankton, S. D., 1937-42; Hd. Dept. of Math. and Sci., N. M. State Tchrs. Coll., Silver City, N. Mex., 1942-48; Hd., Dept. of Math., N. M. Western Coll., Silver City, N. M., 1948—. Mem.: Sigma Xi; Pi Gamma Mu; Pi Mu Epsilon; Mason. Author: Coll. Algebra, 1940 (Edwards Bros.). Ph.D. Dissertation: Multiplicative Representation of the Elements of a Ring. War Record: 1st Lt., Army Air Corps. Travel: U. S. and Mexico. Hobbies: Stamp Collecting; Hiking; Archaeology. Listed in: A.M.S.



SNOWDEN, Franklin Curtis, Rsch. Chemist, Leeds and Northrup Co., Philadelphia, Pa. 616 Orchard Way, Hatboro, Pa. ANALYTICAL INSTRUMENTATION; GAS ANALYSIS; CONVENTIONAL AND CATHODE-RAY POLAROGRAPHY. b. Trenton, N. J., Mar. 4, 1921. s. Herbert Norris and Evelyn (Tomlinson) S. Edn.: B.S., Lafayette Coll., 1942; Lehigh Univ., 1949-51. m. Marian Lambert. Dec. 14, 1941. c.: Janice; Amy; Jocelyn. Exp.: Jr. Physicist, O.S.R.D., Johns Hopkins Univ., Silver Spring, Md., 1942-43; Instr. in Math., Lafayette Coll., Easton, Pa., 1943-44; Lt. U.S.N.R., Destroyer Radar, 1944-



Pa., 1943-44; Lt. U.S.N.R., Destroyer Radar, 1944-

46; Rsch. Chem., Gen. Aniline and Film Corp., Easton, Pa., 1946-51; Rsch. Chem., Leeds and Northrup Co., Philadelphia, Pa., 1951—. Mem.: Amer. Chem. Soc.; Electrochem. Soc.; Tau Kappa Alpha. Contrb. to: Analytical Chem.; Jour. Scientific Instrn. Special Int.: Polarography, Conventional and Cathode-Ray; Analytical Instrument Dev. and Design; Gas Analysis.

SNOW, Charles Henry, Dean Emer., Coll. of Engrng., N. Y. Univ., N. Y., N. Y.; 12 Lake Ave., Yonkers, N. Y. **ENGINEERING.**

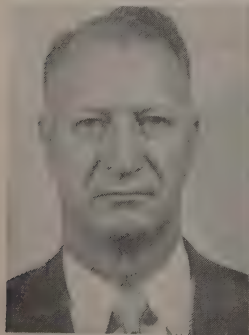
SNOW, Laetitia Morris, Prof. Emer., Wellesley Coll., Wellesley, Mass.; 290 Laurel Ave., Pacific Grove, Calif. **BOTANY.**

SNYDER, Charles D., Prof. Emer. Physiol., Schl. of Med., Johns Hopkins Univ., 4709 Keswick Rd., Baltimore, Md. **PHYSIOLOGY.**

SNYDER, Elmer, Sr. Pomologist, U. S. D. A., Rt. 3, Box 307, Fresno, Calif. **VITICULTURE.**

SNYDER, Freeman Woodrow, Asst. Prof. of Agronomy and Asst. Agronomist, Univ. of Ark., Fayetteville, Ark. **PLANT PHYSIOLOGY.** b. Philadelphia, Pa., Dec. 6, 1917. s. Freeman and Mary A. (Shaffer) S. Edn.: B.S., Univ. of Idaho, 1938; Ph.D., Cornell Univ., 1950. m. Elizabeth Fink, Aug. 6, 1938. c.: Robert Gordon, Barbara Naneen. Exp.: Asst. on Watershed Studies, Coll. Park, Md., 1942-43; Asst. on Watershed Studies in Soil Conservation Service, U.S.D.A., Coll. Park, Md., 1946-47; Lab. Asst. in Botany, Cornell Univ., Ithaca, N. Y., 1948-50; Asst. Prof. of Agronomy and Asst. Agronomist, Univ. of Ark., Fayetteville, Ark., 1950—. Mem.: Botanical Soc. of Amer.; Amer. Soc. of Plant Physiol.; Ark. Acad. of Sci.; Sigma Xi. Contrb. to: Proc. Ark. Acad. Sci.; Proc. Assn. Southern Agr. Workers; Proc. Southern Weed Conference. Special Int.: Plant Physiol. Mineral Nutrition, Defoliation, Herbicides, and Cotton Physiol.; Biochemistry; Soils.

SNYDER, James E., Section Hd., Rsch. Dept., Good-year Tire and Rubber Co., 206 Beck Ave., Akron 2, Ohio. **PACKAGING.** b. Mar. 17, 1903, Carlisle, Pa. Edn.: B.S., Iowa State Coll., 1924; M.S., ibid., 1925; Ph.D., Pa. State Coll., 1928. m. Barbara Wentch. Exp.: Rsch. Chemist, DuPont Cellophane Co., 1928-37; Rsch. Chemist, Goodyear Tire and Rubber Co., Akron, Ohio, 1937-41; A.U.S., 1941-45, Col. Arty., 1945; Section Hd., Goodyear Tire and Rubber Co., 1945—; Commandant, Akron Army Reserve Schl., 1951—. Mem.: Kappa Sigma; Scabbard and Blade; Phi Lambda Upsilon. Special Int.: Transparent Films; Packaging; Cellophane; Pliofilm.



SNYDER, John Paul, Shoreham Bldg., Washington, D. C. **CHEMISTRY.**

SNYDER, W. C., Univ. of Calif., Berkeley 4, Calif. **PLANT PATHOLOGY.**

SOBEL, Albert. **BIOCHEMISTRY.**

SOBOTKA, Harry H., Chf. Chemist, Mount Sinai Hosp., 68 E. 86th St., N. Y., N. Y. **ORGANIC CHEMISTRY.**

SODERBERG, Carl Richard, Head, Dept. of Mech. Engrng., Mass. Institute of Technology, Cambridge, Mass. **MECHANICAL ENGINEERING.** b. Ulvohamn, Sweden, February 3, 1895. s. Jonas and Johanna Kristina (Nordquist) S. Edn.: Naval Architect, Chalmers Inst. of Tech., Göteborg, Sweden, 1919; S.B., Mass. Inst. of Tech., 1920. Hon. Deg.: Chalmers Inst. of Tech., Göteborg, Sweden, Feb., 1951, Dr. of Tech. m. Sigrid Kristina Löfstedt of Boston, Mass., May 9, 1921. c.: Carl

Richard; Lars Olof; Barbro Kristina. Exp.: Westinghouse Elec. and Mfg. Co.: Development Engr., 1922-28; Chf. turbine engr., 1931-38; Swedish Gen. Elec. Co., Vasteras, Sweden: in chg. of turbo generators, 1928-30; Mass. Inst. of Tech.: Prof. of Mech. Engrng. since 1938; Hd. of Mech. Engrng. Dept. since 1947. Hon. Pos.: Currently Chmn., Div. of Engrng. and Ind. Rsch., Natl. Rsch. Coun. Mem.: Ingeniörs vetenskapsakademien; Fellow, A.A.A.S.; Natl. Academy of Sci.; Fellow of the Inst. of the Aeronautical Sci.; British Instn. of Mech. Engrs.; Amer. Soc. of Naval Architects and Marine Engrs. Travel: Europe; Scand. countries. Gen. int.: Designer and inventor of steam turbines and generators for land and marine applications. Hobbies: sailing; fishing. Listed in: Who's Who in Amer.; A.M.S.; Who's Who in Engrng.

SOFF, LeRoy Davenport, Chf. Chemist, Paragon Paint and Varnish Co., 5-49 46th Ave., Long Island City, N. Y. **PAINT.**

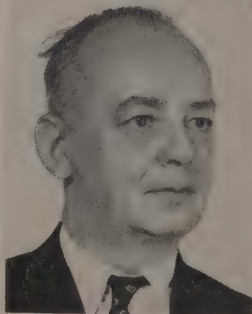
SOFFER, Milton David, Assoc. Prof. of Chem., Smith Coll., Northampton, Mass. **ORGANIC CHEMISTRY, THE CHEMISTRY OF NATURAL PRODUCTS.** b. N. Y. City, Dec. 11, 1914. s. Henry A. and Hannah (Kleinman) S. Edn.: B.S., Univ. of Ark., 1937; M.A., Harvard Univ., 1939; Ph.D., ibid., 1942. m. Mary June Barns, Aug. 23, 1944. c.: Katherine Barns; Frederic David. Exp.: N.D.R.C., Post-Doctoral Rsch. Fellowship, Purdue Univ., Lafayette, Ind., 1941-42; Instr., Asst. Prof., Assoc. Prof. of Chem., Smith Coll., Northampton, Mass., 1942—. Hon. Pos.: Guggenheim Fellow, Oxford Univ., England, 1950-51; Natl. Sci. Foundation Grant, 1952-54. Mem.: Amer. Chem. Soc.; A.A.A.S.; A.A.U.P.; Sigma Xi. Contrb. to: Rsch. Publications on Structural and Synthetic Investigations of Natural Products and High Molecular Weight Substances, Jour. of Amer. Chem. Soc.; Organic Synthesis. Special Int.: Synthetic and Structural Investigation in Field of Natural Products, Carbocyclic Substances and Alkaloids.



SOGNNAES, Reidar Fauske, Assoc. Prof. of Dental Med., Harvard Univ., 188 Longwood Ave., Boston, Mass. **PATHOLOGY.**

SOKOLOFF, Vladimir P., Visiting Prof., Box 1226, Johns Hopkins Univ., Baltimore 18, Md. **SOILS AND GEOCHEMISTRY.**

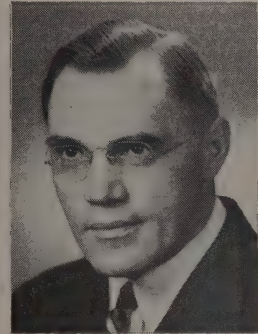
b. Tomsk, Siberia, Nov. 3, 1904. s. P. L. and E. A. (Trisno) S. Edn.: B.S., Univ. of Ariz., 1928; Ph.D., Univ. of Calif., 1937. m. O. E. White, 1933. c.: Philip Dale. Exp.: Special Chem. and Lab. Foreman, Amer. Beet Sugar Co., Oxnard, Calif., 1924-29; U. S. Dept. of Agri., 1930-37; Jr. Chemist and Asst. Prof. of Microbiol., Univ. of Calif., Berkeley, Calif., 1937-43; Sr. Soil Scientist, U. S. Geol. Survey, 1943-50; Visiting Prof., Johns Hopkins Univ.,



Baltimore, Md., 1950—. Mem.: Amer. Inst. of Mining and Met. Engrs.; Amer. Geo. Soc.; Sigma Xi. Contrb. to: Sci.; Commonwealth Engrs.; Chem. Engrng. and Mining Rev.; Geochimica and Cosmochimica Acta of England; Soil Sci.; Phytopathol.; Jour. of Plant Physiol.; Citrus Leaves; Jour. Indus. and Engrng. Chem.; The Mines Jour.; Mining Rev.; Mining World. Special Int.: Geochem. Exploration and Prospecting for Concealed Deposits of Copper, Lead, Zinc and Gold. Australian Geochem. Exploration, 1948, 1949.

SOKOLOFF, Leon, Surgeon, Natl. Inst. of Arthritis and Metabolic Diseases, Natl. Inst. of Health; Bethesda 14, Md. **PATHOLOGY**. b. Brooklyn, N. Y., May 9, 1919. s. Barnet and Ray (Cohen) S. Edn.: B.A., N. Y. Univ., 1938; M.D., *ibid.*, 1944. m. Dr. Barbara Snow, June 2, 1950. c.: Michael David. Exp.: Fellow in Therapeutics, N. Y. Univ., N. Y., 1944-45; Intern, Third Med. Division, Bellevue Hosp., N. Y. C., 1945-46; Resident in Pathol., *ibid.*, 1946-47; Instr., N. Y. Univ., N. Y. C., 1947-50; Asst. Prof. of Path., *ibid.*, 1950-52; Surgeon, Natl. Inst. of Arthritis and Metabolic Diseases, Natl. Inst. of Health, Bethesda, Md., 1952—. Mem.: Sigma Xi; Alpha Omega Alpha; Harvey Soc.; A. M. A.; Assoc. of Amer. Pathologists and Bacteriologists. Contbr.: Amer. Jour. of Pathol.; Archives of Pathol.; Archives of Internal Med.; Amer. Jour. of Med. Sci.; Circulation; Amer. Heart Jour.; Proceedings of the Soc. for Experimental Biology and Med. Special Int.: Pathol. of Rheumatic Diseases.

SOLANDT, Omond McKillop, Chmn., Defense Rsch. Bd., Dept. of National



Defence, Ottawa, Can. **PHYSIOLOGY, OPERATIONAL RESEARCH**. b. Winnipeg, Man., Can., Sept. 2, 1909. s. Donald McKillop and Edith (Young) S. Edn.: B.A., Univ. of Toronto, 1931; M.A., *ibid.*, 1932; B.Sc., *ibid.*, 1933; M.D., *ibid.*, 1936; M.A., Cambridge, 1939. Hon. Deg.: D.Sc., Univ. of British Columbia, 1946; D.Sc., Laval Univ., 1948; D.Sc., Univ. of Manitoba, 1950; D.Sc., McGill Univ., 1951; LL.D., Dalhousie Univ., 1952. m. Elizabeth McPhedran, 1941. c.: Sigrid; Andrew; Kathrine. Exp.: Lectr., Univ., 1939; Dir., South West London Blood Supply Depot, 1940; Med. Rsch. Coun. Physiol. Lab., Armoured Fighting Vehicle Schl., Lulworth, Eng., 1941; Dir. Tank Sect., Army Operational Rsch. Group, 1942; Deputy Supt., *ibid.*, 1943; Supt., *ibid.*, 1944; Dir., Operational Rsch. Div., SEAC, and Scientific Adviser to Admiral Mountbatten (post not assumed because of cessation of hostilities), 1945; Dir. General of Defence Rsch., Dept. of National Defence, 1946; Chmn., Defence Rsch. Bd., *ibid.*, Ottawa, Can., 1947—. Mem.: Physiol. Soc.; Canadian Physiol. Soc.; Fellow, Royal Soc. of Can.; Alpha Kappa Kappa; Alpha Omega Alpha. Contbr. to: Trans. Royal Soc. of Can.; Univ. of Toronto Med. Jour.; Proc. Royal Soc.; Proc. Soc. for Exptl. Biol. and Med.; etc. Gen. Int.: In 1945 was a Member of the British Group Investigating the Effects of the Atomic Bomb in Japan; Participated in British Atomic Trial in Australia in Oct., 1952. Special Int.: Operational Rsch. and Scientific Administration.

SOLBERG, Archie N., Exec. Dir. Rsch. Foundation, Univ. of Toledo, 3215 Kylemore Rd., Toledo 6,



Ohio. **EMBRYOLOGY; X-RADIOLOGY; RESEARCH ADMINISTRATION**. b. Jan. 4, 1909. Lammon, S. D., s. Joseph A. and Oline (Amundsen) S. Edn.: B.S., N. D. Agri. Coll., 1930; M.S., *ibid.*, 1933; Ph.D., Columbia Univ., 1938. m. Margaret Olsen of Fargo, N. D., Sept. 12, 1934. d. Mr. and Mrs. N. Robert Olsen. c.: Norman Robert; James Joseph; Mary Ann; Marilyn Jean. Exp.: Asst. in Zool., N. D. Agri. Coll., 1929-30; Instr. in Zool., 1930-33; Asst. in Zool., Columbia Univ., 1933-36; Univ. Fellow in Zool., 1936-37; Instr. in Biol., Univ. of Toledo, 1937-39; Asst. Prof., Biol., 1939-44; Assoc. Prof. of Biol., 1944-50; Prof. of Biol., *ibid.*, 1950—; Executive Director, Research

Foundation, Univ. of Toledo, 1946—; Head, Dept. of Med. Technol., 1944—; Dir. of Special Services, 1951—. Mem.: A.A.A.S.; Ohio Academy of Sci.; Mich. Academy of Sci.; Sigma Xi; Biol. Photographic Soc.; Theta Chi; Scabbard and Blade. Contbr. to: Jour. of Exp. Zool.; Copeia; The Aquarium. Ph.D. Dissertation: The Effect of X-rays on the Germ Cells of *Oryzias Latipes*. War Record: O.R.C., 1930-40. Gen. Int.: Rsch. for Toledo Scale Co. Hobby: Photography. Listed in: A.M.S.; Who's Who in Amer. Special Int.: Embryology of Fishes. Biological Effects of Radiation.

SOLHEIM, Wilhelm Gerhard, Prof. and Hd., Dept. of Botany, Univ. of Wyo., Laramie, Wyo. **MYCOLOGY**.

SOLIDAY, Ray C., **MATHEMATICS**.

SOLIS-COHEN, Solomon, Prof. Emer., Clinical Med., Jefferson Med. Coll., Philadelphia, Pa.; Cheltenham and Mountain Aves., Oak Lane, Philadelphia, Pa. **MEDICAL SCIENCES**.

SOLLENBERGER, Paul, Prin. Astronomer, Chf. Time Service, U. S. Naval Observatory 1909 37th St., N. W., Washington, D. C. **ASTRONOMY**.

SOLLER, John Theodore, Prof. of Physics, Amherst Coll., Amherst, Mass. **PHYSICS**.

SOLLER, Walter, Dir. of Applied Sci. Rsch. Lab., Univ. of Cincinnati, Cincinnati, Ohio. **PHYSICS**.

SOLLERS, Helen, Asst. Entomol., U. S. Dept. of Agri., 1218 Floral St., N. W., Washington, D. C.

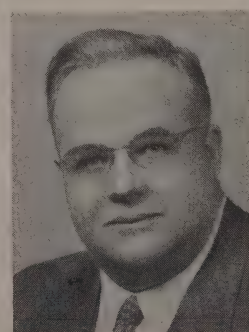
INSECTS AFFECTING MAN AND ANIMALS. b. Baltimore, Md., Sept. 29, 1911. d. William A. and Helen (Day) S. Edn.: B.S., Wilson Techs. Coll., 1934. Exp.: Joined Insect Pest Survey of U. S. Bur. of Entomol. and Plant Quarantine, Washington, D. C., 1937; Jr. Entomol., *ibid.*, 1943-47; Asst. Entomol. in Insects Affecting Man and Animals, *ibid.*, 1947—. Hon. Pos.: Custodian of Entomol. Soc. of Wash., 1950—; Pres., Twenty Council, 1949. Mem.: Entomol. Soc. of Wash.; Entomol. Soc. of Amer.; Entomol. Soc. of Can.; Amer. Mosquito Control Assn.; The Twenty; Defenders of the Furbers. Contbr. to: Mosquito News; N. J. Mosquito Extermination Assn.; U. S. Dept. of Agri. Publications. Special Int.: Insects of Med. Importance.



SOLLEY, Fred Palmer, Physician, Private Practice, 25 E. 92nd St., N. Y., N. Y. **INTERNAL MEDICINE**.

SOLLMANN, Torald H., Dept. of Pharmacol., Western Reserve Univ., Cleveland 6, Ohio. **PHARMACOLOGY**.

SOLLNER, Karl Chf. Phys. Biochemist, Lab. of Phys. Biol., Natl. Inst. of Health and Prof. of



Physiol. Chem., The Medical Schl., Univ. of Minn., Lab. of Phys. Biol., Natl. Inst. of Health, Bethesda 14, Md. **PHYSICAL CHEMISTRY, COLLOIDS, PHYSICAL BIOCHEMISTRY**. b. Vienna, Austria, Jan. 9, 1903. s. Anton M. and Julie (Karplus) S. Edn.: Ph.D., Univ. of Vienna, 1926. m. Herta Rosenberg, July 23, 1934. c.: Barbara. Exp.: Demonstrator in Chem., Vienna, Austria, 1922-26; Fellow, Kaiser Wilhelm Inst., für Physikalische Chemie und Elektrochemie, Berlin-Dahlem, Ger., 1927-28; Haber Fellow,

ibid., 1928-30; Weston Fellow in Electrochem., ibid., 1930-31; Rsch. Assoc., ibid., 1928-33; Privat-Docent, Univ. of Berlin, Berlin, Ger., 1933; Rsch. Guest, Dept. of Chem., Univ. Coll., London, England, 1933-37; Rsch. Chemist, Dept. of Agron., Cornell Univ., Ithaca, N. Y., 1937-38; Chemist, Dept. of Physiol., Univ. of Minn., Minneapolis, Minn., 1938-41; Asst. Prof., ibid., 1941-43; Assoc. Prof., ibid., 1943-47; Prof., ibid., 1947—; Prin. Rsch. Analyst, Lab. Phys. Biol., Natl. Inst. of Health, U. S. Public Health Service, Bethesda, Md., 1947-48; Chf. Phys. Biochemist, ibid., 1948—, Consulting Chemist, 1933—. Mem.: A.A.A.S.; Amer. Chem. Soc.; Soc. of Gen. Physiol.; Sigma Xi; Wash. Acad. of Sci.; N. Y. Acad. of Sci.; Amer. Inst. of Chemists, Fellow. Contbr. to: Z. Phys. Chem.; Z. Elektrochem.; Kolloid-Z.; Z. angewandte Chemie; Trans., Faraday Soc.; India Rubber World; Jour. Phys. and Colloid Chem.; Jour. Gen. Physiol.; Jour. Colloid Sci.; Jour. Amer. Chem. Soc.; Jour. Electrochem. Soc., etc. Special Int.: Sonic and Ultrasonic Waves in Colloid Chem.; Mech. of Sonic Dispersion and Coagulation; Electrochem.; Phys. and Electrochem. of Membranes and Membrane Processes; Membrane Potential; Ion Exchange Membranes; Membrane Electrodes; Osmotic Processes and Anomalous Osmosis; Colloidal Dispersions; Gel Structures. Application of Physical and Colloid Chem. to the improvement of industrial processes.

SOLOMON, Meyer, SPEECH AND HEARING.

SOLTAU, David Livingstone, Prof. of Physics, Dir. Div. Natural Sci., Univ. of Redlands, Redlands, Calif. PHYSICS.

SOMMER, H. H., Univ. of Wis., Dept. of Dairy Indus., Madison, Wis. DAIRY CHEMISTRY.

SOMMER, Hermann, Assoc. Prof. Med. Rsch., Univ. of Calif., San Francisco, Calif. TOXICOLOGY.

SOMMERVILLE, Richard C., retired, 307 Vernon St., Lynchburg, Va. PSYCHOLOGY OF BEAUTY.

SOMOGYI, Michael, Chemist, Jewish Hosp., St. Louis, Mo. PHYSIOLOGICAL CHEMISTRY.

**SONNEBORN, Tracy Morton, Prof. of Zool., Ind. Univ., Bloomington, Ind. GENETICS (ESPECIAL-
LY OF THE PROTOZOA). b. Baltimore, Md.,
October 19, 1905. s. Lee and Daisy (Bamberger) S. Edn.: A.B., Johns Hopkins Univ., 1925; Ph.D., ibid., 1928. m. Ruth Meyers, June 6, 1929. c.: Lee M.; David R. Exp.; Fellow, Natl. Rsch. Council, 1928-30; Rsch. Asst., Johns Hopkins Univ., 1930-31; Rsch. Assoc., ibid., 1931-33; Assoc. in Zool., ibid., 1933-39; Assoc. Prof. of Zool., Ind. Univ., 1939-42; Prof. of Zool., ibid., 1942—. Hon. Pos.: Vice-Pres., Genetics Soc. of Amer., 1948; Pres., ibid., 1949; Treas., Amer. Soc. Naturalists, 1944-47; Vice-Pres., ibid., 1948; Pres., ibid., 1949. Mem.: Fellow, A.A.A.S.; Genetics Soc. Amer.; Amer. Soc. Naturalists; Amer. Soc. Zoologists; Soc. for the Study of Evolution; Human Genetics Soc.; Ind. Acad. of Sci.; Natl. Acad. Sci.; Amer. Philos. Soc.; Amer. Acad. Arts and Sci.; Harvey Soc.; Phi Beta Kappa; Sigma Xi; Beta Beta Beta. Hon. Mem.: Facultad de Biología y Ciencias Médicas, Universidad de Chile; Sociedad de Biología de Santiago de Chile; Sociedad de Biología de Concepción (Chile); Sociedad Médica de Concepción (Chile). Contbr. to: Biol. Bull.; Jour. Exptl. Zool.; Physiol. Zool.; Genetics; Heredity; Proc. Natl. Acad. Sci.; Amer. Naturalist; etc. Gen. Int.: Discovered Mat-
ing Types in Ciliated Protozoa, 1937; Discovered Cytoplasmic Inheritance in Protozoa, 1943; Co-
winner of \$1,000 Prize of A.A.A.S. for outstanding Rsch. Paper, 1946; Natl. Sigma Xi Lectr., 1947. Special Int.: Heredity in Protozoa; Interrelations of Genes, Cytoplasm and Environment in Cellular Heredity.**

SONNICHSEN, Harold M., Tech. Dir., Permacel Tape Corp., New Brunswick, N. J. ORGANIC CHEMISTRY. b. Hancock, Minn., Apr. 4, 1912. s. Henry M. and Mary (Hults) S. Edn.: A.B., Tex. Western, 1934; M.S., Harvard Univ., 1935; Ph.D., ibid., 1939. m. Thelma Lowenberg, Mar. 11, 1939. c.: Susan Elizabeth; Harold Eric. Exp.: Chemist and Group Leader, E. I. du Pont, 1939-44; Tech. Service Mgr., Permacel Tape Corp., 1944-48; Asst. Tech. Dir., ibid., 1948-51; Tech. Dir., ibid., 1952—.

Mem.: Sigma Xi; Amer. Chem. Soc.; A.A.A.S.; Fellow, Amer. Inst. of Chemists; Alpha Chi Sigma. Special Int.: High Polymers and Adhesives.

SONTAG, Lester Warren, Dir., Samuel S. Fels Rsch. Inst., Yellow Springs, Ohio. MEDICAL RESEARCH.

SOPER, Edgar Kirke, Assoc. Prof. of Geol. and Consulting Petroleum Geologist, Univ. of Calif., Los Angeles, Calif. PETROLEUM GEOLOGY.

SOPER, Fred Lowe, Assoc. Dir., Internal Health Div., Rockefeller Foundation, 49 W. 49th St., N. Y., N. Y. PUBLIC HEALTH ADMINISTRATION.

SORBER, Daniel Glenn, Chemist in Chg. Frozen Food Section, Food Products Div., Western Regional Rsch. Lab., Albany, Calif. FOOD TECHNOLOGY.

SORENSEN, Charles James, Rsch. Prof. Entomol., Utah State Agri. Coll., Logan, Utah. AGRICULTURAL ENTOMOLOGY.

SORENSEN, Herbert, Prof. of Ednl. Psychol., Univ. of Ky., Lexington, Ky. EDUCATION PSYCHOLOGY, STATISTICS.

SORRIN, Sidney, Asst. Prof. Periodontia, N. Y. Univ., Coll. of Dentistry, 209 E. 23rd St., N. Y., N. Y. PERIODONTIA.

SOSKE, Joshua Laurence, Pres. and General Mgr., Geophysical Engr. Corp., P. O. Box 7, Sta. C, Pasadena, Calif. GEOPHYSICS.

SOSKIN, Samuel, Dir. Rsch. Inst., Michael Reese Hosp., 29th St. and Ellis Ave., Chicago, Ill. PHYSIOLOGY.

SOSMAN, Robert B., Schl. of Ceramics, Rutgers Univ., New Brunswick, N. J. CERAMICS.

SOTTERY, C(onstantine) Theodore, Prof. Chemistry, Bard Coll., Annandale-on-Hudson, New York. ORGANIC CHEMISTRY. b. July 30, 1896, Smyrna, Turkey. s. Theodore S. and Sophia (Merika) S. Edn.: A.B., Clark Univ., 1916; A.M., Columbia Univ., 1923; Ph.D., ibid., 1925. m. Emma Laura Water of Guilford, Conn., August 29, 1925. d. Geo. F. and Emma P. c.: Theodore Walter; Ann Elizabeth. Exp.: Anal. Chem., Mer-rimac Chem. Co., Wyman Gordon Co. and Amer. Optical Co., 1916-17; Sci. Master and Athletic Coach, Troy Conf. Acad., Poultney, Vt., 1917-18; Instr. in Chem., Bradford Duffee Textile Schl., 1919-22; Lab. Instr., Columbia Univ., 1922-25; Prof. of Chem., Albright Coll., Myerstown, Pa., 1925-28; Asst. and Assoc. Prof. Chem., St. Stephens Coll., 1928-33; Assoc. Prof., Prof., Bard Coll., Columbia Univ., 1934—. Part-time: Chem. Reader, Coll. Entrance Examination Bd., 1930-32; Visiting Prof. of Organic Chem., Summer Session, 1943, Columbia Univ., On leave from Bard Coll.; Prof. of Chem., Univ. of Mass., Fort Devens, Mass., 1946-48. Hon. Pos.: Pres., Rad Hook Nursing Assn., 1940—. Mem.: A.A.U.P.; A.A.A.S.; A.C.S.; Alpha Chi Lambda; Phi Lambda Upsilon; Sigma Xi. Contbr. to: Jour. of A.C.S.; Jour. of Biol. Chem. Ph.D. Dissertation: The Study of the Accelerating Effects of Glucose on Invertase From Honey. War Record: 47th Signal Serv. Co., Signal Corps, U. S. A., Univ. of Vt., First World War. Hobbies: Old Houses; Antique Furniture Refinishing. Listed in: A.M.S.; Who's Who in the East; Biog. Encyc. of the World; Chem. Who's Who; Who Knows—and What.

SOUDER, Wilmer, Chf., Metrology Dir., Natl. Bureau of Standards, Washington, D. C. METROLOGY, DENTAL MATERIALS.

SOULE, Byron Avery, Assoc. Prof. of Chem., 408 Chem. Bldg., Univ. of Mich., Ann Arbor, Mich. CHEMISTRY.

SOULE, George, 3 E. 69th St., N. Y., N. Y. ECONOMICS.

SOUTHWICK, Mildred Daniels, Instr. in Plant Sci., Vassar Coll., Poughkeepsie, N. Y. ECOLOGY.

SOUTHWORTH, George Clark, Mem. of Technical Staff, Bell Telephone Labs., Murray Hill, N. J.



PHYSICS AS APPLIED TO ELECTRICAL COMMUNICATIONS. b. Little Cooley, Pa., Aug. 24, 1890. s. Freedom and Mary (Fleek) S. Edn.: B.S., Grove City Coll., 1914; M.S., *ibid.*, 1916; Ph.D., Yale Univ., 1923. Hon. Deg.: D.Sc., Grove City Coll., 1931. m. Lowene Smith, Aug. 14, 1918. c.: Margaret Eleanor; George Howard. Exp.: Asst. Physicist, Bur. of Standards, 1917-18; Instr. and Asst. Prof., Yale Univ., 1918-23; Mem. of Tech. Staff, Amer. Telephone and Telegraph Co., 1923-34;

Mem. of Technical Staff, Bell Telephone Labs., Murray Hill, N. J., 1934—. Mem.: Fellow, Amer. Physical Soc.; Fellow, A.A.A.S.; Fellow, Inst. of Radio Engrs.; Sigma Xi. Author Principles and Applications of Waveguide Transmission, 1950. Contrb. to: Physical Rev.; Proc. Inst. of Radio Engrs.; Jour. Franklin Inst.; Bell Telephone Tech. Jour.; Jour. Applied Physics; etc. Gen. Int.: Morris Liebmann Prize, I. R. E., 1938; Levy Medal, Franklin Inst., 1946; Ballantine Medal, *ibid.*, 1947. Special Int.: Short Electromagnetic Waves and Their Application to Problems in Radar and Television; Radio Astron.; Earth Currents.

SPARKS, William Joseph, Dir. Rsch. Chem. Div. Standard Oil Development Co. of N. J., 405 Colonial Ave., Westfield, N. J. **CHEMISTRY**.

SPAETH, J. Nelson, Hd., Dept. of Forestry, Univ. of Ill., Urbana, Ill. **FORESTRY**.

SPALDING, Edward D., Clinical Prof. of Med., Wayne Univ., 320 Professional Bldg., Detroit, Mich. **INTERNAL MEDICINE**.

SPANDAU, Harry Michael, retired, 69 S. Walnut St., Mansfield, Ohio.

SPANGLER, Robert Clifton, Prof. of Botany, W. Va. Univ., Morgantown, W. Va. **BOTANY**.

SPARHAWK, William Norwood, Prin. Forest Economist, U. S. Forest Service, U. S. D. A., Washington, D. C. **FORESTRY**.

SPARKS, Fred W., Prof. of Math., Tex. Technol. Coll., Lubbock, Tex. **ALGEBRA, NUMBER THEORY**.

SPARROW, Frederick Kroeber, Assoc. Prof. of Botany, Univ. of Mich., Ann Arbor, Mich. **MYCOLOGY**.

SPARROW, Stanwood Willston, Dir. of Rsch., Studebaker Corp., South Bend, Ind. **AUTOMOTIVE ENGINEERING**.

SPAULDING, Major Franklin, Prof. and Hd., Dept. of Agron., Tenn. A. and I. State Coll., Nashville, Tenn. **AGRONOMY**.

SPAULDING, Perley, Sr. Pathologist in Chg. Div. Forest Pathol., U. S. D. A., 360 Prospect St., New Haven, Conn. **PATHOLOGY OF FOREST STANDS**.

SPAWN, Gerald Bishop, Prof. of Entomol-Zool; Grad. Faculty; Entomologist, Expt. Station; Acting Head of Entomol-Zool. Dept., S. Dak. State Coll., Coll. Station, S. Dak. **ENTOMOLOGY, ZOOLOGY AND WILDLIFE CONSERVATION**. b. Chester, S. Dak., Dec. 6, 1907. s. Charles Earl and Josephine (Natrass) S. Edn.: B.S., S. Dak. St. Coll., 1931; M.S., *ibid.*, 1933; Ph.D., Iowa St. Coll., 1941. m. Erma Grace (Robar) S., Aug. 28, 1929. c.: Gerald Wesley; and Donald Robar. Exp.: Jr. Refuge Manager, U. S. Fish & Wildlife Service, Mound City, Mo., 1935-38; Faculty of S. Dak. St. Coll., Brookings, S. Dak., 1938-44; Lt. in Med. Service Corp., U. S. Navy, 1944-46; Assoc. Prof., S. Dak. State Coll., Coll. Station, S. Dak., 1946-53;

Prof., *ibid.*, 1953—. Mem.: Entomological Soc. of Amer.; S. D. Ornithologists Union; Phi Kappa Phi. Contrb.: Iowa St. Coll. Jour. of Sci.; S. Dak. Farm and Home Rsch.; Experiment Station and Extension Bull. Special Int.: Entomological Rsch.

SPEAR, Joseph, Chmn. and Prof., Dept. of Math., Northeastern Univ., Boston, Mass. **MATHEMATICS**.

SPEDDING, Frank Harold, Dir. Inst. for Atomic Rsch., Ia. State Coll., Ames, Ia. **CHEMISTRY**. b.



Oct. 22, 1902, Hamilton, Ont., Can. s. Howard Leslie and Mary Ann Elizabeth (Marshall) S. Edn.: B.S., Chem. Engr., Mich., 1925; M.S., Chem., Mich., 1926; Ph.D., Chem., Univ. Calif., 1929; LL.D., Drake Univ., 1946; D.Sc., Univ. of Mich., 1949. m. Ethel Annie MacFarlane of Vancouver, B. C., Can., June, 1931. d. Mr. and Mrs. Andrew MacFarlane. c.: Mary Ann Elizabeth. Exp.: Tchng. Fellow, Univ. of Mich., 1925-26; Tchng. Fellow, Univ. of Calif., 1926-29; Instr., *ibid.*,

1929-30; Natl. Rsch. fellow, *ibid.*, 1930-32; Instr., 1932-34; Guggenheim Professorship abroad (England, Germany, Russia), 1934-35; Geo. Fisher Baker Asst. Prof., Chem., Cornell Univ., N. Y., 1935-37; Assoc. Prof. Chem., Ia. State Coll., 1937-41; Prof. Phys. Chem., 1941—; Project Dir., Manhattan Project, Ames, 1942-48; Lt. (Sr.) U. S. Naval Reserve, 1937-51; Dir., Ames Lab. of the Atomic Energy Comm., Iowa State Coll., 1948—; Prof. of Physics, *ibid.*, 1950—; Mem. of Plutonium Project Coun., Chicago, 1942-46; Mem., Bd. of Govs., Argonne Natl. Lab., 1946-48; Dir., Inst. for Atomic Rsch., Ia. State Coll., 1945—. Hon. Pos.: A.C.S. Award in Pure Chem.; Langmuir Award, 1933; Assoc. Ed., Jour. of Chem. Phys., 1938-41; Phi Lambda Upsilon Jubilee, Plaque for Outstanding Work in Inorganic Chem., 1949, Iowa Medal of the A.C.S., 1948; Nichols Medal, 1952; National Academy of Science 1952. Mem.: A.C.S.; A.A.A.S.; A.A.U.P.; Faraday Soc.; Sigma Xi; Phi Lambda Upsilon; Phi Kappa Phi. Contrb. to: Jour. of A.C.S.; Phys. Rev.; Jour. of Chem. Phys.; Trans. of Faraday Soc. Hobbies: Hiking; Mtn. Climbing. Listed in: A.M.S.; Who's Who.

SPEER, Harry Edward, Owner, Speer's Prescription Pharmacy, 9225 St. Clair, Cleveland, Ohio. **PRESCRIPTION PHARMACY**.

SPEICHER, Benjamin Robert, Prof. and Hd., Dept. of Zool., Univ. of Maine, Orono, Maine. **CYTOLOGY**.

SPEIDEL, Carl Caskey, Prof. of Anatomy, Medical Dept., Univ. of Va., Charlottesville, Va. **ANATOMY**.

SPENCE, Bartholomew J., Prof. and Chmn., Dept. of Physics, Northwestern Univ., Evanston, Ill. **PHYSICS**.

SPENCE, Kenneth W., Prof. and Hd., Dept. of Psychol., State Univ. of Iowa, Iowa City, Iowa. **PSYCHOLOGY**.

SPENCER, Arthur Coe, retired, 3250 Highland Pl., Washington, D. C. **ECONOMIC GEOLOGY**.

SPENCER, Charles D., Lamp Development Lab., Lamp Dept., General Electric Co., Nela Park, Cleveland, Ohio. **CERAMICS**.

SPENCER, Damon Alvin, Sr. Animal Husbandman in Chg. Sheep and Goat Husbandry, Bureau Animal Indus., U. S. D. A., Washington, D. C. **SHEEP AND GOAT HUSBANDRY**.

SPENCER, Edwin Rollin, Consulting Botanist and Plant Pathologist, Lebanon, Ill. **PLANT PATHOLOGY**.

SPENCER, Frank C., 8 Los Arboles Rd., Albuquerque, N. Mex. **ANTHROPOLOGY, PSYCHOLOGY.**

SPENCER, George Johnston, Prof. of Zool., Univ. of B. C., Vancouver, B. C., Can. **ENTOMOLOGY.**

SPENCER, H. C., Ill. Inst. of Tech., Chicago, Ill. **ENGINEERING DRAWING.**

SPENCER, Harold Foster, Dean and Prof. of Biol. and Hd. Dept., Whittier Coll., Whittier, Calif. **CYTOLOGY.**

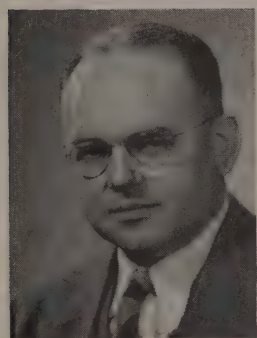
SPENCER, Hugh Miller, Assoc. Prof. of Chem., Cobb Chemical Lab., Univ. of Va., Charlottesville, Va. **PHYSICAL CHEMISTRY.**

SPENCER, John N., Supvr. of Operations and Maintenance, Bureau Reclamation, Rm. 350, New Custom House, Denver, Colo. **AGRONOMY, SOILS.**

SPENCER, Joseph N., Commercial Solvents Corp., Terre Haute, Ind. **PHARMACOLOGY.**

SPENCER, Roscoe Roy, Chf., Natl. Cancer Inst., Bethesda, Md. **CANCER RESEARCH.**

SPENCER, Roy Clarence, Chf., Antenna Lab., U. S. A. F. Cambridge Rsch. Center, 230 Albany St., Cambridge, Mass. **PHYSICS, ANTENNAS, MICROWAVE OPTICS.**



b. Pennellville, N. Y., Apr. 14, 1901. s. Clarence B. and Clarissa (Gillespie) S. Edn.: A.B., Cornell Univ., 1922; Ph.D., Columbia Univ., 1932. m. M. Blanche Wheelwright, 1929. c.: Barbara J.; Dana R. Exp.: Fellow in Astronomy, Swarthmore Coll., 1922-23; Heckscher Rsch. Asst. in X-Rays, Cornell Univ., 1923-24; Fellow in Physics, ibid., 1924-25; Radio Tube Devel. Engr., Westinghouse Lamp Co., Bloomfield, N. J., 1926-27; Instr. in Phys., Columbia Univ., 1927-31; Instr., Univ. of Nebr., 1931-34; Asst. Prof., ibid., 1934-41; Assoc. Prof., ibid., 1941; Staff Mem., Radiation Lab., M. I. T., 1941-45; Chf., Antenna Lab., U.S.A.F., Cambridge Rsch. Center, Cambridge, Mass., 1946—. Mem.: R.E.S.A.; Amer. Physical Soc.; Optical Soc. Amer.; Inst. of Radio Engrs.; Amer. Math. Soc.; Assn. for Computing Machinery; Fellow, A.A.A.S.; Sigma Xi. Contrb. to: Jour. Applied Physics; Jour. Optical Soc.; Physical Rev.; Rev. Scientific Instruments. Gen. Int.: Various Contributions to Microwave Antennas, Microwave Optics and Applied Math. Special Int.: X-Ray Spectroscopy; Antennas; Microwave Optics; Applied Math.

SPENCER, Warren Poppino, Prof. of Biol., Coll. of Wooster, Wooster, Ohio. **GENETICS.**

SPENCER-STRONG, G. H., 109 Witherspoon Rd., Baltimore, Md. **CERAMICS.**

SPENGLER, Kenneth C., Exec. Secy., Amer. Meteorological Soc., 5 Joy St., Boston, Mass. **METEOROLOGY.**

SPERANDIO, Glen Joseph, Instr. in Pharmacy, Purdue Univ., West Lafayette, Ind. **PHARMACY.**

SPERRY, Arthur Bradley, Prof. of Geol., Kans. State Coll., Manhattan, Kans. **SEDIMENTARY PETROLOGY.**

SPERRY, Omer Edison, Assoc. Prof., Dept. of Range and Forestry, Tex. A. and M. Coll., F. E. 24, College Station, Tex. **PLANT AND RANGE ECOLOGY.**

SPERRY, Warren Myron, Assoc. Prof. of Biochem., Columbia Univ., N. Y., N. Y. **BIOCHEMISTRY.**

SPESSARD, Earle Augustus, Prof. of Botany and Hd., Dept. of Biol., Hendrix Coll., Conway, Ark. **PLANT PHYSIOLOGY.**

SPICER, Clyde A., 17 Ridge Rd., Westminster, Md. **MATHEMATICS.**

SPIEGEL, Ernest A., Prof. and Hd., Dept. of Exptl. Neurology, Schl. of Med., Temple Univ., 3400 N. Broad St., Philadelphia, Pa. **NEUROLOGY.**

SPIEGEL-ADOLF, Mona, Prof. of Colloid Chem. and Hd. Dept., Schl. of Med., Temple Univ., Philadelphia, Pa. **COLLOID CHEMISTRY.**

SPIEGELMAN, Mortimer, Metropolitan Life Ins. Co., N. Y. C.

SPIEGELMAN, Sol, Univ. of Ill., Champaign, Ill. **MICROBIOLOGY.**

SPIEKER, Edmund Maute, Chmn., Dept. of Geol., Ohio State Univ., Columbus, Ohio. **STRATIGRAPHIC AND STRUCTURAL GEOLOGY.**

SPIER, Leslie, Box 880, Santa Cruz, Calif.

SPIES, John William, Neuropsychiatrist, State of Ind., 210 N. Warman Ave., Indianapolis, Ind. b. Paris, Tex., April 10, 1900. s. John Earl and Mary (Love) S. Edn.: M.D., Harvard Univ., 1924; A.B., Univ. of Tex., 1929; M.S., Yale Univ., 1930; M.P.H., Johns Hopkins Univ., 1943. m. Elizabeth Ann Satterfield. c.: William Allen Douglas; Mary Godfrey Pense. Exp.: Tchr. Tex. Pub. Schls., Fannin Tyler Schl. of Bus. Admin., Tyler, Tex., 1915-18; Rsch. Scholar, Harvard Med. Schl., Boston, Mass., 1920-24; Externe Adams Neuropsychiatric Inst., Jamaica Plain, Mass., 1922-24; House Surgeon, St. Luke's Hosp., New York, N. Y., 1924-26; Resident in Orthopedics, Medical Center, Jersey City, N. J., 1926-27; Resident Surg. and Fellow, Memorial Hosp., N. Y. C., 1927-29; Amer.-Belgian Found. Fellow 1929 and 1936; Instr. Yale Schl. of Med., New Haven, Conn., 1929-31; Assoc. Prof. of Surgery, Peiping Union Med. Coll., Peiping, China, 1931-35; Dir. TATA Mem. Hosp., Bombay, India, 1935-38; Dean, Med. Br., Prof. of Prev. Med. and Pub. Health, Prin. Administrator of Hosps., Univ. of Tex., Galveston, Tex.; 1938-42; Medical Clinician, Los Angeles, Calif., 1943-46; Public Health Dir. of Divs. of Communicable Diseases and Cancer Control, Del. State Bd. of Health, Marshalltown, Del., 1946-49; State Health Commissioner and Secy. to the Bd., Salt Lake City, Utah, 1949-50; Neuropsychiatrist, State of Idaho, 1950-51; Neuropsychiatrist for Veterans Administration, Marlin, Tex., 1951-52; Neuropsychiatrist, Veterans Administration Hosp., Lexington, Ky., 1952-53. Mem.: Amer. Radium Soc., Amer. Assoc. Pathologist and Bacteriologists, Royal Soc. of Apothecaries; Amer. Assn. for Cancer Rsch.; Amer. British, Chinese, Indian and Bombay Med. Assns., Amer. Bd. of Radiology; Royal Coll. of Surgeons; James Ewing Society; Amer. Genetic Soc.; Tex. Philo. Soc.; Mason; Alpha Kappa Kappa; Sigma Xi; Amer. Acad. of Pol. and Soc. Sci.; Assn. of Military Surgs. of U. S. Contrb. to: Med. Journals.

SPIES, Tom Douglas, Assoc. Prof. of Med., Univ. of Cincinnati, Cincinnati, Ohio. **MEDICINE.**

SPIETH, George Edward, Prof. of Chem., Hillsdale Coll., Hillsdale, Mich. **ORGANIC CHEMISTRY.**

SPIKE, James Edward, Jr., Asst. Dir. of Rsch., Reynolds Rsch., Reynolds Metals Co., Glen Cove, N. Y. **BIOPHYSICS.**

SPINK, William Wesley, Prof. of Med., Univ. of Minn. Hosp., Minneapolis, Minn. **INTERNAL MEDICINE.**

SPINNEY, Louis Bevier, Prof. of Physics, Iowa State Coll., Ames, Iowa. **PHYSICS.**

SPIRER, Jess, Dir., Univ. Guidance Center, Univ. of Miami, Coral Gables, Fla. **CLINICAL PSYCHOLOGY.** b. Verona, Pa., May 13, 1911. s. Jacob and Sadie (Singer) S. Edn.: A.B., Univ. of Pittsburgh, 1931; M.A., ibid., 1933; Ph.D., ibid., 1939; L.L.B., Duquesne Univ., 1943. m. Mildred Levenson, Aug. 23, 1936. c.: Ruth; Barbara Gene. Exp.: Psychologist, Western St. Penitentiary, Pittsburgh, Pa., 1934-42; Sr. Psychologist, ibid., 1942-45; Lectr. in Psychol., Univ. of Pittsburgh, Pitts-

burgh, Pa., 1943-45; Lectr., State Dept. Public Instruction, *ibid.*, 1943-45; Dir., Univ. Guidance Center, Univ. of Miami, Coral Gables, Fla., 1947—; Prof. of Psychol. and Sociol., *ibid.*, 1945—, Mem.: Southern Soc. of Electroencephalography; Amer. Bd. of Examiners in Professional Psychol.; Div. of Clinical and Abnormal Psychology; Amer. Psychological Assn.; Pa. Psychological Assn.; Sigma Xi; Psi Chi; Fla. Psychological Assn.; Sigma Alpha Mu. Special Int.: Clinical Psychol., Electroencephalography Criminology, Legal Psychol.

SPITZER, Lyman, Jr., Charles A. Young Prof. of Astron., Princeton Univ. Observatory, Princeton, N. J. **ASTROPHYSICS.** b. Toledo, Ohio, June 26, 1914. s. Lyman and Blanche (Brumback) S. Edn.: B.A., Yale Univ., 1935; Ph.D., Princeton Univ., 1938. m. Doreen D. Canaday, June 29, 1940. c.: Nicholas C.; Dionis C.; Sarah L. Exp.: Natl. Rsch. Fellow, 1938-39; Instr. in Physics and Astron., Yale Univ., 1939-42; Physicist, Columbia Univ., Div. of War Rsch., 1942-45; Dir., Sonar Analysis Group, *ibid.*, 1945-47; Rsch. Assoc., Yale Univ., 1944-46; Assoc. Prof., *ibid.*, 1946-47; Prof., Dir. of Observatory, Chmn. of Dept., Princeton Univ., 1947—, Mem.: Natl. Acad. Sci.; Amer. Astron. Soc.; Amer. Physical Soc.; Royal Astron. Soc., London; Astron. Soc. of the Pacific; British Interplanetary Soc.; Amer. Geophysical Union. Contrb. to: *Astrophys. Jour.*; Monthly Notice of the Royal Astron. Soc.; *Physical Rev.* Special Int.: Theoretical Astrophysics—Cosmogony, Interstellar Matter, Stellar Atmospheres; Theoretical Physics—Pressure Broadening, Transport Phenomena in an Ionized Gas.

SPOCK, Leslie Erskine, Assoc. Prof. of Geol., Wash. Sq. Coll., N. Y. Univ., N. Y., N. Y. **GEOLOGY, PETROLOGY**

SPOEHR, Herman Augustus, Chmn., Div. of Plant Biol., Carnegie Inst. of Wash., Stanford Univ., Calif. **PLANT PHYSIOLOGY.**

SPOHN, Adelaide, Nutritionist, Elizabeth McCormick Memorial Fund, 848 N. Dearborn St., Chicago, Ill. **NUTRITION.**

SPONSLER, Olenus Lee, Prof. Emer. of Botany, Univ. of Calif., Los Angeles 24, Calif. **BOTANY;**

PHYSICAL BIOLOGY;
PROTOPLASM, ULTRA-STRUCTURE. b. Akron, Ohio, June 17, 1879. s. Israel Seymour and Sarah Matilda (Lee) S. Edn.: A.B., Univ. of Mich., 1910; A.M., Univ. of Nebr., 1912; Ph.D., Stanford Univ., 1922. Exp.: Adj. Prof., Forestry and Botany, Univ. of Nebr., 1910-11; Associate Prof. in Chg., Forest Bot., *ibid.*, 1911-12; Assoc. Prof., Univ. of Mich., 1912-17; Wood Tech., Forest Products Lab., U. S. Forest Service, 1917-18; Instr., Bot., Univ. of Calif., Los Angeles, Calif., 1922-24; Asst. Prof., *ibid.*, 1924-26; Assoc. Prof., *ibid.*, 1926-28; Prof., *ibid.*, 1928-48; Emeritus, *ibid.*, 1948—. Hon. Pos.: Acting Chmn. of Sub-Div. of Botany, Univ. of Calif., Los Angeles, Calif., 1922-34; Chmn. of Dept. of Botany, *ibid.*, 1934-44; Chmn. of Grad. Group in Physical-Biol. Sci., *ibid.*, 1939-46. Mem.: A.A.A.S.; Amer. Botanical Soc.; Plant Physiologists; Soc. Exptl. Biol. Med.; Soc. for Study of Growth and Development; Western Soc. of Naturalists; Sigma Xi; Acacia Alumnus; Gamma Alpha; Mason; U. S. Figure Skating Assn. Author: *Trees*, 1923. Contrb. to: *Amer. Jour. Bot.*; *Protoplasma*; *Jour. Amer. Chem. Soc.*; *Plant Physiol.* War Record: W. W. I. Worked on Plywoods for Airplane Wings. Gen. Int.: Hon. Life Mem. in Amer. Soc. of Plant Physiol., 1942. Special Int.: Molecular Structure of Starch Grains, Cellulose, Cell Walls, etc. with X-Ray diffraction Methods; Molecular Structure of Protoplasm; Electron Microscope Studies of Protoplasm on the Micellar Level and at the Molecular-Micellar Border Line; Electrical Aspects of Protoplasm of the Molecular Level.

SPORN, Philip, Vice-Pres. and Chf. Engr., Amer. Gas and Electric Service Corp., 30 Church St., N. Y., N. Y. **ENGINEERING.**

SPRAGG, Sidney Duward Shirley, Asst. Prof. of Psychol., Univ. of Rochester, Rochester, N. Y. **PSYCHOLOGY.**

SPRAGUE, Austin Dever, Assoc. Prof. of Physics, DePauw Univ., Greencastle, Ind. **INFRA-RED SPECTROMETRY.**

SPRAGUE, George Frederick, Sr. Agronomist, U. S. D. A., Farm Crops Subsection, Iowa State Coll., Ames, Iowa. **PLANT BREEDING, GENETICS.**

SPRAGUE, James Maurice, Dir., Organic Chem. Rsch., Sharp and Dohme, Inc., Glenolden, Pa. **ORGANIC CHEMISTRY.**

SPRAGUE, Vance Glover, Agronomist, U. S. Pasture Rsch. Lab., State College, Pa. **PLANT PHYSIOLOGY.**

SPRINGER, William Moore, Vice-Pres. in Chg. Rsch., Bristol Myers Co., 60 Courter Ave., Maplewood, N. J.

SPROAT, Ira E., R. T. Vanderbilt Co., Park Ave., N. Y. 17, N. Y. **CERAMICS**

SPRUGEL, Dr. George Jr., Acting Hd., Biology Branch, Office of Naval Rsch., Navy Dept., Washington, D. C. **AQUATIC ECOLOGY.** b. Boston, Mass., Sept. 26, 1919. s. George and Frances (Strong) S. Edn.: B.S., Iowa State Coll., 1946; M.S., *ibid.*, 1947; Ph.D., *ibid.*, 1950. m. Catharine Cornwell, Oct. 27, 1945. c.: Douglas George. Exp.: Instr., Dept. of Zool. and Entomol., Iowa State Coll., Ames, Iowa, 1946-48; Asst. Prof., *ibid.*, 1948-51; Project Officer and Asst. Hd., Biol. Branch, Office of Naval Rsch., Navy Dept., Washington, D. C., 1951-52; Acting Hd., *ibid.*, 1952—. Mem.: Sigma Xi; R.E.S.A.; A.S.L.O.; A.A.A.S.; Amer. Fish Soc.; Iowa Acad. of Sci.; Phi Theta Kappa; Gamma Sigma Delta. Contrb. to: *Ecology*; *Proc. of Iowa Acad. of Sci.*; *Iowa State Coll. Jour. of Sci.* War Record: U. S. Navy, 1940-46. Special Int.: Aquatic Ecology; Limnol.; Fish Growth; Ecology and Population Mechanics in Muskrats.

SPURR, Josiah Edward, 324 Henkel Circle, Winter Park, Fla. **GEOLOGY.**

SQUIER, Theodore Louis, Assoc. Clinical Prof. of Med., Schl. of Med., Marquette Univ., Milwaukee, Wis. **INTERNAL MEDICINE, ALLERGY.**

SRENSEK, Stanley E., Pharmacologist, Div. of Pharmacol., Food and Drug Admin., Washington, D. C. **BIOASSAYS.**

STABLER, Robert Miller, Asst. Prof. of Zool., Univ. of Pa., Philadelphia, Pa. **PARASITOLOGY.**

STACK, John Langley Field, N. A. C. A. **AERODYNAMICS.**

STADIE, William Christopher, Prof., John Herr Musser Dept. of Rsch. Med., 821 Maloney Clinic, 36th and Spruce Sts., Philadelphia 4, Pa. **CHEMICAL ASPECTS OF CLINICAL INVESTIGATION; INTERMEDIARY METABOLISM; ACTION OF INSULIN AND OTHER HORMONES UPON INTERMEDIARY METABOLISM.** b. N. Y. City, June 15, 1886. s. Charles and Augusta (Kiseo) S. Edn.: B.S., N. Y. Univ., 1907; M.D., Coll. of Physicians and Surgeons, Columbia, 1916. m. Amanda Brugger, July 28, 1922. c.: Elizabeth Ann. Exp.: Intern. Presbyterian Hosp., N. Y. City, 1916-18; Asst. and Assoc. Mem., Hosp. of Rockefeller Inst., N. Y. C., 1918-21; Asst. Prof. of Med., Yale Univ., New Haven, Conn., 1921-24; Assoc. Prof., Rsch. Med., Univ. of Pa., Philadelphia, Pa., 1924-41; John Herr Musser Prof., Rsch. Med., Philadelphia, Pa., 1941—. Mem.: Amer. Physicians; Amer. Soc. for Clin. Investigation; Amer. Soc. of Biol. Chem.; Harvey Soc.; Philadelphia Coll. of Physicians; Natl. Acad. of Sci.; Amer. Philosophical Soc.; Former Assoc. Editor: *Amer. Jour. of Med. Sci.*; Editorial Board, *Jour. Biol. Chem.* Contrb. to: *Scientific Periodicals*. War Record: 1st Lt., Med. Corps, U. S. Army, 1918-19. Gen. Int.: Awarded John Phillips Memorial



medal of A.C.P., 1940. Special Int.: Chem. Aspects of Clin. Investigation; Intermediary Metabolism; Action of Insulin and Other Hormones Upon Intermediary Metabolism.

STADLER, Lewis John, Univ. of Mo., Columbia, Mo.

STADNICHENKO, Taisia Maximovna, Geologist, U. S. Geol. Survey, 917 18th St., N. W., Washington, D. C. COAL, CARBON SEDIMENTS.

STAFF, Edgar Jonathan, Chf., Div. Labs., State Dept. of Health, 345 State Office Bldg., Providence, R. I. BACTERIOLOGY.

STAFFORD, W. L., Johns-Manville Rsch. Center, Box 159, Manville, N. J. CERAMICS.

STAGE, Harry Hutchinson, Asst. Chf., Div. Aff. Man and Animals, Bur. of Ent. and Plant Quar., Washington 25, D. C. ENTOMOLOGY, MOSQUITO CONTROL AND RESEARCH. b. Crittenden, N. Y., May 1, 1894. s. Augustus E. and Grace (Hutchinson) S. m. Iantha E. Emmerling, Aug. 25, 1917. c.: Shirley Eileen; Anson Hutchinson. Exp.: U. S. Navy, 1917-18; Scientific Asst., Bur. Ent., N. Y. C., 1919-20; Entomologist, St. Louis S. W. Railway, Pine Bluff, Ark., 1920-30; Mosquito Investigations, Pacific N. W., 1930-40; Asst. Chief, Div. Insects Aff. Man and Animals, Bur. of Ent. and Plant Quar., Wash., D. C., 1940—. Mem.: Entomological Soc. of Wash.; Amer. Assn. of Econ. Ent.; Amer. Mosquito Control Assoc. Fla. Mosquito Control Assoc.; Wash. Ent.; N. J. Mosquito Control Proc. Gen. Int.: Widely Traveled on Mosquito Control and Rsch. Problems. Special Int.: Med. and Vet. Ent.

STAHLY, Eldon E., Sr. Fellow, Mellon Inst. Indus. Rsch., Pittsburgh, Pa. CHEMISTRY.

STAHLY, Grant L., Prof. of Bacteriol., Ohio State Univ., Columbus, Ohio. BACTERIOLOGY.

STANTON, Walter Hutchinson, Assoc. Prof. of Speech and Drama, Cornell Univ., Ithaca, N. Y. PHYSICS.

STAIR, Edward Clement, Assoc. Prof. of Horticulture, Purdue Univ., W. Lafayette, Ind. HORTICULTURE.

STAKMAN, Elvin Charles, Hd., Dept. of Plant Pathol. and Botany, Univ. of Minn.; Agent in Div. of Plant Disease Control, U. S. Dept. of Agri., Univ. Farm, St. Paul, Minn. PLANT PATHOLOGY; MYCOLOGY. b. May 17, 1885, Algoma, Wis. s. Frederick Stakman and Emelie (Eberhardt). Edn.: B.A., Univ. of Minn., 1906; M.A., *ibid.*, 1910; Ph.D., *ibid.*, 1913. Hon. Degs.: Dr. Nat. Sci., Univ. of Halle (Germany), 1938; D.Sc., Yale, 1950; Sc.D., Univ. of R. I., 1953. m. Louise Jensen of Minneapolis, Minn., 1917. Exp.: Tchr. in Pub. Schls. of Minn., 1906-



09; Instructor in Plant Pathology, Univ. of Minn., 1909; Asst. Prof., 1913; Assoc. Prof., 1916; Prof., 1918; Head of Section of Plant Pathology, 1913; Chief, Division of Plant Pathology and Botany, 1940; Pathologist in Charge of Barberry Eradication Campaign, U. S. Dept. of Agri., 1918; Pathologist and Agent, Bur. Plant Indus., U. S. Dept. Agri., 1919-34; Agent, Bur. Entomology and Plant Quarantine, U. S. Dept. of Agri., 1934—; Guest Prof., Univ. of Halle (Germany), 1930-31. Hon. Pos.: Mem., Exec. Com., Natl. Sci. Bd., 1950-53; Mem., Div. of Biol. and Agri., Natl. Rsch. Coun., 1931-34; Vice-Chmn., 1937-38, 1947-48; Chmn., Crop Protection Comm., 1942-45; Mem., Agri. Bd., 1950—; Mem., Exec. Comm., A.A.A.S., 1944-50; Pres., 1949; Mem., Adv. Comm. for Biol. Med., U. S. Atomic Energy Comm., 1947—; Scientific Mission to Japan, S.C.A.P., Dec., 1948; Advisor, U.N.E.S.C.O. Conf., Florence, 1950; Mem., Natl. Comm. for

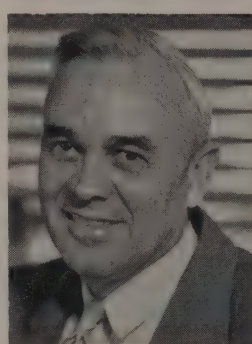
U.N.E.S.C.O., 1950-53; Delegate, Pan-Pac. Sci. Congress, 1923; Delegate, Natl. Acad. Sci. to 6th Internatl. Bot. Congress, 1935; Vice-Pres., Phytopathological Sect., 6th Internatl. Bot. Congress, 1935; Vice-Pres., Mycological Sect., 3rd Internatl. Congress for Microbiol., 1939; Pres., Sect. on Phytopathology, 7th Internatl. Bot. Congress, 1950; Emil Christian Hansen Gold Medal and Prize, 1928; Pres., Amer. Phytopathological Soc., 1922; Chmn., War Comm., 1942-43; Editor-in-Chief, *Phytopathology*, 1925-29; American Ed. of *Phytopathologische Zeitschrift*, 1931—; Mem., Ed. Com., Annual Rev. of Microbiology, 1946—. Mem.: Amer. Phytopath. Soc.; Amer. Genetic Assn.; Amer. Acad. Arts and Sci.; A.A.A.S.; A.A.U.P.; Amer. Soc. Naturalists; Amer. Philos. Soc.; Bot. Soc. Amer.; Brit. Myc. Soc.; Hist. Sci. Soc.; Kais. Akad. Naturf. (Halle); Minn. Acad. Sci.; Minn. Hist. Soc.; Myc. Soc. Amer.; Natl. Acad. Sci.; Philos. Sci. Assn.; Torrey Bot. Club; Wash. Acad. Sci.; Hon. Mem., Amer. Coll. Allergists; Hon. Mem., Canadian Phytopathol. Soc.; Hon. Mem., Japanese Phytopathol. Soc.; For. Mem., Royal Swedish Acad. of Agri.; Mem., Norwegian Acad. of Arts and Letters; Hon. Mem., Karachi Bot. Soc.; Corres. Mem., Ver. f. Angew. Bot.; Phi Beta Kappa; Sigma Xi; Alpha Zeta; Gamma Sigma Delta; Gamma Alpha; Skylight Club. Contrb. to: Bull. of Torrey Bot. Club; Phytopathol., U. S. Dept. of Agriculture Yearbooks; Phytopathology; Bot. Gazette; Amer. Jour. of Bot.; Bot. Rev.; Proc., Pan-Pac. Sci. Cong., 1923; Proc., Internatl. Congr. Pl. Sci., 1929; Proc., 6th Internatl. Cong. Genetics, 1932; Proc., 5th Pac. Sci. Cong., 1933; Proc., Zesde Internatl. Bot. Cong., 1935; Proc., 3rd Internatl. Cong. Comp. Path., 1935; Jour. of Allergy and Others.

STALDER, Walter, Consulting Petroleum Geologist, Crocker Bldg., San Francisco, Calif. PETROLEUM GEOLOGY.

STALLARD, Harvey, Private Practice, 803 Medico-Dental Bldg., San Diego, Calif. DENTISTRY.

STAMBERG, Olof Ernest, Dir., Tech. Service Dept., Red Star Yeast and Products Co., 221 E. Buffalo St., Milwaukee, Wis. CHEMISTRY.

STAMM, Alfred J., Subject Matter Specialist, United States Forest Products Lab., Madison 5, Wis.



PHYSICAL AND COLLOID CHEMISTRY OF WOOD AND WOOD PRODUCTS. b. Los Angeles, Calif., Dec. 29, 1897. s. August Julius and Elizabeth (Kottmeier) S. Edn.: B.S., Calif. Inst. of Tech., 1917-21; M.S., Univ. of Wis., 1923; Ph.D., *ibid.*, 1925. Hon. Deg.: International Edn. Bd. Fellow, Uppsala Sweden. m. Endine, Aug. 16, 1928. c.: Virginia, Bonnie, Alfred John. Exp.: Chemist, General Petroleum Corps, Los Angeles, 1921-22; Asst. in Chem., Univ. of Wis., 1922-25; Assoc. Chem. U. S. Forest Products Lab., 1925-28; Chemist to Principal Chemist, U. S. Forest Products Lab., Madison 5, Wis., 1928-46; Chief Div. Derived Products, *ibid.*, 1946-51; Subject Matter Specialist, *ibid.*, 1951—. Hon. Pos.: Chmn. Colloid Div., Amer. Chem. Soc. Mem.: Amer. Chem. Soc. Forest Products Rsch. Soc.; Alpha Chi; Sigma, Tau Beta Pi; Sigma Xi; Phi Lambda Upsilon. Author: Chemical Processing of Wood, 1952. War Record: W. W. I. General Int.: 17 Patents on wood processing and dimensional stabilization. Special Int.: Physical and Colloid Chem. of Wood and Wood Products.

STAMMELMAN, Mortimer J., Pres., Atmos Products Co., 119 W. 23rd St., N. Y., N. Y. CHEMISTRY.

STANDER, Henricus Johannes, Prof. of Obstetrics and Gynecology, Cornell Univ., N. Y., N. Y. OBSTETRICS AND GYNECOLOGY.

STANDLEY, Paul C., Curator Herbarium, Chicago Natural History Museum, Chicago, Ill. **BOTANICAL SCIENCES.**

STANFIELD, Joseph Fisher, Prof. of Botany and Hd. Dept., Miami Univ., Oxford, Ohio. **PLANT PHYSIOLOGY.**

STANFORD, Ernest Hall, Asst. Prof. of Agron. and Asst. Agronomist, Expt. Sta., Univ. of Calif., Davis, Calif. **PLANT BREEDING.**

STANFORD, Joseph Sedley, Assoc. Prof. of Zool. and Entomol., Utah State Agri. Coll., Logan, Utah. **MEDICAL ENTOMOLOGY.**

STANLEY, Robert LeRoy, Education Dir., Diesel Engine Manufacturers Assn., One N. La Salle St., Chicago 2, Ill. **DIESEL ENGINES.** b. Marion, Ohio, Nov. 20, 1913. s. Frank Leslie and Bertha May (Probst) S. m. Barbara R. Cechman, April 14, 1949. c.: Elizabeth Ann. Edn.: Bachelor of Mechanical Engrng., Ohio State Univ., 1936; M.S., Rutgers Univ., 1939. Exp.: Instructor, Rutgers Univ., Ext. Div., 1936-39; Instr., Union Coll., Schenectady, N. Y., 1939-43; Asst. Prof. of Eng., Union Coll., 1943-47; Assoc. Prof. of Eng. Rsch., Pa. State Coll., 1947-53; Ednl. Dir., Diesel Engine Manufacturers Assn., Chicago, Ill., 1953—; Oct. 1950-Mar. 1951 on leave of absence to serve as Ednl. Director for Diesel Engine Manufacturers Assn., Chicago. Mem.: Soc. of Automotive Engrs.; Amer. Soc. of Mechanical Engrng.; Amer. Soc. for Engrng. Edn.; A.A.U.P.; Sigma Xi; Masons. Hobbies: Golf; Photography.

STANLEY, Wendell Meredith, Univ. of Calif., Berkeley 4, Calif.

STANSEL, Roy Harrison, Mgr. Private Concern, 1705 Hill St., Alvin, Tex. **AGRICULTURE.**

STANTON, Hazel Martha, Reg. Mgr. Business Rsch., Daniel Starch and Staff, 420 Lexington Ave., N. Y., N. Y. **PSYCHOLOGY.**

STANTON, Timothy William, retired, 1017 N. Noyes Dr., Silver Springs, Md. **GEOLOGY.**

STANTON, Thomas Ray, Sr. Agronomist in Chg. Oat Investigation, U. S. Bureau Plant Indus., Beltsville, Md. **AGRONOMY.**

STANWICH, Charles A., 131 Rynda Rd., South Orange, N. J. **ENGINEERING.**

STARBURG, Harry Leonard, Instr. in Pharmacol., Coll. Med. Evangelists, Loma Linda, Calif. **MEDICINE.**

STARCH, Daniel, Pres., Daniel Starch and Staff, 420 Lexington Ave., N. Y., N. Y. **PSYCHOLOGY.**

STARCH, Elmer A., Great Plains Economist, U. S. D. A., Washington, D. C. **ECONOMICS.**

STARIN, William Alfred, Prof. of Bacteriol., Ohio State Univ., Columbus, Ohio. **BACTERIOLOGY, IMMUNOLOGY.**

STARK, Arvil Lane, Dir. of Agri. Rsch. and Information, P. O. Box 140, Sugarhouse Sta., Salt Lake City, Utah. **HORTICULTURE.**

STARK, Clifford Nicks, Prof. of Bacteriol., Dairy Bldg., Cornell Univ., Ithaca, N. Y. **MEDICAL SCIENCES.**

STARK, John T., Prof. of Geol., Northwestern Univ., Evanston, Ill. **STRUCTURAL GEOLOGY.**

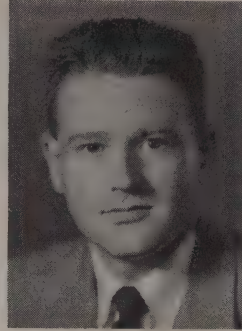
STARK, Louis M., Mgr., Schl. Service, Westinghouse Electric Corp., 306 Fourth Ave., Pittsburgh, Pa. **EDUCATION.**

STARK, Marion Elizabeth, Prof. of Math., Wellesley Coll., Wellesley, Mass. **MATHEMATICAL ANALYSIS.**

STARK, Mary B., Visiting Prof., Hamline Univ., St. Paul, Minn. **BIOLOGY.**

STARK, Orton Kirkwood, Prof. of Bacteriol., Miami Univ., Oxford, Ohio. **BACTERIOLOGY.**

STARKEY, Walter Leroy, Asst. Prof., Ohio State Univ., Columbus 10, Ohio. **MECHANICAL ENGINEERING.** b. Minneapolis, Minn., Oct. 5, 1920. s. Harry N. and Rena B. (Towne) S. Edn.: B.M.E., Univ. of Louisville, 1943; M.Sc., Ohio State Univ., 1947; Ph.D., *ibid.*, 1950. m. Bonna Bethane Preston, 1949. c.: David Harry. Exp.: Instr., Univ. of Louisville, 1943-46; Instr., Ohio State Univ., 1947-50; Asst. Prof., *ibid.*, 1951—; Hon. Pos.: Univ. Scholarship, Ohio State Univ., 1946; Robinson Fellowship, *ibid.*, 1947, 1948-49. Mem.: Sigma Xi; Amer. Soc.



Mechanical Engrs.; Tau Beta Pi; Pi Tau Sigma; Pi Mu Epsilon. Special Int.: Machine Design; Applied Mechanics; Fatigue of Metals.

STARR, Isaac, Dean Med. Schl. and Prof. Therapeutic Rsch., Univ. of Pa., Philadelphia, Pa. **INTERNAL MEDICINE.**

STARR, Merle Arthur, Asst. Prof. of Physics, Univ. of Ore., Eugene, Ore. **PHYSICS.**

STATEN, Raymond Dale, Asst. Prof., Univ. of Ark., Fayetteville, Ark. **AGRONOMY DEPARTMENT SPECIALIZING IN GRASS BREEDING AND PASTURE MANAGEMENT.** b. Stillwater, Okla., May 17, 1922. s. Hi W. and Anna Eleanor (Wertman) S. Edn.: B.S., Okla. A. and M. Coll., 1947; M.S., Univ. of Nebr., 1949; Ph.D., *ibid.*, 1951. m. Betty Lou Coldwell, May 4, 1946. c.: Barbara Sue, Larry Wray. Exp.: Asst. Prof. of Agronomy, Univ. of Ark., Fayetteville, Ark., 1951—. Mem.: Amer. Soc. of Agronomy, Sigma Xi; Alpha Zeta; Phi Sigma; Gamma Sigma Delta. Contrb. to: Agronomy Jour.; Whats New in Crops and Soils. Special Int.: Rsch. Pasture Management and Utilization, Forage Crop Improvement particularly Grasses. Instr. in Principles of Pasture Management; and Seed Technol. Including Identification, Judging, and Commercial Grading of Farm Crops.

STATES, Marshall Ney, Vice-Pres., Central Scientific Co., 1700 Irving Park Rd., Chicago, Ill. **PHYSICS.**

STAUD, Cyril J., Supt., Emulsion Rsch. Lab., Eastman Kodak Co., Kodak Park, Rochester, N. Y. **PHOTOGRAPHY.**

STAUFFER, Clinton Raymond, Prof. Emer. Geol., Univ. of Minn., Minneapolis, Minn.; 2247 Loma Vista St., Pasadena, Calif. **STRATIGRAPHIC GEOLOGY.**

STAUFFER, John Frederick, Jr., Asst. Prof. of Botany, Univ. of Wis., Madison, Wis. **PLANT PHYSIOLOGY.**

STEARN Allen Edwin, Prof. of Chemistry, Chairman of Department, Univ. of Mo., Columbia, Mo. **PHYSICAL CHEMISTRY.** b. September 14, 1894, Lafayette, Ind. s. John H. and Louise (Hagerty) S. Edn.: A.B., Stanford, 1915; M.A., Stanford, 1916; M.S., Univ. of Ill., 1917; Ph.D., Univ. of Ill., 1919. m. Esther A. Wagner of Chicago, Ill., Jan. 20, 1920. d. Rev. M. and Emma Wagner. c.: Enid Wagner. Exp.: Asst. Prof., Univ. W. Va., 1920; Instr., Univ. of Ill., 1919; Asst. Prof., Univ. of Mo., 1921-24; Rsch. Assoc., Calif. Inst. Tech., 1924-26; Assoc. Prof., Univ. Mo., 1926-38; Prof. and Chmn. Chem. Dept., *ibid.*, 1938—; Rsch. and Develop. Chem., Mallinckrodt Chem. Wks., St. Louis, Mo., summer, 1915-17. Hon. Pos.: A.C.S.: Sigma Xi; Phi Mu Alpha. Mem.: A.C.S.; A.A.U.P.; Mo. Acad. of Sci.; A.A.A.S.; Soc. Amer. Bact.; Amer. Assn. Pub. Health; Phi Beta Kappa; Sigma Xi; Phi Mu Alpha; Alpha Chi Sigma; Phi Lambda Upsilon. Author: An Elem. Outline of Analytical Chem., 1922; Studies in the Physico-Chemical Behavior of Bacteria, 1928. Contrb. to: Jour. A.C.S.; Jour. Chem. Phys.; Jour. Phys. Chem.; Jour. Bact.; Amer. Jour. Pub. Health; Jour. Lab. and Clin. Med.; Jour.

Exptl. Med.; Jour. Gen. Psychol.; Jour. Biol. Chem.; Protoplasm; Jour. Inf. Dis.; Stain Tech.; Jour. Ind. Eng. Chem.; Erg. D. Enzymforsch. Ph.D. Dissertation: A Study of the Heats of Dilution of Certain Aqueous Salt Solutions. Special Int.: Chemical Kinetics.

STEARN, John Theodore, Chem. Engr., Inventor and Consultant in Chem., Internatl. Business Machine Corp., 310 Fifth Ave., N. Y., N. Y. INDUSTRIAL CHEMISTRY.

STEARN, Noel Hudson, Vice-Pres., W. C. McBride, Inc., Oil Co., 2101 Missouri Pacific Bldg., St. Louis 3, Mo. GEOL.



OGY. b. Lafayette, Ind., Sept. 23, 1896. s. John H. and Sally Louise (Hagerty) S. Edn.: B.A., Stanford Univ., 1917; M.A., ibid., 1918; Ph.D., Wis. Univ., 1926. m. Juliann Agnes Winter, Dec. 31, 1949. c.: Joan Summer; John Winter. Exp.: Consultant: Detroit, Mackinac and Marquette Land Co.; Loretto Iron Co., Loretto, Mich.; Dinamita Mine, Chihuahua, Mex.; Chf. of Exploration Expedition into B. C.; W. C. McBride, Cassiar Mts. of Northern

Inc., St. Louis, Mo.; Leo Yount, Inc., Eldorado, Ark.; Amer. Boy Mine, Patagonia, Ariz.; Ark. Geol. Survey, Harbison-Walker Refractories Co.; Ducktown Chemical and Iron Co.; Mo. Geol. Survey; Chicago World's Fair Centennial Celebration; Chf. Geol. and Vice-Pres., Southwestern Quicksilver Co., 1930-41; Pres., ibid., 1941-44; Chf. Geologist, W. C. McBride, Inc., 1930-40; Vice-Pres., ibid., 1940-50; Vice-Pres., and Co-Mgr., ibid., 1950—. Mem.: Amer. Inst. Mining and Metallurgical Engrs.; Geol. Soc. Amer., Fellow; Amer. Assn. Petroleum Geologists; Soc. Econ. Geologists; Soc. Petroleum Geophysicists; A.A.A.S., Fellow; Sigma Xi; Phi Beta Kappa; Gamma Alpha; Phi Delta Kappa; Phi Mu Alpha; Mo. Acad. Sci.; St. Louis Acad. Sci.; Amer. Geophysical Union; Mo. Soc. of Professional Engrs.; Ill. Geol. Soc.; Ill.-Ind. Petroleum Assn.; Independent Petroleum Assn. of Amer. Author: Cloak of Words, 1936. Contrb. to: A.I.M.E.; A.A.P.G. Bull.; Mining Jour.; Engrng. and Mining Jour.; Econ. Geol.; Amer. Mineralogist; Jour. Geol.; Oil Weekly; etc. War Record: Lieut., Infantry, World War I. Special Int.: Geomagnetism; Petroleum Geol.; Econ. Geol.

STEARNS, Carl Leo, Prof. of Astron., Wesleyan Univ., Middletown, Conn. ASTRONOMY.

STEARNS, Howard Oliver, Assoc. Prof. of Physics, Simmons Coll., 300 The Fenway, Boston, Mass. PHYSICS.

STEBBINS, G. Ledyard, Jr., Prof. of Genetics, Univ. of Calif., Davis, Calif. PLANT GENETICS. b.



Lawrence, N. Y., Jan. 6, 1906. s. George L. and Edith (Chandler) S. Edn.: Ph.D., Harvard Univ., 1931. m. Margaret Chamberlaine, June 13, 1931. c.: Edith; Robert; George. Exp.: Instr., Colgate Univ., 1931-35; Jr. Geneticist, 1935-39; Asst. Prof. of Genetics, Univ. of Calif., Berkeley, Calif., 1939; Assoc. Prof. of Genetics, ibid., 1940-46; Prof. of Genetics, Univ. of Calif., Davis, Calif., 1947—. Hon. Pos.: Pres., Soc. for the Study of Evolution, 1947. Mem.: Sigma Xi; Natl. Acad. of Sci.; Soc. Amer. Naturalists; Phi Beta Kappa. Author: Variation and Evolution in Plants, 1950; etc. Contrb. to: Amer. Jour. Botany; Genetics; Evolution; Amer. Naturalist;

Madrono. Special Int.: Genetics and Breeding of Forage Plants particularly Grasses; Plant Evolution, Dynamics of Natural Populations in Plants.

STEBBINS, Joel, Rsch. Assoc., Lick Obs., Univ. of Calif., Mt. Hamilton, Calif. ASTRONOMY. b. Omaha, Nebr., July 30, 1878. s. Charles Sumner and Sara Ann (Stubbs) S. Edn.: B.S., Univ. of Nebr., 1899; Ph.D., Univ. of Calif., 1903. Hon. Deg.: Sc.D., Univ. of Wis., 1920; LL.D., Univ. of Nebr., 1940; LL.D., Univ. of Calif., 1953. m. May Prentiss, 1905. c.: Robert Prentiss; Isabelle (Mrs. Theodore A. Dodge). Exp.: Instructor, Asst. Prof. and Prof., Astronomy, Univ. of Ill., Urbana, Ill., 1903-22; Prof. of Astronomy, and Director, Washburn Observatory, Univ. of Wis., Madison, Wis., 1922-48; Emeritus, ibid., 1948—; Research Assoc. Lick Obs., Univ. of Calif., Mt. Hamilton, Calif., 1948—. Mem.: Natl. Acad. of Sci.; Amer. Phil. Soc.; Amer. Acad. of Arts and Sci.; Amer. Astronomical Soc.; Foreign Assn. Royal Astronomical Soc.; Phi Delta Theta; Sigma Xi; Phi Beta Kappa. Contrb. to: Astrophys. Jour. Gen. Int.; Rumford Medals; Draper Medal; Bruce Medal; Gold Medal; Roy. Astron. Soc. Special Int.: Application of Photoelectric Cell to Stellar Photometry; Variable Stars; Cosmology.

STEBINGER, Eugene, retired, Rt. 2, Box 695, Los Altos, Calif. PETROLEUM GEOLOGY.

STECKBECK, David Walter, Botanical Hall, Univ. of Pa., Philadelphia, Pa. BOTANICAL SCIENCES.

STEEL, Alvin Arthur, Fruit Grower and Mining Engr., Rt. 3, Parma, Idaho. GEOLOGY.

STEEL, Matthew, Prof. of Chem., L. I. Coll. of Med., Brooklyn, N. Y. CHEMISTRY.

STEELE, Byram W., 3103 S. W. 23rd St., Miami, Fla. CONCRETE RESEARCH.

STEELE, Dewey G., Prof. of Genetics, Univ. of Ky., Lexington, Ky. GENETICS.

STEELE, Frank John, Chf. Pharmacist, Greenwich Hosp., Greenwich, Conn. PHARMACY.

STEELE, Harold, retired, 415 Erie St., S. Haven, Mich. HORTICULTURE.

STEELE, John Gordon, Sr. Soil Scientist, Soil Conservation Service, U. S. D. A., Washington, D. C. SOILS AND SOIL CONSERVATION.

STEENBOCK, Harry, Prof. of Biochem., Univ. of Wis., Madison, Wis. BIOCHEMISTRY.

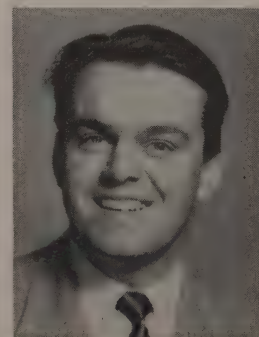
STEER, Mack D., SPEECH AND HEARING.

STEERE, William Campbell, Prof. of Botany and Curator Bryophytes, Univ. of Mich., Ann Arbor, Mich. BOTANY.

STEES, James G., Army and Navy Club, 17th and Eye St., Washington, D. C. ENGINEERING.

STEFANSSON, Vilhjalmur, 67 Morton St., N. Y., N. Y. GEOGRAPHY, ANTHROPOLOGY.

STEFFEN, Rolf Marcel, Assoc. Prof. of Physics, Purdue Univ., W. Lafayette, Ind. NUCLEAR



PHYSICS. b. Basel, Switzerland, June 17, 1922. s. Wilhelm F. and Tilly E. (Bodenweber) S. Edn.: Ph.D., Swiss Federal Inst. of Tech., 1949. m. Heidi Gassmann, Feb. 18, 1949. c.: Roy Peter. Exp.: Grad. Asst., Swiss Fed. Inst. of Tech., 1945-49; Asst. and Assoc. Prof. of Physics, Purdue Univ., W. Lafayette, Ind., 1949—. Mem.: Amer. Phys. Soc.; Sigma Pi Sigma; Sigma Chi; Schweizerische Physikalische Gesellschaft. Contrb. to: Phys. Rev.; Helvetica Physica Acta; Sci., etc. Special Int.: Internal Conversion of

Gamma and X-Rays; Angular Correlation of Successive Gamma Rays; Influence of the Chem. State on Angular Correlation Measurements; Nuclear Energy Levels.

STEFFEN, Gustav Ivar, Asst. Dir., Bureau Labs., N. Y. City Dept. of Health, 125 Worth St., N. Y., N. Y. BACTERIOLOGY.

STEGGERDA, Frederic Russell, Assoc. Prof. of Physiol., Univ. of Ill., Urbana, Ill. PHYSIOLOGY.

STEGHER, Robert Morgan, Asst. Prof. of Med., Med. Schl., Western Reserve Univ., Cleveland, Ohio. INTERNAL MEDICINE.

STEHR, William Carl, Prof. of Entomol., Ohio Univ., Athens, Ohio. ENTOMOLOGY.

STEIDTMANN, Edward, Prof. of Geol., Va. Military Inst., Lexington, Va. TEACHING, GEOLOGY.

STEIL, William Nicholas, 1926 N. 53rd St., Milwaukee, Wis. BOTANICAL SCIENCES.

STEIN, Irving F. STERILITY.

STEIN, Irving Melville, Vice-Pres. and Dir. of Rsch., Leeds and Northrup Co., 4901 Stenton Ave., Philadelphia, Pa. SCIENTIFIC INSTRUMENTS.

STEIN, Kathryn Forney, Prof., Zool. Mt. Holyoke Coll., S. Hadley, Mass. ZOOLOGY. b. Nov. 24, 1902, Annville, Pa. d Geo. W. and Rose Emma (Witmer) S. Edn.: B.A., Mt. Holyoke Coll., 1924; M.S., Univ. Chicago, 1928; Ph.D., ibid., 1931. Exp.: Asst. Zool., Mt. Holyoke Coll., 1924-25; Instr., ibid., 1925-27; Asst. Prof., ibid., 1933-41; Assoc. Prof., 1941-47; Prof., ibid., 1947—. Asst. Zool., Univ. Chicago; Anat., Yale. Mem.: A.A.A.S.; Amer. Assn. Anat.; Amer. Assn. Geneticists, Soc. Study of Growth; Amer. Soc. Human Genetics; Phi Beta Kappa; Sigma Xi; Sigma Delta Epsilon. Contrb. to: Anat. Rec.; Proc. Soc. Exp. Biol. and Med. Ph.D. Dissertation: The Location and Differentiation of the Presumptive Ectoderm and Hypophysis as Shown by Chorio-Allantoic Grafts. Travel: Europe; London; Edinburgh. Hobbies: House; Garden; Travel. Listed in: Who's Who in Amer.; A.M.S. Special Int.: Genetics, Endocrinology, Hematology.

STEINBACH, Otto Francis, Asst. Prof. of Chem., Queens Coll., Flushing, N. Y. PHYSICAL CHEMISTRY.

STEINBERG, John Christian, Mem. Technical Staff, Rsch. Physicist, Bell Telephone Labs., 463 West St., N. Y., N. Y. COMMUNICATION ACOUSTICS.

STEINBERG, Robert Aaron, Plant Physiologist, U. S. D. A., Plant Indus. Sta. Beltsville, Md. PLANT PHYSIOLOGY.

STEINER, Gotthold, U. S. Plant Indus. Sta., Beltsville, Md. ZOOLOGICAL SCIENCES.

STEINER, Harold M., General Mgr., Knouse Farms and Orchards, Flora Dale, Pa. ENTOMOLOGY.

STEINER, John, Rsch. Chemist, Miner Labs., 9 S. Clinton St., Chicago, Ill. CHEMISTRY.

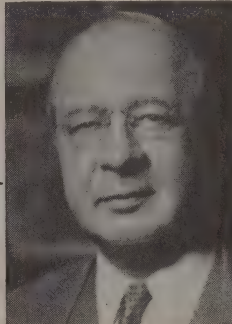
STEINER, Luke Eby, Prof. of Chem. and Hd. Dept., Oberlin Coll., Oberlin, Ohio. PHYSICAL CHEMISTRY.

STEINER, Paul E., Assoc. Prof. of Pathol., Univ. of Chicago, Chicago, Ill. PATHOLOGY.

STEINHAUS, Arthur H., Prof., Physiol. and Dir., Div. of Health and Physical Edn., Geo. Williams Coll., 5315 Drexel Ave., Chicago, Ill. PHYSIOLOGY. b. Oct. 4, 1897, Chicago, Ill. s. Henry D. and Rose Daehler. m. Eva Kunzmann of Keokuk, Ia., 1921. c.: Robert A. Edn.: B.S., 1920, Univ. of Chicago; B.P.E., Geo. Williams Coll., 1921; M.S., Univ. of Chicago, 1925; M.P.E., Geo. Williams Coll., 1926; Ph.D., Univ. of Chicago, 1928. Exp.: Instr. in Biological Sci., Geo. Williams Coll., 1920-28; Prof. of Physiol., ibid., 1928—. Visiting Prof., Univ. of Calif., Berkeley, Summer Sessions, 1937, 1939, 1941; Univ. of Colo., Summer, 1942; Univ. of Wis., Summers, 1943, 1949; During 1944 on Leave to

Serve as Chief, Div. of Phys. Edn. and Health Activities, U. S. Office of Edn.; Aug., 1945-July, 1946 on Leave as Consultant, Sect. on Health Edn., The Robinson Foundation, Inc., N. Y. C.; Univ. of Saskatchewan, Summer, 1946; Lectr. in Edn., Northwestern Univ. Coll., 1948-49; Summer of 1950, Univ. of Ore. Mem.: Amer. Physiol. Soc.; Amer. Genetic Assn.; Fellow, A.A.A.S.; Pres., Amer. Acad. of Phys. Edn., 1943-45; Fed. Internationale Medico-Sportive; Amer. Assn. Health, Phys. Edn. and Recreation (Vice-Pres., 1947-48); Amer. Pub. Health Assn.; Ill. Assn. Health, Phys. Edn., Recreation, and Safety (Pres., 1948-49); N.E.A.; Sigma Xi; Kappa Delta Pi; Pi Gamma Mu. Ph.D. Dissertation: The Effect of Exercise on the Basal Metabolism. Contrb. to: Amer. Jour. of Physiol.; Proceedings Soc. of Expt. Biol. and Med.; Rsch. Quart. of Amer. Assn. Health, Phys. Edn., and Recreation; Jour. of Health and Phys. Edn.; Phys. Edn. Rev.; Jour. of Phys. Edn.; Jour. of Phys. Edn. and Schl. Hyg., Eng.; Arbeitsphysiologie, Germany; Physiological Rev.; Annual Rev. of Physiol.; War Med.; Amer. Jour. Pub. Health; Clin. Med. Rschs. of Gen. Int.: The Physiology of Exercise and the Chronic Effects of Exercise. Author: Tobacco and Health, 1939; How to Keep Fit and Like It, 1943; More Firepower for Health Edn., 1945; Lects. on the Physiology of Exercise, 1948; Fellow on John Simon Guggenheim Memor. Foundation, 1931-32; Guest Lectr., Internatl. Cong. of Phys. Edn. and Sport Students Cong., Berlin, 1936. Roberts-Gulick Award, 1940; William Anderson Award of Merit, 1951.

STEINMAN, David Barnard, Consulting Engr., 117 Liberty St., N. Y. 6, N. Y. DESIGN AND CONSTRUCTION OF LONG-SPAN BRIDGES; BRIDGE AERODYNAMICS. b. N. Y., N. Y., June 11, 1886, s. Louis Kelvin and Eva (Scolard) S. Edn.: B.S., Coll. of the City of N. Y., 1906; A.M., Columbia Univ., 1909; C.E., ibid., 1909; Ph.D., ibid., 1911. Hon. Deg.: Sc.D., Coll. of the City of N. Y., 1947; Dr. of Engrng., Manhattan Coll., 1953; Dr. of Sci., Columbia Univ., 1953; Dr. of Engrng., Rensselaer Poly. Inst., 1953; LL.D., Alfred Univ., 1953. m. Irene Hoffman, June 9,



1915. c.: John Francis; Alberta; David. Exp.: Engrng. Work until 1910; Prof. of Civil Engrng., Univ. of Idaho, 1910-14, also Consulting Practice; Special Asst. to Gustav Lindenthal on Design and Construction of Hell Gate Arch Bridge and Other Notable Bridges, 1914-17; Prof. in Chg. of Civil and Mech. Engrng., Coll. of the City of N. Y., 1917-20; Consulting Practice, 1920—; Designing or Consulting Engr. for Many Notable Bridges, Including Suspension Bridge at Florianopolis, Brazil (largest bridge in S. A.), 1922-26; Carquinez Strait Bridge, Calif. (longest cantilever bridge in the U. S.), 1923-27; Bridge at Grand Mere, Que., Can., 1928-29; St. John's Bridge, Portland, Ore. (highest span in the Northwest), 1929-31; Sydney Harbor Bridge, Australia; Cologne-Muhlheim Bridge, over the Rhine, Germany; Mt. Hope (R. I.) Bridge (longest span in New England), 1927-29; Waldo Hancock Bridge, Maine, 1930-31; Tri-Borough Bridge, N. Y. City; Sky-Ride and Observation Towers (Century of Progress Expn., Chicago), 1933; Henry Hudson Bridge, N. Y. City; Thousand Islands Internatl. Bridge, over St. Lawrence River (5 bridges), 1937-38; Deer Isle-Sedgwick Bridge, Maine, 1938-39; Lions Gate Bridge, Vancouver, B. C., Can., 1937-39; Charter Oak Bridge, Hartford, Conn., 1941-42; and others on 5 continents; Engaged in Reconstruction of Brooklyn Bridge, 1948-52; Vice-Pres., Tioga-Nichols Bridge Co., Smithboro Bridge Co.; Dir., Independence Bridge Co., Interboro Bridge Co., Richmond-Hopewell Bridge Co.; Pres., Pan-American Public Works, Inc. Hon. Pos.: Chmn. for N. Y. State, Natl. Com. for Trade Recovery, 1933-34; Mem., Senate, Columbia Univ. Dept. of Engrng.; Mem., Natl. Council of Natl. Econ. League; Mem., Exec. Com., Engrs. Council for Professional Development; Pres., Amer. Toll Bridge Assn., 1932-

34; Hon. Vice-Pres. and Mem. Adv. Council, Laymen's Natl. Com.; Inventor of New Influence Line Methods and Charts for Design of Railway Bridges; Improvements in Suspension Bridge Design; New System of Design Loading for Railway Bridges; Simplified Methods of Analysis for Bridge Design; Aerodynamic Analysis of Suspension Bridges. Mem.: Natl. Organizing Comm. of Freedom Internatl.; Pub. Works Comm. of N. Y. Soc. of Architects; Natl. Comm. for Columbia Univ. Schl. of Engrng.; Sigma Alpha; Union County Chapter of N. J. Soc. of Professional Engrs.; Erie County Chapter of N. Y. Soc. of Professional Engrs.; Chmn., Comm. on Registration, A.S.C.E., 1951-52; Vice-Chmn., N. Y. State Bd. of Examiners of P. E., 1952-53; Vice-Pres., Associated Alumni of C. C. N. Y., 1950-53; Awarded Testimonial Scroll by Alumni and Friends of Madison House, 1952; Certificate of Cooperation, U. S. Mutual Security Agency, 1952; Fellow of Rsch. Council, Emerson Univ.; Fellow, Aerial League of Amer.; A.A.A.S.; Amer. Geog. Soc.; Royal Soc. of Arts; Life Mem., Phi Beta Kappa; Amer. Soc. Civil Engrs.; Colegio de Ingenieros de Puerto Rico; N. Y. Good Roads Assn.; Cooper Union Alumni Assn.; Chmn., U. S. Council of Internatl. Assn. Bridge and Structural Engrs.; Amer. Assn. Engrs.; Natl. Soc. Professional Engrs.; N. Y. State Soc. Professional Engrs.; N. Y. State Bd. Examiners for Professional Engrs. and Land Surveyors; Natl. Council State Bds. of Engrng. Examiners; Amer. Engrng. Council; Brooklyn Engrs. Club; Amer. Railway Engrng. Assn.; Amer. Soc. for Testing Materials; Amer. Concrete Inst.; Amer. Military Engrs.; Soc. for Engrng. Edn.; Assoc. Alumni Coll. of City of N. Y.; Engrng. Inst. of Can.; Municipal Engrs. of N. Y.; Corp. of Professional Engrs. of Que.; Idaho Soc. of Engrs.; Amer. Inst. of N. Y.; Natl. Pub. Housing Conf.; Advisory Council of City Charter Com. of N. Y.; Amer. Math. Soc.; Acad. Political Sci.; Met. Regional Com. Engrs. Employment and Salaries; Architects and Engrs. Alliance; Ohio Soc. Professional Engrs.; Ky. Soc. Professional Engrs.; Tex. Soc. Professional Engrs.; Hon. Life Mem., Nassau County Chapter, N. Y. State Soc. of Professional Engrs.; Hon. Mem., Engrng. Alumni of Coll. of the City of N. Y.; Life Mem., Professional Engrs. of Ore.; Hon. Mem., Hudson County Soc. Professional Engrs.; Phi Beta Kappa; Sigma Xi; Tau Beta Pi; Soc. for Preservation of Covered Bridges; Natl. Travel Club; Chi Epsilon; Pres., N. Y. Acad. Sci.; Hon. Mem., Legion Belge (Belgium); Hon. Mem., Free French War Veterans; Hon. Mem., Accademia di Filologia Classica (Rome, 1952); Hon. Mem., Internatl. Faculty, Andhra Univ. (India); Trustee of the French Univ. of N. Y.; Hon. Mem., Societe des Ingenieurs Professionnels (France); Life Fellow, Royal Soc. of Arts (England); Pres., Union Internationale des Ingenieurs Professionnels. Hon. Pos.: Knight Commander (with Star) of the Order of the Gold Cross of the Military Chapter of Cyprus and Jerusalem (Rome, 1952); Cross of Commander, Grand Prix Humanitaire de Belgique (Belgium, 1952); Cross of Knight of the Ordre des Chevaliers de la Croix de Lorraine (Paris, 1952); Hon. Companion of the Resistance of the Ordre des Chevaliers de la Croix de Lorraine et des Compagnons de la Resistance (Paris, 1952). Author: Bridges and Their Builders, 1941; The Builders of the Bridge, 1945; Suspension Bridges, Their Design, Construction and Erection, 1923 and 1929; Suspension Bridges and Cantilevers; The Wichert Truss; Famous Bridges of the World, 1953. Contrb. to: A.S.C.E. Trans.; Ency. Britannica; Ency. Americana; Collier's Ency.; Assoc. Editor, Engrs. Handbook Library, 1921-23. Gen. Int.: Registered Professional Engr. in N. Y., Ore., Ill., Maine, Iowa, Conn., Fla., Ohio, Nebr., Que., Ont., British Columbia, Puerto Rico, N. J., Mich.; Awarded J. James R. Croes Medal, 1919, Normal Medal, 1923 and 1951; Thomas Fitch Rowland Prize, 1929, all by Amer. Soc. Civil Engrs.; Artistic Bridge Awards, Amer. Inst. Steel Construction, 1930, 1932, 1937, 1938, 1939, 1942; Prize, Amer. Assn. Engrs. for "Vow of Service," adopted for Engrng. Profession, 1926; Alfred T. White Prize, Brooklyn Engrs. Club, 1934; Townsend Harris Medal for Professional Achievements, Assoc. Alumni of Coll. of the City of N. Y., 1934; Alumni Service Medal, 1936; Columbia Medal for Excellence, 1947; Eggleston Medal, 1950; Presented with Silver Scroll for Contributions to Adv. of Engrng. by Eleven Engrng. Societies, 1932; Inventor, Improvements in Stereo-Photography; Presented 1952 with Highest

Award of Natl. Soc. of Professional Engrs. for Distinguished Service for the Advancement of the Engrng. Profession and Devotion to Humanity.

STEINMAYER, Reinhard August, Prof. of Geol., Tulane Univ., New Orleans, La. **ENGINEERING, GEOLOGY.**

STEINMETZ, Ferdinand Henry, Prof. of Botany and Hd. Dept., Botany and Entomol., Univ. of Maine, Orono, Maine. **PLANT PATHOLOGY.**

STEINMETZ, Harry Charles, Assoc. Prof. of Psychol., San Diego State Coll., San Diego, Calif. **PSYCHOLOGY.**

STEINMETZ, Mary E., Hd., Sci. Dept., Abington Friends Schl., Jenkintown, Pa. **MATHEMATICS.**

STENQUIST, John L., Dir. of Rsch., Measurements and Statistics, Dept. of Edn., 3 E. 25th St., Baltimore, Md. **PSYCHOLOGY, EDUCATION.**

STENSTROM, Karl Wilhelm, Prof. of Biophysics, Med. Schl., Univ. of Minn., Minneapolis, Minn. **PHYSICS, MEDICAL SCIENCES.**

STEPHAN, Frederick Franklin, Rm. 300, 20 Nassau St., Princeton, N. J. **STATISTICS.**

STEPHAN, Robert M., Dental Surgeon, U. S. P. H. S., Natl. Inst. of Health, Bethesda, Md. **DENTAL RESEARCH.**

STEPHENS, Henry Newburn, Dir. of Rsch., Minn. Mining and Mfg. Co., St. Paul, Minn. **ORGANIC CHEMISTRY.**

STEPHENS, Stanley G., Prof. of Genetics, Hd., Genetics Faculty, Div. of Biological Sci., N. C. State Coll., Raleigh, N. C. **CYTOGENETICS OF COTTON WITH PARTICULAR REGARD TO THE MECHANISM OF SPECIES DIFFERENTIATION.** b. Sept. 2, 1911, Dudley, Worcestershire, Eng. s. George and May (Selwood) S. Edn.: M.A., Cambridge Univ., Eng., 1936; Ph.D., Edinburgh Univ., 1941. m. Dorothy L. Bolam, Sept. 2, 1938. d. George and Louise Bolam. c.: David Bolam; Michael George. Exp.: McGill Univ., Can., 1944-45; Carnegie Inst., Rsch. Assoc., 1945-47; Texas A. and M. Coll., Prof. Gen., 1947-49; N. C. State Coll., Rsch. Prof. of Agron., 1949-51; Hd. Genetics Faculty, *ibid.*, 1951—. Mem.: Sigma Xi; N. C. Acad. of Sci.; Gen. Soc. of Amer.; Amer. Soc. of Natural.; A.A.A.S. Co-Author: The Evolution of Gossypium, 1948. Contrb. to: Gen.; Jour. Hered.; Jour. Gen.; Bot. Rev.; Amer. Nat.; Arch. Biochem. Ph.D. Dissertation: Studies of Yield in Cereals. Travel: West Indies; Guatemala; Yucatan; El Salvador.

STEPHENS, William Edwards, Assoc. Prof. of Physics, Univ. of Pa., Philadelphia, Pa. **NUCLEAR PHYSICS.**

STEPHENS, William Richmond, Prof. of Chem., Baylor Univ., Waco, Tex. **CHEMISTRY.**

STEPHENSEN, Bird Richard, Physicist, Edward J. Meyer Memorial Hosp., Buffalo, N. Y. **X-RAY.**

STEPHENSON, Edward Beattie, Sr. Assoc. Supt. Sound Div., Naval Rsch. Lab., Washington, D. C. **SOUND PHYSICS.**

STEPHENSON, Eugene A., Prof. and Hd., Dept. of Petroleum Engrng., Univ. of Kans., Lawrence, Kans. **PETROLEUM ENGINEERING.**

STEPHENSON, Roscoe Elmo, Prof. of Soils, Ore. State Coll., Corvallis, Ore. **SOIL SCIENCE.**

STEPHENSON, William, Univ. of Chicago, Ill. **PSYCHOLOGY.**

STERN, Curt, Univ. of Calif., Berkeley, Calif.

STERN, Kurt, Dir., Blood Center, Mount Sinai Med. Rsch. Foundation and Hospital, Chicago, Ill. **CANCER RESEARCH, BLOOD GROUPS AND BLOOD TRANSFUSIONS, GENERAL PATHOLOGY.** b. Vienna, Austria, April 3, 1909. s. Leopold and Elsa (Heller) S. Edn.: M.D., Univ. of Vienna Med. Schl., 1933. m. Florence Shirley

Sherman, May 28, 1939. c.: Elsa L.; Josef J.; David M. Exp.: Instr., Inst. of Med. Chem., Univ. of Vienna, 1930-33; Rsch. Assoc. Inst. Med. Chem., Univ. of Vienna, 1933-38; Delegate to First International Cancer Congress, Madrid, 1933; Rsch. Fellow, New York Univ., and Cancer Div. Bellevue Hosp., N. Y. C., 1939-40; Jr. Physician, N. Y. State Inst. Malignant Diseases, Buffalo, N. Y., 1943-45; Asst. Pathologist, Mount Sinai Hosp., Chicago, Ill., 1945-48; Asst. Dir., Mt. Sinai Med. Rsch. Found., 1946-50; Dir., Blood Center, ibid., 1950—; Asst. Prof., Dept. of Path., Chicago Med. Schl., Chicago, Ill., 1949—, Mem.: Amer. Soc. Clinical Path.; A.A.A.S.; A.M.A.; Ill. Soc. Path.; Chicago Path. Soc.; Amer. Assn. for Cancer Rsch.; N. Y. Acad. of Sci. Author: Die Wege und Ergebnisse Chemischer Krebsforschung, 1936; The Biochemistry of Malignant Tumors, 1943 (with R. Willheim). Contrb. to: Jour. Clinical Path.; Proc. Soc. Exper. Biol. and Med.; Military Surgeon; Cancer Rsch.; Proc. Amer. Assn. Blood Banks; Biological Abstracts; Amer. Jour. Med. Sci.; Jour. Lab. and Clinical Medicine. Gen. Int.: Clinical Pathology.

STERN, Alexander W., Physicist, Civil Engr., Bureau of Highway Design, Municipal Building, Brooklyn 1, New York.



QUANTUM THEORY; ELEMENTARY PARTICLES; THE CONCEPTS OF MODERN PHYSICS. b. N. Y., N. Y., Nov. 30, 1898. s. William and Kate (Lewin) S. Edn.: Cooper Union, 1916-20; Coll. City of N. Y., 1921-22; Univ. of Mich., Symposia on Theoretical Physics, Summers 1931-33. m. Bertha Gendel, June 29, 1924. c.: Kathryn. Exp.: Civil Engr., Bureau of Highway Design, Brooklyn, N. Y., 1924—. Mem.: Amer. Phys. Soc.; Fellow, A.A.A.S.; N. Y. Soc. Professional Engrs. Contrb. to: Phys. Rev.; Sci.; Phys. Today; Scientia; Proc. Internatl. Congress of Math.; Jour. Chem. Edn.; Philos. of Sci.; etc. Special Int.: The Range and Validity of the Concepts of Modern Phys.; The Application of the Ideas and Concepts of Quantum Theory to Biol., Psychol. and Other Scientific Disciplines; Quantum Theory; The Uncertainty Principle; Cosmic Rays.

Stern, Malvin David, Firestone Rsch. Fellow, Frick Chem. Lab., Princeton Univ., Princeton, N. J. CHEMICAL PHYSICS.

STERN, Otto, 759 Cragmont Ave., Berkeley, Calif.

STERRETT, Douglas Bovard, Pavilion, B. C., Can. GEOLOGY.

STETSON, George Albert, Editor, Amer. Soc. Mech. Engrs., 29 W. 39th St., N. Y., N. Y. ENGINEERING.

STETSON, Harlan True, Dir., Cosmic Terrestrial Rsch. Lab., 31 Bird St., Needham, Mass.

STETSON, Henry Crosby, Assoc. Curator Oceanography, Museum Comparative Zool., Harvard Univ., Cambridge, Mass. OCEANOGRAPHY.

STETSON, John Minor, Prof. and Hd., Dept. of Math., Coll. of Wm. and Mary, Williamsburg, Va. DIFFERENTIAL GEOMETRY.

STEVENS, Alexander Raymond, Prof. of Urology, Med. Coll., Cornell Univ., N. Y., N. Y. MEDICINE, UROLOGY.

STEVENS, Harold E., Amherst Apts., Orlando, Fla. BOTANICAL SCIENCES.

STEVENS, Howard Elmore, Assoc. Prof. Mech. Engrng., Rensselaer Poly Inst., Troy, N. Y. PRODUCTION ENGINEERING.

STEVENS, John Cyprian, Consulting Engr., Stevens and Thompson, Engrs., 600 National Bldg., Portland, Ore. HYDRAULICS. b. Moline, Kans., Jan. 9, 1876. s. Charles Freeland and Esther Meek (Kilgore) S. Edn.: B.S. in C.E., Univ. of Nebr., 1905; C.E., ibid., 1928. Hon. Deg.: Dr. of Engrng., Ore. State Coll., 1938; Dr. of Engrng., Univ. of Nebr., 1947. m. Nancy Canning, June 15, 1905. c.: Jane Canning; Martha Elizabeth; Robert John; Nancy Lou. Exp.: Asst. State Engr., Nebr., 1902-03; Asst. Engr., U. S. Reclamation Service, Nebr., 1903-04; Engr., U. S. Geol. Survey, Nebr., 1904-05; District Engr., ibid., 1905-10; Private Practice, Portland, Ore., 1910-12; In Chg. Engrng. Design and Construction for Two Hydroelectric Developments for Pearson Engrng. Corp. of N. Y. in Spain, 1912-14; Engr. in Chg., West Okanogan Valley Irrigation District, 1915-16; Resumed Private Practice, July, 1916; Partnership with R. E. Koon, Stevens and Koon, Consulting Engrs., Portland, Ore., 1920-52; Partner, Stevens and Thompson, Engrs., Portland, Ore., 1952—; Treasurer, Leupold and Stevens Instruments, Inc., Portland, Ore., 1915—. Hon. Pos.: Consultant, Gas-Ice Corp., Seattle, Wash., 1934—; Mem., Bd. of Engrs., Portland Sea Wall and Sewage Pumping Plant; Consultant, Natl. Resources Planning Bd., Washington, D. C.; Consultant, U. S. Bureau of Reclamation, Denver, Colo.; Consultant, Mont. Power Co., Butte, Mont.; Consultant, Idaho Power Co. Analysis of Hells Canyon Dam; Consultant, Portland General Electric Co.; Secy., Special Com. on Irrigation Hydraulics, Amer. Soc. Civil Engrs., 1922-23; Chmn. Com. on Hydraulic Rsch., ibid., 1934-45; Pres., Ore. Section, ibid., 1936; Dir., ibid., 1932-34; Natl. Pres., ibid., 1945; Mem. of Com. that Drafted Ore. Water Law, Ore. State Conservation Commn., 1907-13; Vice Chmn., Super-Power Survey of Pacific Northwest, 1921-23; Mem., Portland Post War Development Com., 1943—; Mem., Ore. State Bd. of Higher Curricula, 1925-28; Pres., Geol. Soc. of the Ore. Country, 1940-41; Regional Chmn., Pacific Northwest, Amer. Geophysical Union, 1938—; Dir., Speakers Bureau, Ore. Defense Council, 1942-45. Mem.: Amer. Soc. of Civil Engrs.; Professional Engrs. of Ore.; A.A.A.S.; Portland Rotary; Amer. Inst. of Consulting Engrs. Gen. Int.: Norman Medal (Gold), Amer. Soc. Civil Engrs., 1938; Gold Medal, Sigma Tau, was one of the founders, also Natl. Pres., 1928-32; Registered Professional Engr. in the states of Ore., Wash., Idaho, Calif., Wyo.



STEVENS, Kenneth Porter, Prof. and Hd., Dept. of Biol., Washington and Lee Univ., Lexington, Va. PHYSIOLOGY.

STEVENS, Kenneth Richards, Rsch. Assoc. Prof., Utah State Agri. Coll., Logan, Utah. AGRICULTURAL BACTERIOLOGY.

STEVENS, Kenneth Richards, Rsch. Assoc. Prof., Utah State Agri. Coll., Logan, Utah. AGRICULTURAL BACTERIOLOGY.

STEVENS, Ludlow Robert, Apt. E-2, 4712 Leiper St., Philadelphia, Pa. HEMATOLOGY, BACTERIOLOGY.

STEVENS, Neil Everrett, Prof. of Botany, Univ. of Ill., Urbana, Ill. PLANT PATHOLOGY.

STEVENS, Orin Alva, Botanist, N. Dak. Agri. Coll., Fargo, N. Dak. BIOLOGY.

STEVENS, Russell B., Assoc. Prof. of Botany, Univ. of Tenn., Knoxville, Tenn. MYCOLOGY.

STEVENS, Stanley Smith, Prof. of Psychol.; Dir., Psychological Lab., Memorial Hall, Harvard Univ., Cambridge 38, Mass. EXPERIMENTAL PSYCHOLOGY AND PSYCHOACOUSTICS. b. Ogden, Utah, Nov. 4, 1906. s. Stanley S. and Adeline (Smith) S. Edn.: A.B., Stanford Univ., 1931; Ph.D., Harvard Univ., 1933. m. Maxine Leonard (Div.).

c.; Peter Smith. Exp.: Asst. in Psychol., Harvard Univ., Cambridge 38, Mass., 1932-34; National Resch. Fellow, *ibid.*, 1934-35; Resch. Fellow in Physics, *ibid.*, 1935-36; Instr. in Psychol., *ibid.*, 1936-38; Asst. Prof., *ibid.*, 1938-44; Assoc. Prof., *ibid.*, 1944-46; Prof. of Psychol., *ibid.*, 1946—; Dir. Psychological Lab., *ibid.*, 1949—; Dir., Psychoacoustic Lab., *ibid.*, 1944—; Hon. Pos.: Chmn. Nat. Resch. Council Div. of Anthropol. and Psychol., 1949-52. Expert Consultant, Resch. and Dev. Bd., 1946-53. Mem.: Natl. Acad. of Sci.; Amer. Acad. of Arts and Sci.; Amer. Psychological Assn.; Amer. Physiological Soc.; Acoustical Soc. of Amer.; Soc. of Experimental Psychologists; Phi Beta Kappa; Sigma Xi. Author: Hearing, 1938 (with H. Davis); The Varieties of Human Physique, 1940 (with W. H. Sheldon and W. B. Tucker); The Varieties of Temperament, 1942 (with W. H. Sheldon). Editor: Handbook of Experimental Psychol., 1951. Awarded Howard Crosby Warren Medal by the Soc. of Experimental Psychol., 1943; awarded Presidential Certificate of Merit, 1948. Special Int.: Hearing; Theory of Measurement.

STEVENS, Terrill Dryden, Prof. of Forestry, Ala. Poly. Inst., Auburn, Ala. **FORESTRY.**

STEVENSON, Earl Place, Pres. and Dir., Arthur D. Little, Inc., 30 Memorial Dr., Cambridge, Mass. **CHEMISTRY.**

STEVENSON, Holland Newton, Attending Laryngologist, New Rochelle Hosp., Professional Bldg., New Rochelle, N. Y. **OTOLARYNGOLOGY.**

STEVENSON, John Albert, Prin. Mycologist, Hd. Div. Mycology and Disease Survey, Bureau Plant Indus., Soils and Agri. Engrng., Beltsville, Md. **MYCOLOGY.**

STEVENSON, Paul Huston, Sr. Surgeon, Div. Mental Hygiene, U. S. P. H. S., Bethesda, Md. **MEDICINE, PUBLIC HEALTH.**

STEWART, Julian H., Prof. of Anthropol., Columbia Univ., N. Y., N. Y. **SOCIAL ANTHROPOLOGY.**

STEWART, Carl J., Coun. and Math. Instr., Rt. 5, Bloomington, Ind. **MATHEMATICS.** b. Monroe Co., Aug. 6, 1919. s. Geo. and Maude (Owens) S. Edn.: B.S., Central Normal Coll., 1946; M.S., Ind. Univ., 1948. m. Ruth Hall. c.: Jeanne Dell; Daniel Carl. Exp.: Prin. Elem. Schl., Monroe Co., Ind., 1938-40; Asst. Prin., Lebanon Elem. Schl., Lebanon, Ind., 1940-42; Asst. Prin., Fairview Elementary Schl., Bloomington, Ind., 1945-46; Counselor, Math. Instr., Bloomington H. S., and Critic Tchr., Ind. Univ., 1946-51. Mem.: N.E.A.; Indiana State Tchrs. Assn.; Alpha Mu Kappa; Phi Delta Kappa; Delta Pi Epsilon. War Record: U. S. Navy, 3 Yrs. Now in U. S. Naval Reserve. Travel: England; Africa; France; Panama Canal; Hawaii; Philippines. Hobbies: Basketball; Football; Track; other Sports; Gardening.

STEWART, Dorothy Robson, Rockford Coll., Rockford, Ill. **CELLULAR PHYSIOLOGY.**

STEWART, Fred Waldorf, Pathologist, Memorial Hosp., N. Y., N. Y. **PATHOLOGY.**

STEWART, George, Chf. Range Reseeding Resch., U. S. Forest Service, Ogden, Utah. **RANGE ECOLOGY.**

STEWART, George Walter, retired, part-time Prof. of Phy., St. Univ. of Iowa, Hall of Phy., Iowa City, Iowa. **PHYSICS.** b. Feb. 22, 1876, St. Louis, Mo. s. Oliver Milton and Eleanor (Bell) S. Edn.: A.B., DePauw, 1898; Ph.D., Cornell, 1901; Sc.D., DePauw, 1928; Pittsburgh Univ., 1931; Kalamazoo

STEWART, Guy Robertson, Asst. to Chf. Resch., Soil Conservation Service, U. S. D. A., Washington, D. C. **SOIL FERTILITY.**

STEWART, Harold A., Biol. Sci. Instr., Bloomington H. S., Bloomington, Ind. **BIOLOGY AND SOIL CONSERVATION.** b. Monroe County, Ind., January 14, 1917. e. George and Maude May (Owens) S. Edn.: B.S., Central Normal Coll., 1945; M.S., Ind. Univ., 1948. m. Rossie Mae Phillips of Monroe Co., Ind., May 6, 1939. d. Mr. and Mrs. Charles Phillips. c.: Dewey Wesley. Exp.: Elm. Schl., Monroe Co., Ind., 1938-40; Prin., Kirksville Elm. Schl., Monroe Co., 1940-42; Prin., Smithville Elem. Schl., Monroe Co., 1942-43; Phys. Edn. Suprv. and Asst. Prin., Fairview Elem. Schl., Bloomington, Ind., 1943-45; Monroe Co. Attendance Officer, 1945; Hist. Dept. Head, Bedford H. S., 1946; Instr. of Biol. Sci., Canterbury Coll., 1946-47; Instr. of Biol. Sci., Bloomington H. S., 1946-51. Mem.: Ind. Acad. of Sci.; N.E.A.; Bloomington Fed. of Tchrs.; Alpha Mu Kappa; Phi Delta Kappa; Southern Ind. Schl. Men's Club. Hobbies: Fishing; Collection of Bones of Mammals.

STEWART, Homer Joseph, Assoc. Prof. of Aeronautics and Meteorology, Calif. Inst. of Tech., Pasadena, Calif. **AERODYNAMICS.**

STEWART, James K., Technical Adviser, Pigment Color and Chemical Div., Sherwin-Williams Co., 115th and Cottage Grove Ave., Chicago, Ill. **CHEMISTRY.**

STEWART, John Quincy, Assoc. Prof. of Astronomical Physics, Princeton Univ., Princeton, N. J. **ASTRONOMY.**

STEWART, Maude Gertrude, 410 Winona St., Northfield, Minn.

STEWART, Morris Albion, Assoc. Prof., Parasitology and Asst. Dean Grad. Div., Div. Entomol. and Parasitology, Univ. of Calif., Berkeley, Calif. **PARASITOLOGY.**

STEWART, Paul Rich, Pres. and Prof. of Geol., Waynesburg Coll., Waynesburg, Pa. **GEOLOGY.**

STEWART, Ralph Thomas, Asst. Chf. Food Div., Office Internatl. Trade, Dept. of Commerce, Washington, D. C. **AGRICULTURE.**

STEWART, Robert Meldrum, Dominion Astronomer, Dominion Observatory, Observatory House, Ottawa, Ont., Can. **ASTRONOMY.**

STEWART, W. C., Asst. Prof., Dept. of Physiol., Univ. of Alberta, Edmonton, Alta., Can. **PHARMACOLOGY.**

STICKEL, William Henson, Asst. Biologist, Patuxent Resch. Refuge, U. S. Fish and Wildlife Service, Bowie, Md. **HERPETOLOGY AND MAMMALOLOGY.**

STIEGLER, Harold W., Dir. of Resch., Amer. Assn. Textile Chemist and Colorists, Lowell Textile Inst., Lowell, Mass. **CHEMISTRY.**

Coll., 1950. m. Zella White, July 7, 1904. c.: Rodney C. Exp.: Cornell Univ., Asst. Phy., 1899-1901; *ibid.*, Instr., 1901-03; Univ. of N. Dak., 1903-09; State Univ. of Iowa, Instr., 1909; Hd. of Dept., *ibid.*, 1909-46; Retired, 1946. Mem.: Phi Beta Kappa; Sigma Xi; Phi Kappa Pi; Pi Epsilon; Phi Kappa Psi; Natl. Acad. Sci.; Amer. Physical Soc.; Amer. Optical Soc.; Amer. Acoustical Soc. Amer. Inst. of Physics. Author: Theory of Acoustics, 1930; Introd. Acoustics, 1932. Hon. Pos.: Pres., Soc. of Sigma Xi, 1929-31; Pres., Amer. Phys. Soc., 1942. Travel: Around the World. Listed in: Who's Who; A.M.S.

STEWART, Guy Robertson, Asst. to Chf. Resch., Soil Conservation Service, U. S. D. A., Washington, D. C. **SOIL FERTILITY.**

STEWART, Harold A., Biol. Sci. Instr., Bloomington H. S., Bloomington, Ind. **BIOLOGY AND SOIL CONSERVATION.** b. Monroe County, Ind., January 14, 1917. e. George and Maude May (Owens) S. Edn.: B.S., Central Normal Coll., 1945; M.S., Ind. Univ., 1948. m. Rossie Mae Phillips of Monroe Co., Ind., May 6, 1939. d. Mr. and Mrs. Charles Phillips. c.: Dewey Wesley. Exp.: Elm. Schl., Monroe Co., Ind., 1938-40; Prin., Kirksville Elm. Schl., Monroe Co., 1940-42; Prin., Smithville Elem. Schl., Monroe Co., 1942-43; Phys. Edn. Suprv. and Asst. Prin., Fairview Elem. Schl., Bloomington, Ind., 1943-45; Monroe Co. Attendance Officer, 1945; Hist. Dept. Head, Bedford H. S., 1946; Instr. of Biol. Sci., Canterbury Coll., 1946-47; Instr. of Biol. Sci., Bloomington H. S., 1946-51. Mem.: Ind. Acad. of Sci.; N.E.A.; Bloomington Fed. of Tchrs.; Alpha Mu Kappa; Phi Delta Kappa; Southern Ind. Schl. Men's Club. Hobbies: Fishing; Collection of Bones of Mammals.



STEWART, Homer Joseph, Assoc. Prof. of Aeronautics and Meteorology, Calif. Inst. of Tech., Pasadena, Calif. **AERODYNAMICS.**

STEWART, James K., Technical Adviser, Pigment Color and Chemical Div., Sherwin-Williams Co., 115th and Cottage Grove Ave., Chicago, Ill. **CHEMISTRY.**

STEWART, John Quincy, Assoc. Prof. of Astronomical Physics, Princeton Univ., Princeton, N. J. **ASTRONOMY.**

STEWART, Maude Gertrude, 410 Winona St., Northfield, Minn.

STEWART, Morris Albion, Assoc. Prof., Parasitology and Asst. Dean Grad. Div., Div. Entomol. and Parasitology, Univ. of Calif., Berkeley, Calif. **PARASITOLOGY.**

STEWART, Paul Rich, Pres. and Prof. of Geol., Waynesburg Coll., Waynesburg, Pa. **GEOLOGY.**

STEWART, Ralph Thomas, Asst. Chf. Food Div., Office Internatl. Trade, Dept. of Commerce, Washington, D. C. **AGRICULTURE.**

STEWART, Robert Meldrum, Dominion Astronomer, Dominion Observatory, Observatory House, Ottawa, Ont., Can. **ASTRONOMY.**

STEWART, W. C., Asst. Prof., Dept. of Physiol., Univ. of Alberta, Edmonton, Alta., Can. **PHARMACOLOGY.**

STICKEL, William Henson, Asst. Biologist, Patuxent Resch. Refuge, U. S. Fish and Wildlife Service, Bowie, Md. **HERPETOLOGY AND MAMMALOLOGY.**

STIEGLER, Harold W., Dir. of Resch., Amer. Assn. Textile Chemist and Colorists, Lowell Textile Inst., Lowell, Mass. **CHEMISTRY.**

STIEGLITZ, Edward Julius, Physician, 1726 Eye St., N. W., Washington, D. C. **MEDICINE.**

STIEHLER, Robert Daniel, Rubber Technologist, Natl. Bureau of Standards, Washington, D. C. **PHYSICAL CHEMISTRY.**

STIER, Theodore J. B., Assoc. Prof. of Physiol., Schl. of Med., Ind. Univ., Bloomington, Ind. **PHYSIOLOGY.**

STIFLER, William Warren, Prof. of Physics, Amherst Coll., Amherst, Mass. **PHYSICS.**

STILES, George Whitfield, Dir. of Labs., Colo. State Bd. of Health, 517 Custom House, Denver, Colo. **BACTERIOLOGY.**

STILES, Harold, Assoc. Prof. of Physics, Iowa State Coll., Ames, Iowa. **SPECTROSCOPY.**

STILES, Karl A., Prof. of Biol., Mich. State Coll., East Lansing, Mich. **GENETICS.**

STILL, Alfred, retired, 6038 34th Ave., N. E., Seattle, Wash. **SCIENCE HISTORY.**

STILL, Eugene Updyke, Dir. of Rsch., Strong Cobb and Co., Inc., Cleveland, Ohio. **BIOCHEMISTRY.**

STILLMAN, Ralph Griffiths, Asst. Prof. of Med., Cornell Univ., N. Y., N. Y. **CLINICAL PATHOLOGY.**

STILLMAN, Thomas Bliss, Engrng. Consultant, Babcock and Wilcox Co., 85 Liberty St., N. Y., N. Y. **MARINE BOILERS.**

STIMPERT, F. D., Parke Davis & Co., Detroit, Mich. **BACTERIOLOGY.**

STIMSON, Arthur Marston, Med. Dir., retired, U. S. P. H. S., 414 Raymond St., Chevy Chase, Md. **PUBLIC HEALTH.**

STIMSON, Harold Frederick, Physicist, Natl. Bur. of Standards, Washington, D. C. **HEAT MEASUREMENTS.**

STIRLING, Matthew Williams, Chf., Bureau Amer. Ethnology, Smithsonian Inst. Bldg., Washington, D. C. **ANTHROPOLOGY.**

STITT, Rhea Emerson, Agronomist, U. S. D. A., Cooperating Mont. Agri. Expt. Sta., Bozeman, Mont. **GRASS BREEDING.**

STOCK, Kurt, retired, Fish Creek, Wis. **METALLURGY, GEOLOGY.**

STOCKARD, Alfred Henry, Asst. Prof. of Zool., Dir., Biol. Sta., Univ. of Mich., Ann Arbor, Mich. **VERTEBRATE MORPHOLOGY.**

STOCKBARGER, Donald Charles, Assoc. Prof. of Physics, Mass. Inst. of Tech., Cambridge, Mass. **EXPERIMENTAL PHYSICS.**

STOCKING, Charles Howard, Prof. of Pharmacy, Coll. of Pharmacy, Univ. of Mich., Ann Arbor, Mich. **PHARMACY.**

STOCKMEYER, Walter H., Prof., Mass. Inst. of Tech., Cambridge, Mass. **CHEMISTRY.**

STOCKTON, Robert Summers, Construction Engr., Irrigation and Land Development, Craigantler Ranch, Thompson Falls, Mont. **IRRIGATION.**

STOCKWELL, Marvel M., Assoc. Prof. of Econ., Univ. of Calif., 405 Hilgard Ave., Los Angeles, Calif. **PUBLIC FINANCE.**

STODDARD, Ernest Marion, Assoc. Plant Pathologist, Conn. Agri. Expt. Sta., New Haven, Conn. **PLANT PATHOLOGY.**

STODDARD, George Dinsmore, Pres., Univ. of Ill., Urbana, Ill. **PSYCHOLOGY.**

STODDARD, Herbert Lee, Sherwood Plantation, Thomasville, Ga. **ORNITHOLOGY.**

STODDARD, Kenneth B., Assoc. Prof. of Physiol. Optics and Optometry, Dean, Schl. of Optometry, Univ. of Calif., Berkeley, Calif. **PHYSIOLOGICAL OPTICS.**

STOESZ, A. Dietrich, Sr. Agronomist and Chf., Regional Nursery Div., Soil Conservation Service, Box 713, Lincoln, Nebr. **PLANT ECOLOGY, SOIL CONSERVATION.**

STOKES, James Raysor, Chmn., Div. of Sci. and Hd. Biol. Dept., Ga. State Coll. for Women, Mill-
edgeville, Ga. **BOTANY.**

STOKES, John Hinchman, Prof. of Dermatology and Syphilology, Grad. Schl. Med., Univ. of Pa., Philadelphia, Pa. **DERMATOLOGY, SYPHILOLOGY.**

STOKES, Ruth Wyckliffe, Prof., Math., Syracuse Univ., Syracuse, N. Y. **MATHEMATICS AND ASTRONOMY.**



b. Greenville, S. C., Oct. 12, 1893. d. Dr. Wm. Henry and Frances Emily (Fuller) S. Edn.: A.B., Winthrop Coll., 1911; M.A., Vanderbilt Univ., 1923; Ph.D., Duke Univ., 1931; Post Grad. Work: Brown Univ.; Univ. of Chicago; Univ. of Wis. Exp.: Instr., S. C., 1911-22; Asst. Prof., Math., Winthrop Coll., 1923-28; Asst., Duke Univ., 1928-31; Instr., ibid., 1931-32; Assoc. Prof., Math., N. Tex. State C., 1932-35; Prof. and Hd., Dept., Mitchell Coll.,

1935-36; Prof. and Head, Dept. of Astronomy and Math., Winthrop Coll., 1936-46; Asst. Prof., Math., Syracuse Univ., 1946-53; Assoc. Prof., ibid., 1953—; (Act. Dual Prof., Math. and Edn., ibid., 1947-48). Mem.: A.M.S.; M.A.A. (Vice-Chmn., Southeast Sect., 1941-46, Chmn., 1946-47, ibid.); Sigma Xi; Pi Mu Epsilon; Sigma Delta Epsilon; Natl. League of Amer. Pen Women; A.A.A.S., Elected Fellow, September, 1950; N.C.T.M. (Com., Visual Aids, Bd. of Dirs., 1945-47); So. Car. Edn. Assn. (Pres., Math. Sect., 1940-41); Sigma Kappa; D.A.R.; Editor-in-Chief, Pi Mu Epsilon Jour., Official Publication of the Hon. Math. Frat., Bd. of Councillors-Gen., ibid., Spring, 1951—; Exec. Com., Duke Inst. for Tchrs. of Math., 1940-47; Sec., Syracuse Univ. Fac. Club, 1953—; ibid., Bd. of Dirs., 1953—. Ph.D. Dissertation: A Geometric Theory of Solution of Linear Inequalities. War Record: Cryptography and Cryptanalysis Instr., W. W. II. Travel: Canada; Mexico; U. S. Hobbies: Riding; Golf; Swimming; Raising African Violets. Listed in: A.M.S.; Amer. Women; Who's Who in S. C.; Who's Who in the South and Southwest.

STOKEY, Alma Gracey, Prof. Emer. Plant Sci., Mount Holyoke Coll., Dickinson House, South Hadley, Mass. **GAMETOPHYTE OF FERNS.**

STOKINGER, Herbert Ellsworth, Chf. Toxicol., Div. of Occupational Health, U. S. Public Health Service, 1014 Broadway, Cincinnati 2, Ohio. **TOXICOLOGY.**



b. Boston, Mass., June 19, 1909. s. William H. and Charlotte M. (Greene) S. Edn.: A.B., Harvard Univ., 1930; Ph.D., Columbia Univ., 1937. m. Helen Ackerman, June 10, 1950. Exp.: Chf. of Sect. of Toxicol., Div. of Occupational Health, U. S. Public Health Service, Cincinnati, Ohio, 1951—; Chf. of Indus. Hygiene Sect., Atomic Energy Proj., Univ. of Rochester, N. Y., 1943-51; Rsch. Assoc. in Bacteriol. Chem., ibid., 1939-43; Rsch. Assoc. in Chemotherapy, Columbia Univ., N. Y. C., 1937-39; Instr. in Chem.,

City Coll. of N. Y., N. Y. C., 1932-39. Mem.: Amer. Indus. Hygiene Assn.; Amer. Soc. for Pharmacol. and Exptl. Therapeutics; Soc. for Exptl. Biol. and Med.; Amer. Public Health Assn.; Amer. Soc. of Immunol.; Engrng. Soc. of Cincinnati, etc. Contrb. to: Soc. of Exptl. Biol. and Med. Jour.; Bull., N. Y. Acad. of Sci.; Jour. Bacteriol.; Jour. Amer. Med. Assn.; Arch. of Indus. Hygiene, etc. Special Int.: Exptl. Prod. of Toxicity from Indus. Chem. and Mechanism of Action of Toxic Agents in the Body; Consultation on Toxicologic Questions.

STOKLEY, James, Sci. Writer and Lectr., General Electric Resch. Lab., 1076 Ardsley Rd., Schenectady, N. Y. **ASTRONOMY, POPULARIZATION OF SCIENCE.**

STOLAND, Ole Olafson, Prof. of Physiol., Univ. of Kans., Lawrence, Kans. **MEDICAL SCIENCES.**

STOLL, Norman Rudolph, Assoc. Mem., Dept. of Animal and Plant Pathol., Rockefeller Inst. for Med. Resch., Princeton, N. J. **PARASITOLOGY, HELMINTHOLOGY.**

STONE, Calvin P., Prof. of Psychol., Stanford Univ., Stanford, Calif. **PSYCHOLOGY.** b. Portland, Ind., Feb. 28, 1892. s. Ezekiel and Emily (Brinkerhoff) S. Edn.: A.B., Valparaiso Univ., 1913; M.A., Ind. Univ., 1916; Ph.D., Univ. of Minn., 1921. m. Minnie Ruth Kemper of Brook, Ind., 1917. c.: James Herbert; Robert Kemper; Barbara Ruth. Exp.: Instr. in Psychol. and Anatomy, Univ. of Minn., 1921-22; Asst. Prof. to Prof., Stanford Univ., 1922—. Hon. Pos.: Pres., Western Psychol. Assn., 1932; Vice-Pres., Section I, A.A.A.S., 1939; Pres., Amer. Psychol. Assn., 1941-42. Mem.: Sigma Xi; A.A.M.D.; Soc. Exptl. Biol. and Med.; Natl. Acad. Sci.; Calif. Acad. Sci. War Record: 1st Lt. and Capt., Sanitary Corps in Div. of Psychol., 1918-19. Gen. Int.: Most influential experimental work is in the field of sex behavior in animals. Special Int.: Animal Psychol.; Neurophysiol.; Abnormal Psychol. Sex Behavior in Man and Animals.

STONE, Charles Leonard, Prof. of Psychol., Dartmouth Coll., Hanover, N. H. **PSYCHOLOGY.**

STONE, Earl Lewis, Jr., Asst., Dept. of Agron., Cornell Univ., Ithaca, N. Y. **FOREST SOILS.**

STONE, Harvey B., Assoc. Prof. of Surgery, Schl. of Med., Johns Hopkins Univ., Baltimore, Md. **SURGERY.**

STONE, Leon Stansfield, Bronson Prof. Comparative Anatomy, Schl. of Med., Yale Univ., New Haven, Conn. **EMBRYOLOGY.**

STONE, Marshall Harvey, 313 Eckhart Hall, Univ. of Chicago, Chicago 37, Ill.

STONE, Ralph Walter, Asst. State Geologist, Pa. Geol. Survey, Dept. Internal Affairs, 3115 N. Front St., Harrisburg, Pa. **ECONOMIC GEOLOGY.**

STONE, Robert William, Prof. and Hd., Dept. of Bacteriol., Pa. State Coll., State College, Pa. **BACTERIAL PHYSIOLOGY, FERMENTATION.** b. Redland, Ore., Apr. 17, 1910. s. Claude and Christina (Hamilton) S. Edn.: B.S., Ore. State Coll., 1932; Ph.D., Iowa State Coll., 1936. m. Margaret K. Atwood, 1935. c.: Alan Atwood; Sylvia Louise; Sue Ellen. Exp.: Asst. Prof. of Bacteriol., Pa. State Coll., 1937-41; Assoc. Prof. of Bacteriol., ibid., 1941-47; Prof. of Bacteriol., ibid., 1947-48; Hd. of Dept. of Bacteriol., ibid., 1948—; Natl. Heart Foundation Fellow, Inst. for Enzyme Resch., Univ. of Wis., 1950-51. Hon. Pos.: Pres., Allegheny Branch, Soc. of Amer. Bacteriologists, 1952; Editorial Bd., Jour. Bacteriol., 1953—. Mem.: Amer. Chem. Soc.; N. Y. Acad. Sci.; Soc. Amer. Bacteriologists. Contrb. to: Archives of Biochem. and Biophysics; Biochemical Jour.; Jour. Bacteriol.; Jour. Biol. Chem. Special Int.: Bacterial Glycolysis; Silage Fermentation; Penicillin Biosynthesis; Microbial Respiration.

STONE, William Ernest, Sr. Entomologist, U. S. Bureau Entomol. and Plant Quarantine, Apt. 3, Colonia Anahuac, D. F., Mex. **ENTOMOLOGY.**

STONE, Wilson Stuart, Prof. of Zoology, Univ. of Tex., Austin, Tex. **GENETICS AND EVOLU-**

TION. b. Junction, Texas, October 6, 1907. s. Donald Stuart and Grace (Finney) S. Edn.: Ph.D., Univ. of Tex., 1935. m. Julia Jean Lampman of St. Paul, Minn., Jan. 28, 1930. d. Rex and Verna L. c.: Charles Stuart; Laurie Jean; Michael Howard. Exp.: Instr., Dept. of Zool., Univ. of Tex., 1932-36; Assoc. Prof., ibid., 1936-42; Prof., ibid., 1942—. Mem.: Amer. Soc. Naturalists; Genetics Soc. of Amer.; Amer. Soc. of Zool.; Soc. for the Study of Evolution; Amer. Soc. of Human Gen.; Sigma Xi. Contrb. to: Genetics; Genetics; Amer. Natl.; Jour. Bact. Ph.D. Dissertation: Linkage Between X and IV Chromosomes in *Drosophila melanogaster*. War Record: Lt., Capt., 1942-45, A.A.F. Hobbies: Shooting; Hunting. Listed in: Who's Who in Amer.; Who Knows—and What; A.M.S.

STONER, William H., Medical Resch. Dept., Schering Corp., 86 Orange St., Bloomfield, N. J. **INDUSTRIAL MEDICINE.**

STOOKEY, Byron, Prof. of Clinical Neurosurgery, Coll. of Physicians and Surgeons, Columbia Univ., N. Y., N. Y. **MEDICINE.**

STOOKEY, Stephan Wharton, Prof. Emer. Geol., Co Coll., 2505 A Ave., N. E., Cedar Rapids, Iowa. **GEOLOGY.**

STORCH, H. H., U. S. Bureau of Mines, Bruceton, Pa. **CHEMISTRY OF COAL.**

STORER, Norman Wyman, Assoc. Prof. of Astron., Univ. of Kans., Lawrence, Kans. **ASTROPHYSICS.**

STORER, Tracy Irwin, Prof. of Zool. and Zoologist, Agri. Expt. Sta., Univ. of Calif., Davis, Calif. **VERTEBRATE ZOOLOGY.**

STOREY, William B., Horticulturist and Prof. of Agri., Chmn., Dept. of Agri., Univ. of Hawaii, Honolulu, Hawaii. **GENETICS.** b. Honolulu, Hawaii, Mar. 31, 1907. s. William and Annie (Bicknell) S. Edn.: B.S., Univ. of Hawaii, 1935; M.S., ibid., 1937; Ph.D., Cornell Univ., 1940. m. Marian Bryson of Iowa City, Iowa, June 4, 1938. d. Harold and Estelle B. Exp.: Biological Aide, 1937-38; Jr. Pomologist, 1938-40; Asst. Horticulturist, and Asst. Prof. of Agri., 1940-43; Assoc. Prof. of Agri., and Assoc. Horticulturist, 1943-52; Prof. Agri. and Horticult., 1952—. Mem.: A.A.U.P.; Hawaiian Acad. of Sci.; Hawaiian Bot. Soc.; Pacific Orchid Soc.; Honolulu Orchid Soc.; Amer. Hibiscus Soc.; Sigma Xi; Phi Kappa Phi; Amer. Soc. for Horticulturist Sci.; Gen. Soc. of Amer. Contrb. to: A.S.H.S.; Jour. of Agri. Resch. Ph.D. Dissertation: A genetical interpretation of sex determination in Carica Papaya L. Travel: Caribbean. Hobbies: chess; bowling; square dancing; bridge.



STORK, Harvey Elmer, Prof. of Botany, Carleton Coll., Northfield, Minn. **BOTANY.**

STORM, Lynn W., Sun Oil Co., Dallas, Tex. **GEOLOGY, GEOGRAPHY.**

STOSE, Harold Frederick, Resch. Chemical Engr., Radio Inventions, Inc., 155 Perry St., Upper Montclair, N. J. **CHEMICAL ENGINEERING RESEARCH.**

STOUFFER, Ellis Bagley, Dean of Univ. and Prof. of Math., Univ. of Kans., Lawrence, Kans. **MATHEMATICS.**

STOUFFER, Samuel A., Dept. of Sociol., Harvard Univ., Cambridge, Mass. **SOCIOLOGY.**

STOUGHTON, Roger W., Resch. Chemist, Mallinckrodt Chemical Works, 3600 N. Second St., St. Louis, Mo. **CHEMISTRY.**

STOUT, Arlow Burdette, Curator Emer., N. Y. Botanical Garden, N. Y. 58.



N. Y. BOTANY—GENETICS OF STERILITIES. b. Jackson Centre, Ohio, March 10, 1876. s. Hezekiah Milton and Harriet (Bond) S. Edn.: B.A., Univ. of Wis., 1909; Ph.D., Columbia Univ., 1913. m. Zelda Judd Howe, June 22, 1909. c.: Elizabeth Bond; Arlow Burdette Stout Jr., (dec.). Exp.: Sci. Tehr., H. S., Baraboo, Wis., 1903-07; Instr., Botany, Univ. of Wis., Madison, Wis., 1909-11; Dir., Lab., N. Y. Botanical Garden, N. Y., N. Y., 1911-38; Curator of Labs. and Edn., ibid., 1938-47; Curator,

Emer., ibid., 1947—. Hon. Pos.: Exec. Secy., Internatl. Conf. on Flower and Fruit Sterility, The Hort. Soc. of N. Y., 1926. Mem.: Bot. Soc. Amer.; Torrey Bot. Club; A.A.A.S.; Amer. Soc. Hort. Sci.; Fellow Amer. Soc. Naturalists; N. Y. Acad. Sci.; Genetics Sigma Xi; Phi Beta Kappa; Hon. Life Fellow, Royal Hort. Soc. Hon. Life Mem.: Horticultural Soc. of N. Y.; Pa. Horticultural Soc.; Ohio St. Historical and Arch. Soc.; Baraboo, Wis. Historical Soc.; Wis. Acad. of Arts and Sci. Author: Daylilies, 1934. Gen. Int.: Production of Many New Types of Horticultural Hybrid Hemerocallis, and Over 200 Seedlings of seedless Grapes. Special Int.: Scope, Nature and Genetics of Intra Specific Self and Cross-Incompatibility, of Unilateral Hybridization and of Seedlessness in Grapes; Studies of Synchronous Reciprocating Dichogamy in Avocados.

STOUT, Maude Eola Cathcart, Chmn., Sci. Dept., Bob Jones Univ., Box 4534, Greenville, S. C.



BIOLOGICAL SCIENCES, WITH SPECIAL FIELDS IN ECOLOGY AND BACTERIOLOGY. b. Duncan, S. C., Dec. 4, 1906. d. Joseph R. and Anna Jane (McElrath) Cathcart. Edn.: B.S., Greenville Womens Coll., 1927; M.A., Geo. Peabody Coll. for Tehrs., 1929; Ph.D., ibid., 1939. m. Clyde Graham Stout, Dec. 29, 1942. Exp.: Chmn., Sci. Dept., Appalachian State Tehrs. Coll., Boone, N. C., 1931-46 Chmn., Sci. Dept., Bob Jones Univ., Greenville, S. C., 1948—. Hon. Pos.: Mem., State

Health Dept. of N. C., 1936-46; Dairy Bacteriologist, ibid. Mem.: Tenn. Acad. Sci.; N. C. and S. C. Acad. Sci.; N. C. Bird Club; Natl. Geographic Soc.; Amer. Botanical Soc. Special Int.: Dairy and Water Bacteriol. and Natural Hist. with special emphasis on Bird Study.

STOUT, Melville Bigham, Prof. of Elec. Engrng., 2509 Electrical Engrng Bldg., Univ. of Mich., Ann Arbor, Mich. **ELECTRICAL ENGINEERING.** b. Pittsburgh, Pa., October 17, 1895. s. Melville and Mary Ann (Bigham) S. Edn.: B.S., Univ. of Mich., 1920; M.S., ibid., 1924. m. Laura Catherine Meisel of Pittsburgh, Pa., Sept. 14, 1922. d. Jesse and Lucy Meisel. c.: Thomas Melville; Virginia Louise. Exp.: Elec. Engr., Westinghouse Airbrake Co., 1920-22; Instr. in Elec. Engrng., Univ. of Mich., 1922-28; Asst. Prof., 1928-35; Assoc. Prof., 1935-43; Prof., 1943—. Mem.: Amer. Inst. Elec. Engrs.; Sigma Xi; Tau Beta Pi; Eta Kappa Nu. Author: Electrical Measurements, 1943; Basic Elec. Measurements, 1950. Contrb. to: Elec. Engrng.; Electronics. War Record: Served in France, World War I, 1917-19. Listed in: Who's Who in Amer.; A.M.S.

STOUT, Perry Robert, Assoc. Chemist, Expt. Sta. and Assoc. Prof. of Plant Nutrition, Univ. of Calif., 3048 Life Sci. Bldg., Berkeley, Calif. **SOIL SCIENCE.**

STOW, Marcellus Henry, Prof. and Hd., Dept. of Geol., Wash. and Lee Univ., Lexington, Va. **GEOLOGY.**

STOYANOW, Alexander, Prof. of Geol., Univ. of Ariz., Tucson, Ariz. **STRATIGRAPHIC PALEONTOLOGY.**

STOYE, Frederick H., P. O. Box 109, La Jolla, Calif. **ZOOLOGY.**

STRAIN, Harold H., Argonne Natl. Lab., Chicago, Ill. **CHROMATOGRAPHY.**

STRAIT, Louis A., Assoc. Prof. of Biophysics, Univ. of Calif. Med. Center, San Francisco, Calif. **BIOPHYSICS.**

STRAITON, Archie Waugh, Prof. of Elec. Engrng., Dir., Elec. Engrng. Rsch. Lab., Univ. of Tex., Box F, University Station, Austin, Tex. **ELECTRICAL ENGINEERING.** b. Arlington, Tex., August 27, 1907. s. John and Jeannie (Waugh) S. Edn.: B.S., Univ. of Texas, 1929; M.A., ibid., 1931; Ph.D., ibid., 1939. m. Esther McDonald of Ft. Worth, Tex. d. Mr. and Mrs. W. N. McD. c.: Janelle; Carolyn. Exp.: Prof. of Elec. Engrng., Univ. of Tex., 1949—; Dir., Elec. Engrng. Rsch. Lab., ibid., 1947—; Assoc. Prof. of Elec. Engrng., ibid., 1943-49; Assoc. Dir., Elec. Engrng. Lab., ibid., 1945-47; Prof. and Dir. of Engrng., Tex. Coll. of Arts and Industries, 1941-43; Asst. and Assoc. Prof., ibid., 1931-43. Mem.: Sigma Xi; Amer. Inst. of Elec. Engrng.; Inst. of Radio Engrs.; Amer. Soc. of Engrng. Edn.: Tau Beta Pi; Theta Xi. Contrb. to: Jour. of Applied Phys.; Jour. of Franklin Inst.; Jour. of Sci. Instruments. Ph.D. Dissertation: Harmonic Solution of Differential Equations. Travel: Switzerland. Listed in: Who's Who in the Southwest; Who's Who in Engrng.

STRANATHAN, James Docking, Prof. of Physics and Chmn., Dept. of Physics and Astron., Univ. of Kans., Lawrence, Kans. **PHYSICS.**

STRAND, August Leroy, Pres., Ore. State Coll., Corvallis, Ore. **ENTOMOLOGY.**

STRANDSKOV, Herluf Haldan, Asst. Prof. of Zool., Univ. of Chicago, Chicago, Ill. **GENETICS.**

STRANG, Ruth, Prof. of Edn., Tehrs. Coll., Columbia Univ., N. Y., N. Y. **CHILD PSYCHOLOGY.**

STRATMAN, Sister M. Agatha, Chmn., Natural Sci. Dept., Immaculate Heart Coll., 2021 N. Western Ave., Los Angeles, Calif. **BIOLOGICAL SCIENCES.**

STRATTON, Everett F., Exploitation Mgr., Schlumberger Well Surveying Corp., Houston, Tex. **GEOLOGY.**

STRATTON, George Weatherworth, Univ. of Kans., Lawrence, Kans. **CHEMISTRY.**

STRATTON, Julius Adams, Provost and Vice-Pres., M.I.T., Room 10-200, Cambridge 39, Mass. **ELECTROMAGNETIC THEORY.** b. Seattle, Wash., May 18, 1901. s. Julius A. and Laura M. (Adams) S. Edn.: B.S., M. I. T., 1923; M.S., ibid., 1925; D.Sc., Technische Hochschule, Switzerland, 1927. m. Catherine N. Coffman of Ivy, Va., 1935. c.: Laura Adams; Cary; Catherine N. Exp.: M. I. T. Rsch. Assoc. in Communications, 1924; Asst. Prof., Dept. of Elec. Engrng., ibid., 1928; Asst. Prof., Dept. of Physics, ibid., 1931; Assoc. Prof. ibid., 1935; Prof. ibid., 1941; Dir., Rsch. Lab. of Elec., 1945-49; Provost, ibid., 1949—; Vice-Pres., ibid., 1952—. Mem.: National Academy of Science; Amer. Academy of Arts and Science; Sigma Xi; Zeta Psi. Author: Electromagnetic Theory, 1941. War Record: Consultant, Office Sec. of War, 1942-47. Travel: England; Europe. Listed in: A.M.S.; Who's Who in Engrng.; Who's Who in Amer.; World Biography.

STRATTON, Robert, Assoc. Prof. of Botany and Plant Pathol., Okla. A. and M. Coll., Stillwater, Okla. **TAXONOMY.**

STRAUB, Lorenz George, Dir., St. Anthony Falls Hydraulic Lab., Minneapolis 14, Minn., **HYDRAULIC ENGINEERING—WATERWAYS AND STRUC-**

TURES. b. Kansas City, Mo., June 7, 1901. s. Joseph Valentine and Marie (Weth) S. Edn.: B.S., Univ. of Ill., 1923; M.S., *ibid.*, 1924; Ph.D., *ibid.*, 1927; C.E., *ibid.*, 1930. Exp.: Staff, Burns-McDonnell Engrng. Co., Hydraulic Structures Investigations and Design, 1924-25; Hd., Special Studies Dept., U. S. Engrng. Dept., Kans. City District, 1929-30; Consulting Engr., Minneapolis, Minn., 1929—; Assoc. Prof., Dept. of Math. and Mechanics, Univ. of Minn., Minneapolis, Minn., 1930-34; Prof. of Hydraulics, *ibid.*, 1935—; Dir., St. Anthony Falls Hydraulic Lab., *ibid.*, 1938—; Hd., Dept. of Civil Engrng., *ibid.*, 1945—. Hon. Pos.: Pres., Northwestern Section, Amer. Soc. of Civil Engrs., 1937-38; Pres., District 7, *ibid.*, 1938-39; Exec. Com., Hydraulics Div., *ibid.*, 1946-51; Chmn., *ibid.*, 1947-49; Pres., Minn. Section, Amer. Soc. of Mech. Engrs., 1940-41; Natl. Council, Amer. Soc. for Engrng. Edn., 1939-42; Pres., Civil Engrng. Div., *ibid.*, 1940-41; Chmn., Grad. Studies Div., *ibid.*, 1948-49; Amer. Geographical Union; Section of Hydrology, Vice-Pres., 1942-47; Pres., *ibid.*, 1947-50; Vice Chmn., Exec. Council, Union of Internatl. Engrng. Organizations; Amer. Member Permanent Com., Internatl. Assn. for Hydraulic Rsch., 1938—; Pres., *ibid.*, 1948—; Natl. Rsch. Council, Exec. Com., Engrng. and Industrial Rsch. Div., 1950—; Exec. Committee, *ibid.*, 1952—; Com. on Amphibious Operations, *ibid.*, 1950—; Panel Mem. in Geophys., Rsch. and Development Bd., 1948-53; Panel Chmn., *ibid.*, 1949—; Mem., U. S. Beach Erosion Bd., 1950—; Upper Miss. and St. Croix River Improvement Com., 1947—; Vice Chmn., 1951—; Miss. River Parkway Com., 1947—; Afghan Tech. Inst., 1949—; Natl. Pres., Chi Epsilon, 1944-48. Mem.: Amer. Soc. Civil Engrs.; Amer. Soc. Mech. Engrs.; Amer. Soc. for Engrng. Edn.; Amer. Geophysical Union; Internatl. Assn. of Scientific Hydrology; Internatl. Assn. for Hydraulic Rsch.; Union of Internatl. Engrng. Organizations; Vereines Deutscher Ingenieure; Natl. Assn. of Power Engrs., Hon. Mem.; Tau Beta Pi; Sigma Xi; Chi Epsilon; Gamma Alpha; Phi Kappa Phi; Sigma Tau; Cosmos Club, Washington, D. C. Contrb. to: Proc. Amer. Soc. of Civil Engrs.; Engrng. News-Record; Publications of Natl. Rsch. Council; Trans. Amer. Geophysical Union; etc. War Record: Received Navy Award for Distinguished Service in Ordnance Development, 1947; President's Certificate of Appreciation for Wartime Services, 1949. Gen. Int.: 1st Freeman Traveling Fellow in Amer. Soc. of Civil Engrs. in Europe, 1927-29; Officer d'Academie, 1949, France; Order of Palms, France, 1950. Special Int.: Civil Engrng.; Hydraulics; Waterways; Structures.

STRAUMANIS, Martin Edward, Rsch. Prof. of Metallurgy, Univ. of Mo., Schl. of Mines and Metallurgy, Rolla, Mo. INORGANIC CHEMISTRY. b. Krettingen, Lithuania, November 23, 1898. s. Janis and Matilde (Sviders) S. Edn.: Eng. Chem. and Dr. Chem., Univ. of Latvia, m. Ieva Reinharda of Riga, Latvia, Apr. 25, 1927. d. Gustavs and Johanna R. c.: Lilita; Mara; Andrejs; Ilze; Liene. Exp.: Asst. Prof., Univ. of Latvia, Riga, Latvia, 1928-36; Assoc. Prof., *ibid.*, 1936-37; Extraordinary Prof., *ibid.*, 1937-42; Prof., *ibid.*, 1942-44; Dir. of Analytical Lab. of the Univ. of Latvia, 1934-44; Sci. Worker, Inst. of Metal Chem., Univ. of Marburg, 1944-47; Rsch. Prof. of Metall., Univ. of Mo., 1947—. Mem.: Amer. Chem. Soc.; Amer. Crystal Assn.; Electrochem. Soc.; Sigma Xi; Deutsche Bunsen Gesellschaft. Author: The Electrochem. Theory of Corrosion of Metals, 1933; Short Intro. into the Chem. of Complex Compounds, 1935; Precision Determination of Lattice Constants, 1940 and 1948; Colloid Chem., Textbook, 1949, Co-author. Contrb. to: Jour. Amer. Chem. Soc.; Jour. Electrochem. Soc.; Jour. Applied Phys. Dr. Chem. Dissertation: The Rate of Dissolution of Zinc, Cadmium and Iron in Acids from the Stand Point of Local Currents. Travel: Latvia to Germany; Austria; Switzerland; Poland; Finland; Russia; Czechoslovakia. Hobbies: Music; Photography. Listed in: Who's Who in Amer.; Who Knows— and What: A.M.S.; Poggendorff's Handbook. Special Int.: Physical Metallurgy, Corrosion of Metals, Chemistry of Complex Compounds.

STRAUS, Henry Adolph, Sr. Physicist, Monsanto Chem. Co., Clinton Labs., Knoxville, Tenn. PHYSICS.

STRAUSS, Frank Abraham, Vice-Pres., Barsky and Strauss, Inc., 220 Prospect Ave., Staten Island, N. Y. ORGANIC CHEMISTRY.

STRAW, Harold Thompson, Deputy for Rsch. and Geography, AFOIN-1A2, Headquarters, U.S.A.F., Washington, D. C. GEOGRAPHY. b. March 21, 1907, Antigo, Wisconsin. s. Harold Parker Straw and Clara (Thompson) S. Edn.: A.B., Hillsdale Coll., 1930; A.M., Univ. of Michigan, 1934; Ph.D., Univ. of Michigan, 1936. m. Hilda Jackson, Dec. 16, 1932. d. George E. and Carrie S. Smith, Bayport, N. Y. Exp.: Tchng. Fellow in Geog., Univ. of Mich., 1935-36; Asst. Prof. of Geog., Middle Tenn. Coll., Murfreesboro, Tenn., 1936-37; Assoc. Prof. of Geog., *ibid.*, 1937-39; Prof. of Geog., Western Mich. Coll. of Edn., 1939-47; Grant-in-Aid from Social Sci. Rsch. Coun. for Field Work in Tenn., Summer, 1940; Cooperative Natl. Resources Planning Bd. (Summer) 1941. Hon. Pos.: Chmn., Geog. Sect., Tenn. Edn. Assn., 1938-39; Chmn., Geog. Sect., Mich. Acad. Sci., Arts, and Letters, 1942-43. Mem.: A.A.A.S., Fellow; Amer. Geog. Soc.; Assn. Amer. Geog.; A.A.U.P.; Mich. Acad. Sci., Arts, and Letters; Natl. Coun. of Geog. Tchrs.; Tenn. Acad. of Sci.; Sigma Xi; Chi Gamma Phi; Epsilon Delta Alpha; A.F. Mem., U. S. Bd. on Geographic Names, 1950—. Contrb. to: Econ. Geog.; Geog. Rev.; Jour. of Geog.; Papers of Mich. Acad.; Jour. of Tenn. Acad. Sci. Ph.D. Dissertation: Battle Creek, Mich.: A Study in Urban Geog. Achievements of Gen. Int.: Rsch. in Military Geog.; Regional Geog. of Africa; Regional Geog. of the So. and in Urban and Population Problems. Travel: Africa and Near East. War Record: A.C. Grd. Instr., Maps and Charts, 1943-44, Chf. Cartog. Sec., Hist. Br./G-2, 1944-45. Recreations and Hobbies: Music; Drama; Gardening. Listed in: A.M.S.,

STRAYER, George Drayton, Prof. Emer. Edn., Tchrs. Coll., Columbia Univ., N. Y. N. Y. EDUCATIONAL ADMINISTRATION.

STRECKER, Edward Adam, Prof. and Chmn., Dept. of Psychiatry, Schl. of Med., Univ. of Pa., Philadelphia, Pa. PSYCHIATRY.

STREET, John Northcott, Asst. Dir. of Labs., Firestone Tire and Rubber Co., Akron, Ohio. RUBBER CHEMISTRY.

STREETER, Harold Warner, Sanitary Engrng. Dir., Water and Sanitation Investigations, U. S. Public Health Service, E. Third and Kilgour Sts., Cincinnati, Ohio. SANITARY ENGINEERING.

STREETS, Rubert Burley, Assoc. Prof. of Plant Pathol. and Assoc. Plant Pathologist, Univ. of Ariz., Tucson, Ariz. PLANT PATHOLOGY.

STRICKLAND, John Claiborne, Asst. Prof. of Biol., Univ. of Richmond, Richmond, Va. ALGAE, MYXOPHYCEAE.

STRICKLER, Alvin, Hd. of Chem. Dept., Evansville Coll., Evansville, Ind. CHEMISTRY. b. Caledonia,

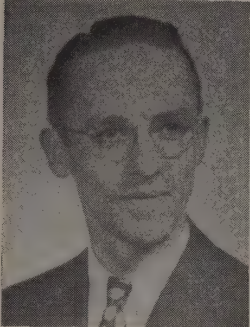
Mich., Sept. 1, 1889. s. John and Mary (Wagner) S. Edn.: A.B., Mich. St. Nor. Coll., 1913; B.S., Univ. of Mich., 1914; M.S., *ibid.*, 1915; Ph.D., Univ. of Wis., 1921. m. Florence Forney of Frankfort, Mich., 1908. d. Christian F. c.: Barbara Ellen, (dec.); William Hobart. Exp.: Country Schl. of Mich., 1907-09; Prin. of Schl., Daggett, Mich., 1909-10; Instr. to Asst. Prof., Mich. State Nor. Coll., 1912-18; Asst. to Chf. Chemist, Natl. Biscuit Co., 1918-19; Instr., Univ. of Wis., 1919-21; Hd. of Chem. Dept., Evansville Coll., 1921—. Mem.: A.C.S.; A.A.A.S.; A.A.U.P.; Ind. Acad. of Sci.; Amer. Inst. of Chem.; Phi Delta Kappa; Phi Lambda Upsilon; Sigma Xi; Kiwanis. Author: Laboratory Manual for Gen. Chem., 1923; Lab. Manual for Organic Chem., 1935. Contrb. to: A.C.S.; Jour. Chem. Edn. Ph.D. Dissertation: Studies in Electroendis-



mose. War Record: Air Force, Capt. to Lt. Col., 1942-46. Hobbies: Sports; Scientific Crime Detection. Listed in: A.M.S.; Who Knows—and What.

STRICKLER, Richard E., Asst. Astronomer, U. S. Naval Observatory, Washington, D. C. ASTRONOMY.

STRIGHT, Isaac Leonard, Prof. of Math., State Tchrs. Coll., 717 Chestnut St., Indiana, Pa. MATHEMATICS. b. Mercer Co., Pa., May 7, 1916. s. Fred L. and Martha (Dight) S. Edn.: A.B., Allegheny Coll., 1935; A.M., *ibid.*, 1938; Ph.D., Western Reserve Univ., 1946. m. Virginia Minser, July 24, 1940. c.: Suzanne; Robert; William. Exp.: Instr. of Math., H. S., Freedom, Pa., 1935-39; Instr. of Math., H. S., Indiana, Pa., 1939-42; Assoc. Prof. of Math., Baldwin-Wallace Coll., Berea, Ohio, 1942-46; Prof. of Math. and Hd. Dept., Northern Mich. Coll., Marquette, Mich., 1946-



47; Prof. of Math., State Tchrs. Coll., Indiana, Pa., 1947—. Mem.: Natl. Council of Tchrs. of Math.; Math. Assn. of Amer.; Natl. Soc. of the Sons of the Amer. Revolution; Delta Tau Delta; Kappa Phi Kappa; Kappa Delta Pi. Contrb. to: The Math. Tchrs.; Jour. Higher Edn.; Jour. Ednl. Psychol. Special Int.: Math. Edn.; Applied Statistics.

STRINGAM, Elwood Williams, Prof. of Animal Husb., Ontario Agri. Coll., Guelph, Ont., Canada.

ANIMAL HUSBANDRY. b. Alberta, Canada, Dec. 10, 1917. s. George L. and Sarah Lovina (Williams) S. Edn.: B.Sc., Univ. of Alberta; M.Sc., *ibid.*; Ph.D., Univ. of Minn. m. Gabrielle Wellington of Ilkley, Yorkshire, England, June 9, 1944. d. Canon and Mrs. A. H. Wellington. c.: John David; Michael George; Peter Elwood. Exp.: Res. Asst., Dom. Dept. of Agri., Dominion Range Exp. Sta., 1940; Livestock Fieldman, Dom. Dept. of Agri., Edmonton, Alberta, 1941; Instr., Animal Husb., Univ. of Minn., 1946-48; Asst. and Assoc. Prof., Div. of An. Sci., Univ. of Manitoba, 1948-51; Prof., Dept. of Animal Husb., Ontario Agri. Coll., 1951—. Mem.: Sigma Xi; Agri. Inst. of Canada; Canada Soc. of Animal Production; The Amer. Soc. of Animal Production. Ph.D. Dissertation: An Analysis of the Breeding Methods Employed in the Dev. of the Poland China Herd of Swine at the Minn. West Central Exp. Sta. War Record: Navigation Officer, R.C.A.F., 1942-45. Travel: Germany; France; Canada; United Kingdom. Hobbies: Fishing; Hunting; Riding; Motoring. Listed in: A.M.S.; Canadian Who's Who.

STRINGFIELD, Glen H., Sr. Agronomist, U. S. D. A., Rsch. Admin., Wooster, Ohio. BREEDING AND CULTURE CORN.

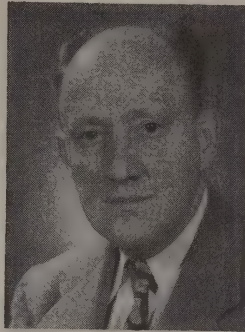
STRODE, George King, Assoc. Dir., Internatl. Health Div., Rockefeller Foundation, 49 W. 49th St., N. Y., N. Y. MEDICAL SCIENCES.

STROMAN, Govan N., Assoc. Agronomist, Cotton and Pinto Bean Breeding, N. Mex. Coll. of Agri. and Mech. Arts, State College, N. Mex. GENETICS.

STROMBERG, Gustaf, Author, 1383 N. Marengo Ave., Pasadena, Calif. PHILOSOPHY SCIENCE.

STROMSTEN, Frank A., Assoc. Prof. of Zool., State Univ. of Iowa, Iowa City, Iowa. COMPARATIVE ANATOMY.

STROCK, Lester William, Engrng. Specialist, Sylvania Electric Co., 21 Madison Ave., Saratoga Springs, N. Y. SOLID STATE STRUCTURE (X-RAY CRYSTALLOGRAPHY), SPECTROCHEMICAL ANALYSIS, AND GEOCHEMISTRY.



b. Chambersburg, Pa., Jan. 23, 1906. s. Roy B. and Myrtle St. (Garmen) S. Edn.: B.Sc., Philadelphia Coll. of Pharm. and Sci., 1927; M.Sc., Univ. of Pa., 1929; Ph.D., *ibid.*, 1931. m. Mary Bullock, June 19, 1931. c.: Winifred Ilse; Carl Elwood; Harold Bunsen. Exp.: Student Asst. in Physics, Philadelphia Coll. of Pharm. and Sci., 1925-

27; Asst. in Physics, Mineralogy and Crystallography, *ibid.*, 1927-29; Asst. in Mineralogy, Philadelphia Acad. Natural Sci., 1929-31; Secy., Philadelphia Mineralogical Soc., 1929-31; Harrison Fellowship in Chem., Univ. of Pa., 1929-31; Fellowship in Div. of Biophysics, Rockefeller Inst. for Med. Rsch., N. Y., N. Y., 1931-32; Guest Rsch. Worker, Mineralogical Inst. of Krakow Univ., Krakow, Poland, 1932-33; Guest Rsch. Worker in Geochemical and Crystallochemical Lab. of Mineralogical Int. of Gottingen Univ., Gottingen, Germany, 1933-35; Guest Technical Worker in Optical Instrument Shop and Lab. of Adam Hilger, Ltd., London, England, 1935-36; Spectrochemist, Lucius Pitkin, Inc., N. Y., N. Y., 1936-37; Scientific Asst., Spectrochemical and Raw Materials Lab. of Norwegian Dept. of Commerce, Univ. of Oslo, Geol. Museum, Oslo, Norway, 1937-38; Rsch. Radiographer for Saratoga Springs Commn., Conservation Dept. of N. Y. State, 1939—; Pres., Saratoga Mining Corp., 1940—; Private Consultant and Analyst, Beryllium Industries, various Govt. Agencies, including U. S. Bureau of Mines and Manhattan Project, 1942-45; Vice-Pres. and Dir. of Rsch. and Development, Saratoga Labs., Inc., 1945-50; Rsch. Assoc. in Oncology, Albany Med. Coll., 1949—; Pres. and Technical Dir., Strock Labs., Inc., 1950—; Engrng. Specialist, Sylvania Electric Products, Inc., Physics Lab., Bayside, L. I., N. Y., 1952—. Hon. Pos.: Amer. Editor of Spectrochimica Acta, 1947—. Mem.: Fellow, A. A.A.S.; Amer. Chem. Soc.; Amer. Inst. Mining and Metallurgical Engrs.; Amer. Mineralogical Soc.; Amer.; Soc. Econ. Geologists; Amer. Crystallographic Assn.; Amer. Geophysical Union; Soc. Applied Spectroscopy; Amer. Soc. Petroleum Geologists; Acad. of Natural Sciences of Philadelphia; Amer. Inst. Physics; Rotary Internatl.; Sigma Xi. Author: Spectrum Analysis, 1936. Contrb. to: Amer. Chem. Soc.; Amer. Inst. Mining and Metallurgical Engrs.; Optical Soc. Amer.; etc. Gen. Int.: Spectrochemical Prospecting for Rare Metals and Application of Spectroscopy to Geochemical Problems. Special Int.: Structure of Solids, Crystal Chem., Chemical Mineralogy, Rare Metals, Trace Elements in Plant and Animal Nutrition.

STRONG, Edward Kellogg, Jr., Prof. of Psychol. and Applied Psychol., 672 Mirada Ave., Stanford Univ., Calif. APPLIED PSYCHOLOGY.

STRONG, Forrest Cook, Asst. Prof. of Botany and Rsch. Asst. Plant Pathol., Mich. State Coll., Lansing, Mich. PLANT PATHOLOGY.

STRONG, John, Prof. of Physics, Johns Hopkins Univ., Baltimore, Md. PHYSICS.

STRONG, Leon Henri, Asst. Prof. of Anatomy, Univ. of Mich. Med. Schl., 4502 E. Medical Bldg., Ann Arbor, Mich. ANATOMY, MAMMAL EMBRYOLOGY.

STRONG, Ralph Kempton, Prof. of Chem., Rose Poly. Inst., Terre Haute, Ind. ECONOMIC CHEMISTRY.

STRONG, Reuben Myron, Prof. and Chmn., Dept. of Anatomy, Schl. of Med., Loyola Univ., Chicago, Ill. ANATOMY.

STRONG, William Duncan, Prof. of Anthropol. and Loubat Prof. Amer. Archaeol., Columbia Univ., N. Y., N. Y. **ANTHROPOLOGY.**

STRONG, William Walker, 500 S. York St., Mechanicsburg, Pa. **PHYSICS.**

STRUVE, Otto, Prof. of Astron., Univ. of Calif., Berkeley, Calif. **SPECTRA OF STARS.** b. Kharnov, Russia, Aug. 12, 1897.



s. Ludwig and Elizabeth (Grohmann) S. Edn.: Ph.D., Univ. of Chicago, 1923. Hon. Deg.: Sc.D., Case Inst., Ph.D., Univ. of Liege, Belgium, Ph.D., Copenhagen, Denmark; Ph.D., Mexico City, Mex. m. Mary Martha Manning, 1925. Exp.: Jr. Asst., Univ. of Kharnov, Russia, 1919; Asst., Instr., Asst. Prof., Assoc. Prof., Prof., Univ. of Chicago, 1919-32; Dir., Yerkes and McDonald Observatories, 1932-47; Dir., Observatory, Univ. of Calif., 1950—Hon.

Pos.: Pres., Internatl. Astron. Union, 1952—. Mem.: Natl. Acad. Sci.; Amer. Philos. Soc.; Amer. Acad. Arts and Sci.; Amer. Astron. Soc.; Amer. Phys. Soc.; etc. Author: Stellar Evolution, 1950. Contrb. to: Astrophys. Jour.; Astron. Jour.; etc. War Record: Lt., Imperial Russian Army, World War I.

STUART, Charles Arthur, Prof. of Biol., Brown Univ., Providence, R. I. **BACTERIOLOGY.**

STUART, Harold Coe, Prof. and Hd., Dept. of Maternal and Child Health, Harvard Schl. of Public Health, 55 Shattuck St., Boston, Mass. **PEDIATRICS.**

STUART, Neil Wade, Physiologist, U. S. D. A., Plant Indus. Sta., Beltsville, Md. **FLORICULTURE.**

STUBBS, Sidney A., 119 E. Park Ave., Tallahassee, Fla. **GEOLOGY, GEOGRAPHY.**

STUCKEY, Henry Perkins, Dir., Ga. Expt. Sta., Experiment, Ga. **HORTICULTURE.**

STUCKEY, Jasper L., 1911 Sunset Dr., Raleigh, N. C. **GEOLOGY, GEOGRAPHY.**

STUDER, Frank John, Rsch. Assoc., Rsch. Lab., General Electric Co., 1186 Waverly Pl., Schenectady, N. Y. **PHYSICS.**

STUDHALTER, Richard Arthur, Prof. of Botany and Hd., Biol. Dept., Tex. Tech. Coll., Lubbock, Tex. **BOTANY.**

STUHLMAN, Otto, Jr., Prof. of Physics, Univ. of N. C., Chapel Hill, N. C. **BIOPHYSICS.**

STUHR, Ernst Theodore, Mgr., Columbia Med. Supply Co. and Frank Nau Mfg. Chemists, 8310 S. W. Canyon Dr., Portland, Ore. **PHARMACOLOGY, PHARMACOGNOSY.**

STUMP, Alexander Bell, Prof. and Hd., Dept. of Biol. and Bacteriol., Flora Macdonald Coll., Red Springs, N. C. **PROTOZOOLOGY.**

STUMP, N. Franklin, Industrial Vision Rsch., Bausch and Lomb Optical Co., Rochester, N. Y. **INDUSTRIAL PSYCHOLOGY.**

STUNKARD, Horace W., Prof. and Hd., Dept. of Biol., N. Y. Univ., N. Y., N. Y. **ZOOLOGY, ANIMAL PARASITOLOGY.**

STURGEON, William E., Prof. of Chem., Beaver Coll., Jenkintown, Pa. **CHEMISTRY.**

STURGIS, Cyrus Cressey, Prof. of Internal Med., Univ. of Mich., Ann Arbor, Mich. **INTERNAL MEDICINE.**

STURGIS, Somers H., **STERILITY.**

STURDIVANT, Harwell Presley, Prof. of Biol. and Hd. of Dept., Western Md. Coll., Westminster, Md. **ZOOLOGY; CYTOLOGY.**



b. Harris Co., Ga., Dec. 15, 1905. s. Harrison Pascal and Lula (Harwell) S. Edn.: B.S., Emory Univ., 1926; M.A., ibid., 1926; Ph.D., Columbia Univ., 1934. m. Elizabeth Bragg, Sept. 4, 1928. c.: Betty Bragg. Exp.: Instr., Emory Univ., 1926-27; Instr., Columbia Univ., 1929-31; Prof. of Biol., Union Coll., Ky., 1932-44; Prof. of Biol. and Hd. Sci. Dept., Middle Tenn. State Coll., 1944-46; Prof. of Biol., Millsaps Coll., 1946-48; Prof. of Biol. and Hd.

Dept., Western Md. Coll., 1948—. Mem.: Beta Beta Beta; Phi Sigma; Sigma Xi; Lambda Chi Alpha; Kiwanis. Contrb. to: Sci.; Jour. Morphology. Special Int.: Cytogenetics.

STURKIE, Paul David, Prof. of Poultry Physiol. and Research Specialist in Poultry Physiology, Rutgers Univ., New Brunswick, New Jersey. **AVIAN PHYSIOLOGY.** b. September 18, 1909, Proctor, Tex. s. Wm. Dudley and Mattie (Luker) S. Edn.: B.S., Tex. A. and M. Coll., 1933; M.S., ibid., 1936; Ph.D., Cornell Univ., 1939. m. Emily Hixon of Auburn, Ala., May 19, 1940. d. Prof. Chas. Hixon. Exp.: Assoc. Poultry Husbandman, Ala. Poly. Inst., Aug., 1939-Oct., 1944; Assoc. Prof. of Poultry Husbandry and Assoc. Poultry Husbandman of Rutgers Univ., New Brunswick, N. J., 1944-50; Prof. of Poultry Physiol. and Rsch. Specialist in Poultry Physiol., ibid., 1950—. Mem.: A.A.A.S.; Genetic Soc. of Amer.; Poultry Sci. Assn.; Amer. Physiological Soc.; N. Y. Acad. of Sci.; Gamma Alpha; Sigma Xi; Grad. Sci.; Gamma Sigma Delta. Contrb. to: Jour. Heredity; Jour. Exp. Zool.; Jour. Morphol.; Amer. Jour. Physiol.; Poultry Sci. Gen. Int.: Winner of Poultry Sci. Award for best rsch. published in 1946-47. Ph.D. Dissertation: Studies on Hereditary Congenital Baldness in Domestic Fowl. Hobbies: Collecting Books and Phonograph Musical Records. Listed in: A.M.S.

STURM, Rolland George, Dir., Auburn Rsch. Foundation and Engr., Expt. Sta. of the Ala. Polytechnic Inst., Textile Engr. Bldg., Auburn, Ala. **ENGINEERING.**



MATERIALS, MECHANICS, STRUCTURES, MACHINES. b. Riverview, Ill., Mar. 24, 1899. s. Michael and Louisa (Rudolph) S. Edn.: Bs.E., Nebr., 1924; M.S.C.E., Univ. of Ill., 1926; Ph.D., ibid., 1936. Hon. Degrees: Professional C.E. m. Mary Jorden, June 16, 1926. c.: Margaret; Martha; Arthur. Exp.: Laborer, Sub-Contractor, Roberts Construction Co., Lincoln, Nebr., 1923; Student Asst.,

Civil Engrng. Dept., Univ. of Nebr., Lincoln, Nebr., 1923-24; Designing Simple Structures and Drafting, Nebr. State Dept. of Public Works, Lincoln, Nebr., 1924-25; Jr. Structural Engr., U. S. Bur. of Pub. Rds.; Spec. Rsch. Asst., Univ. of Ill. for A.S.C.E. Comm. on Reinforced Concrete Arches Plus Full Time Grad. Study, Univ. of Ill., Urbana, Ill., Structural Engr., Field Inspections and Design Investigation, Omaha, Nebr., 1926; Inst. of Theoretical and Applied Mechanics, Univ. of Ill., Urbana, Ill., 1926-29; Bridge Design, Ill. St. Div. of Highways, Revising Standards and Major Designs, Ill. State Div. of Highways, 1927; Design Engr., Kinsey Engrng. Co., Pekin, Ill., 1928-29; Grad. Work, Univ. of Ill., 1929; Rsch. Structural Engr., Aluminum Co. of Amer., New Kensington, Pa., 1929-31; Rsch. Engr. Physicist Aluminum Rsch. Lab., and Dir. of Aluminum Rsch. Lab. Night Schl., New

Kensington, Pa., 1931-44; Head Prof. of Engrng. Mechanics and Rsch. Prof. of Materials, Purdue Univ., Lafayette, Ind., 1944-51; Dir., Auburn Rsch. Foundation and Engrng. Experiment Sta. of the Ala. Polytechnic Inst., Auburn, Ala., 1951—; Consulting Dir. of Rsch. for the Graver Tank and Mfg. Co., East Chicago, Ind., 1951—; Consultant to Loewy Construction Co., New York, N. Y., 1951—; Consultant to Atomic Energy Comm., Oak Ridge, Tenn., 1951—. Hon. Pos.: Pres., Allegheny Mountain Sec. of Math. of Amer.; Pres. Church Schl. Div. of Pittsburgh Bapt. Assn.; Pres. Community Fund, New Kensington, Pa.; Chmn. of Applied Mechanics Comm., A.S.C.E.; Chmn. of Metals Engrng. Div. of A.S.M.E.; Pres. Lafayette Chapter of Indiana Soc. of Professional Engr. Mem.: Pres. of Engrng. Mechanics Div. of A.S.E.E.; A.A.A.S.; M.A.A.; A.S.C.E.; A.S.M.E.; A.I.M.E.; N.S.P.E.; S.E.S.A.; A.O.A.; Soc. of Rheol.; Sigma Tau; Sigma Xi; Chi Epsilon; Tau Beta Pi; Rotary; Chamber of Commerce. Contrb. to: Proceedings of the Third International Congress for Applied Mechanics; Bur. of Standards Jour. of Rsch.; Applied Mechanics; Electrical Engr.; Jour. of Applied Mech.; Ill. Engr. Expt. Sta. Bull.; Rsch. Supplement. Gen. Int.: Founder of the Aluminum Rsch. Lab. Night Schl. Which Was Accredited for Work Toward the Master's and Doctor's Degrees at the Univ. of Pittsburgh; Founder of Valley Heights Chapel, New Kensington, Pa. Which Is Now An Organized Baptist Church; Founder of the Univ. High Twelve Club at Purdue Univ., and Founder of the Purdue DeMolay Club; Developed Schl. of Engr. Mechanics at Purdue to be the First Schl. Accredited by the E.C.P.D. for the Bachelor's, Master's and Doctor's Degrees; Service to the A.S.M.E. Boiler Code Comm. on Vessels under External Pressure.

STURMER, Julius William, retired, 601 Lees Ave., Collingswood, N. J.

STURTEVANT, Alfred Henry, Calif. Inst. of Tech., Pasadena 4, Calif.

SUBARSKY, Zachariah, Chmn., Dept., of Biol. and General Sci., Bronx H. S. Sci., 120 E. 184th St., Bronx, N. Y. SCIENCE EDUCATION.

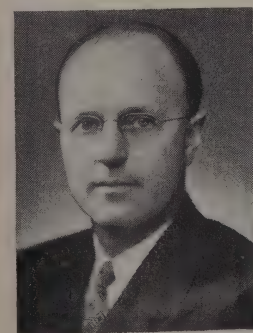
SUCHY, John Frank, Prof., Mont. State Univ., Missoula, Mont. PHARMACEUTICAL CHEMISTRY.

SUFFA, Mary Clegg, Prof. of Math. and Astron., Elmira Coll., Elmira, N. Y. MATHEMATICS.

SUGARMAN, Nathan, Univ. of Chicago, Chicago, Ill. CHEMISTRY.

SUGIURA, Kanematsu, Rsch. Chemist, Old Memorial Hosp., 2 W. 106th St., N. Y., N. Y. EXPERIMENTAL CANCER.

SUITS, Chauncey Guy, Vice Pres. and Dir. of Rsch., General Electric Co., General Electric Rsch.



Lab., The Knolls, P. O. Box 1088, Schenectady, N. Y. PHYSICS. b. Oshkosh, Wis., Mar. 12, 1905. s. Chauncey Gibbs and Otilia (Berger) S. Edn.: B.A., Univ. of Wis., 1927; D.Sc., Natl. Technische Hochschule, Zurich, Switzerland, 1929. Hon. Deg.: D.Sc., Union Coll., 1944; D.Sc., Hamilton Coll., 1946; D.Engng., Rensselaer Poly. Inst., 1950. m. Laura Struckmeyer, Oct. 28, 1931. c.: James Carr; David Guy. Exp.: Physics Consultant, U. S. Forest Products Lab., Madison, Wis., 1929-30; Rsch. Physicist, General Electric Co. Rsch. Lab., 1930-40; Asst. to Dir., Rsch. Lab., General Electric Co., 1940-45; Vice Pres. and Dir. of Rsch., ibid., 1945—. Hon. Pos.: Chmn., Rsch. Comm., A.I.E.E., 1947-49; Bd. of Governors, Scientific Rsch. Soc. Amer.; Engrng. Foundation Bd.; Union Coll. Bd. of Trustees. Mem.: Amer. Physical Soc.; Amer. Inst. Elec. Engrs.; Natl. Acad. Sci.; Amer. Philos.

Soc.; Phi Beta Kappa; Sigma Xi; Eta Kappa Nu; Phi Mu Alpha; Phi Sigma Phi; Sigma Pi. Contrb. to: Elec. Engrng.; Jour. Applied Physics; Physical Rev. Special Int.: Rsch. on Non-linear Circuits; High Pressure Arcs; Circuit Interrupting Phenomena.

SULLIVAN, Betty, Russell-Miller Milling Co., Minneapolis, Minn. CEREAL CHEMISTRY.

SULLIVAN, Elizabeth Teresa, 903 Heliotrope Dr., Los Angeles, Calif. PSYCHOLOGY.

SULLIVAN, Eugene Cornelius, Hon. Vice Chmn. and Dir., Corning Glass Works, 222 Pine St., Corning, N. Y. CHEMISTRY.

SULLIVAN, Harris Martin, Vice Pres., Rsch. and Engrng., Central Sci. Co., 1700 Irving Park Rd., Chicago, Ill. PHYSICS AND PHYSICAL CHEMISTRY, INSTRUMENTATION. b. Boaz, Graves Co., Ky., March 12, 1909. s. William Tender and Hester (Whitis) S. Edn.: B.S., Univ. of Ky., 1931; M.S., ibid., 1933; Ph.D., Pa. State Coll., 1938. m. Elizabeth Hardin, June 4, 1935. c.: Harris Marshall; Emily Ann. Exp.: Instr. in Physics, Univ. of Ky., Lexington, Ky., 1933-35; Instr., Pa. State Coll., State Coll., Pa., 1935-38; Asst. Prof., Rensselaer Polytechnic Inst., Troy, N. Y., 1938-44; Dir. of Rsch., Central Scientific Co., Chicago, Ill., 1944-50; Vice Pres., Rsch. and Engrng., ibid., 1950—. Mem.: Amer. Physical Soc.; Amer. Chem. Soc.; Amer. Optical Soc.; Pi Kappa Alpha; Sigma Xi; Sigma Pi Sigma; Physics Club of Chicago; Amer. Soc. for Metals; Amer. Assoc. of Physics Tchrs.; A.A.A.S. Contrb. to: Amer. Physical Soc. Jour.; Jour. of Amer. Chem. Soc.; Review of Scientific Instruments. Gen. Int.: Mem. of War Metallurgy Advisory Bd. Special Int.: Spectrophotometry, Filter Photometry, X-ray Crystal Analysis, Vacuum Technology, Spectrographic Analysis, Physical Metallurgy.

SULLIVAN, John D., Battelle Memorial Inst., 505 King Ave., Columbus 1, Ohio. CERAMICS.

SULLIVAN, John Magruder, Hd. Emer. Dept. Chem. and Geol., Millsaps Coll., 2 Park Ave., Jackson, Miss. CHEMISTRY, GEOLOGY.

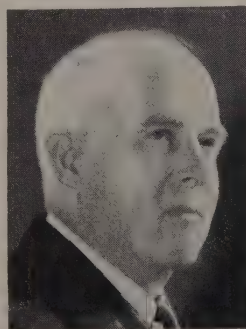
SULLIVAN, Michael Xavier, Dir., Chemo-Medican Rsch. Inst. and Rsch. Prof., Georgetown Univ., 37th and O Sts., Washington, D. C. BIOCHEMISTRY.

SULLIVAN, Russell, 2908 N. Meriden St., Indianapolis, Ind. ASTRONOMY.

SULLIVAN, Walter Edward, Prof. of Anatomy, Sci. Hall, Univ. of Wis., Madison, Wis. ANATOMY.

SUMNER, Francis Cecil, Prof. and Hd., Dept. of Psychol., Howard Univ., Washington, D. C. GENERAL PSYCHOLOGY.

SUMNER, James Batcheller, Dir. of Enzyme Rsch., Savage Hall, Cornell Univ., Ithaca, N. Y. ENZYME CHEMISTRY. b. Canton, Mass., Nov. 19, 1887. s. Charles and Elizabeth Rand (Kelly) S. Edn.: A.B., Harvard Univ., 1910; A.M., ibid., 1913; Ph.D., ibid., 1914. m. Mary Beyer, June 5, 1943. c.: Roberta and Prudence; James; Frederick; John. Exp.: Asst. Prof. of Biochem., Cornell Univ., Ithaca, N. Y., 1914-38; Prof. of Biochem., ibid., 1938—. Mem.: Phi Kappa Phi; Sigma Xi; Amer. Soc. of Biol. Chemists; Natl. Acad. of Sci.; Amer. Acad. of Arts and Sci.; Soc. of Exptl. Biol. and Med. Author: Chem. and Methods of Enzymes, with G. F. Somers, 1953; Editor, The Enzymes, with K. Myrback, 1950. Contrb. to: Various Jour. of Biol. Chem. Gen. Int.: Guggenheim Fellowship, 1937; Scheele Medal, 1937; Nobel Prize in Chem.,



1937; Scheele Medal, 1937; Nobel Prize in Chem.,

1946. Special Int.: Crystallization of the First Enzyme; Purification of Enzymes.

SUMSTINE, David Ross, Assoc. Botany Hon., Carnegie Museum, 603 King Edward Apts., Craig and Bayard Sts., Pittsburgh, Pa. MYCOLOGY.

SUNDWALL, John, Prof. of Hygiene and Public Health, Univ. of Mich., Ann Arbor, Mich. HYGIENE AND PUBLIC HEALTH.

SURFACE, Frank Macy, Exec. Asst. Pres., Standard Oil Co. of N. J., 30 Rockefeller Plaza, N. Y., N. Y. ECONOMICS.

SUSSMAN, Sidney, Chf. Chemist, Water Service Labs., Inc., 423 W. 126th St., N. Y. 27, N. Y. WATER CHEMISTRY. b. Brooklyn, N. Y., Aug. 29, 1914. s. Abraham H. and Mollie (Molbegott) S. Edn.: B.S., magna cum laude, Poly. Inst. of Brooklyn, 1934; Ph.D., Mass. Inst. of Tech., 1937. m. Ann Rosenberg, Aug. 20, 1939. c.: Peter Y.; George D.; Carl A. Exp.: Rsch. Chemist, E. I. du Pont de Nemours and Co., Wilmington, Del., 1937-40; Successively Rsch. Chemist, Group Leader and Chf. Rsch. Chemist, The Permutit Co., Birmingham, N. J., 1940-46; Chf. Chemist, Liquid Conditioning Corp., Linden, N. J., 1946-49; Chf. Chemist, Water Service Labs., Inc., N. Y. C., 1949—. Mem.: Amer. Chem. Soc.; Amer. Inst. of Chemists; Soc. of Chem. Indus.; Amer. Water Works Assn.; Natl. Assn. of Corrosion Engrs.; Phi Lambda Upsilon; Sigma Xi. Hon. Pos.: Co-founder and First Pres., Metropolitan Water and Wastes Soc. Contrb. to: Indus. and Engrng. Chem.; Analytical Chem.; Jour. of Amer. Chem. Soc.; Jour. of Chem. Edn. Five Patents. Special Int.: Indus. Water Conditioning; Corrosion; Ion Exchange.

SUTER, C. M., Sterling-Winthrop Rsch. Inst., Rensselaer, N. Y. CHEMISTRY.

SUTERMEISTER, Edwin, S. D. Warren Co., Cumberland Mills, Maine. PULP AND PAPER TECHNOLOGY.

SUTTLE, A. D., Dept. of Agron., Miss. State Coll., State College, Miss. AGRONOMY.

SUTTON, Arle H., Chf. Geologist, Aluminum Ore Co., P. O. Box 337, Rosiclare, Ill. GEOLOGY.

SUTTON, George Miksch, Dept. of Zool., Univ. of Okla., Norman, Okla. ORNITHOLOGY.

SVENSON, Henry Knute, Curator Forestry and Gen. Botany, Amer. Museum Natural History, Central Park at 79th St., N. Y., N. Y. SYSTEMATIC BOTANY.

SVERDRUP, Harald Ulrik, Prof. of Oceanography, Univ. of Calif., and Dir., Scripps Inst. Oceanography, La Jolla, Calif. OCEANOGRAPHY.

SVIHLA, Arthur, Exec. Off. and Prof. of Zool., Univ. of Wash., Seattle, Wash. ZOOLOGY.

SWAIM, Verne Frank, Hd. Measurements Div., Technical Development Dept., Naval Aviation Ordnance Test Sta., Chincoteague Island, Va. SPECTROSCOPY, MEASUREMENTS.

SWAIN, Robert Eckles, Prof. Emer. Chem., Stanford Univ., 634 Miranda Ave., Stanford University, Calif. BIOCHEMISTRY.

SWAIN, Stephen M., 3403 Spangler Rd., Cleveland 12, Ohio. CERAMICS.

SWALLEN, Lloyd Clayton, Asst. Dir. of Rsch., Great Lakes Carbon Corp., 205 W. Harrison St., Lombard, Ill. ORGANIC CHEMISTRY.

SWAN, Clifford Melville, Consultant, 271 Madison Ave., N. Y., N. Y. ARCHITECTURAL ACOUSTICS.

SWAN, Thomas Hadden, Sr. Fellow, Mellon Inst., Pittsburgh, Pa. TEXTILE CHEMISTRY.

SWAN, William Orr, Assoc. Prof. of Chem., Univ. of Chattanooga, Chattanooga, Tenn. CHEMISTRY.

SWANBERG, Harold, Radiologist, St. Mary's Hosp. and Blessing Hosp., 508 Maine St., Quincy, Ill. RADIOLOGY.

SWANN, David Henry, Assoc. Geologist, Oil and Gas Div., Ill. State Geol. Survey, Urbana, Ill. STRATIGRAPHIC GEOLOGY.

SWANN, Sherlock, Jr., Rsch. Prof. of Chem. Engrng., Engrng. Expt. Station, Univ. of Ill., Urbana, Ill. ELECTRO-ORGANIC CHEMISTRY. b. Sept. 30, 1900, Baltimore, Md. s. Sherlock and Edith R. (Deford) S. Edn.: B.S., Princeton Univ., 1922; Ph.D., Johns Hopkins Univ., 1926. Exp.: Chemist, Columbia Gas and Electric Co., 1926-27; Rsch. Asst. Engrng. Exp. Sta., Div. of Chem. Engrng., Univ. of Ill., 1927—; Rsch. Prof. of Chem. Engrng., Engrng. Exp. Sta., 1941—. Mem.: The Electrochem. Soc.; Amer. Chem. Soc.; A.A.A.S.; Alpha Chi Sigma; Sigma Xi; Phi Lambda Upsilon. Contrb. to: Trans. Electrochem. Soc.; Jour. Amer. Chem. Soc.; Ind. Engr. Chem. Ph.D. Dissertation: Oxidation of Heavy Hydrocarbons at High Temperature and High Pressure. Part I. Identification of Water Soluble Products of the Oxidation.

SWANN, William Francis Gray, Dir., Bartol Rsch. Foundation of the Franklin Inst., Swarthmore, Pa. COSMIC RAYS; ELECTRODYNAMICS; THERMODYNAMICS AND THERMAL MEASUREMENTS; ATMOSPHERIC ELECTRICITY; TERRESTRIAL MAGNETISM; ATOMIC STRUCTURE; RELATIVITY; PHILOSOPHY OF PHYSICS. b. Ironbridge, Shropshire, England, Aug. 29, 1884. s. William Francis and Anne (Evans) S. Edn.: A.R.C.S., Royal Coll. of Sci., 1906; D.Sci., ibid., 1910. Hon. Deg.: M.A., Yale Univ., 1924; D.Sc., Swarthmore Coll., 1929. m. Sarah Frances Mabel Thompson, Aug. 14, 1909. c.: William Francis; Charles Paul; Sylvia. Exp.: Jr. Demonstrator, Phys., Royal Coll. of Sci., 1905-06; Asst. Lectr. and Demonstrator, Phys., Univ. of Sheffield, 1907-13; Chf., Phys. Div., Dept. Terrestrial Magnetism, Carnegie Inst. of Wash., 1913-18; Prof. of Phys., Univ. of Minn., 1918-23; Prof. of Phys., Univ. of Chicago, 1923-24; Prof. of Phys., Yale Univ., 1924-27; Dir., Sloane Lab., Yale Univ., 1924-27; Chmn., Advisory Rsch. Com., Bartol Rsch. Foundation, 1924-27; Dir., Bartol Rsch. Foundation of the Franklin Inst., 1927—. Hon. Pos.: Trustee, Amer. Oncologic Hosp., Philadelphia, Pa.; Mem., Advisory Bd., Biochem. Rsch. Foundation of the Franklin Inst.; Chmn., Bd. of Dirs., Philadelphia Musical Acad. Mem.: Fellow, Phys. Soc., London; Amer. Phys. Soc.; A.A.A.S.; Amer. Philosophical Soc.; Wash. Acad. Sci.; Amer. Geophys. Union; Gamma Alpha; Sigma Xi; Sigma Pi Sigma. Author: Architecture of the Universe, 1934; Physics, 1941. Part Author: "Story of Human Error", 1936. Contrb. to: Trans. Royal Soc., London; Phys. Rev.; Jour. Franklin Inst.; Jour. Wash. Acad. Sci.; Jour. Terrestrial Magnetism; etc. Special Int.: By and Large, Cosmic Radiation and General Mathematical Phys., with Special Relation to Electrodynamics and Relativity.

SWANSON, Carl Pontius, Assoc. Prof. of Botany, Johns Hopkins Univ., Baltimore, Md. CYTOGENETICS.

SWANSON, Carroll Arthur, Asst. Prof. of Botany, Ohio State Univ., Columbus, Ohio. PLANT PHYSIOLOGY.

SWANSON, Charles Oscar, Prof. Emer. Milling Indus., Kans. State Coll., 1640 Fairview Ave., Manhattan, Kans. CEREAL CHEMISTRY.

SWANSON, Edward E., Hd., Dept. of Pharmacol., Eli Lilly and Co., Indianapolis, Ind. PHARMACY.

SWANTON, John Reed, Collaborator, Bureau Amer. Ethnology, Smithsonian Inst., Washington, D. C.; 22 George St., Newton, Mass. ETHNOLOGY.

SWARTZ, Charles Kephart, Prof. Emer. Geol., Johns Hopkins Univ., 2601 Lyndhurst Ave., Baltimore, Md. GEOLOGY, GEOGRAPHY.

SWARTZLOW, Carl R., Regional Naturalist, Natl. Park Service, 1610 N. 38th St., Omaha, Nebr. GEOLOGY.

SWEELY, B. T., Gate 12, Crystal Lake, Ill. CERAMICS.

SWEENEY, J. Shirley, Gainesville, Tex. **INTERNAL MEDICINE.**

SWEENEY, Orland Russell, Prof. and Hd., Dept. of Chem. Engrng., Iowa State Coll., Ames, Iowa. **CHEMICAL ENGINEERING.**

SWEET, Donald Howard, Patent Attorney, 135 S. LaSalle St., Chicago, Ill. **PATENT, DEVELOPMENT WORK.**

SWEET, Joshua Edwin, Prof. Emer., Surgical Rsch., Cornell Univ., Med. Coll., N. Y., N. Y.; Unadilla, N. Y. **SURGERY.**

SWEET, Leon Albert, Dir. Chm. Rsch. and Products Development, Parke, Davis and Co., Detroit, Mich. **CHEMISTRY.**

SWEET, Robert D., Assoc. Prof., Dept. of Vegetable Crops, N. Y. State Coll. of Agri., Ithaca, N. Y. **VEGETABLE CROPS.**

SWEETMAN, Harvey Leroy, Asst. Prof. of Entomol., Mass. State Coll., Amherst, Mass. **ECOLOGICAL, ENTOMOLOGY.**

SWEIGERT, Ray Leslie, Dir. of General Engrng. and Consulting Engr., Ga. Schl. of Tech., Atlanta, Ga. **MECHANICAL ENGINEERING.**

SWENSON, Hugo N., Assoc. Prof. of Physics, Queens Coll., Flushing, New York. **ELECTRONICS.** b. March 11, 1904, New Richland, Minn. s. Andrew and Amanda (Peterson) S. Edn.: B.A., Carleton Coll., 1925; M.S., Ill., 1927; Ph.D., Ill., 1929. Exp.: Physics Dept., Earlham Coll., 1929-30; Instr. in Phys., Barnard Coll., 1931-37; Assoc. Prof. of Phys., Queens Coll., 1948, Fellow, Amer. Scandinavian Foundation, 1930-31. Mem.: Sigma Xi; Phi Beta Kappa; Amer. Phys. Soc.; Amer. Phys. Tchrs.; Gamma Alpha. Listed in: A.M.S.; Phi Beta Kappan.

SWENSON, Paul Christian, Prof. of Radiol., Jefferson Med. Coll. and Hosp., 10th and Samson Sts., Philadelphia, Pa. **MEDICINE, RADIOLOGY.**

SWENSON, Stanley Prescott, Dean, Coll. of Agri., State Coll. of Wahs., Pullman, Wash. **PLANT GENETICS AND BREEDING.** b. Wood Lake, Minn., February 11, 1908. s. Walter and Tilda (Torgerson) S. Edn.: B.S., Univ. of Minn., 1932; M.S., ibid., 1935; Ph.D., ibid., 1936. m. Ollie Burris Veltum of St. James, Minn., June 19, 1936. d. Edgar C. and Kathleen Veltum. c.: Kathleen Jean; Stanley Burris. Exp.: Rsch. Asst. in Plant Genetics, Univ. of Minn., 1932-36; Asst. Prof. of Agron., S. Dak. State Coll., 1936; Assoc. Prof., ibid., 1936-41; Assoc. Prof. of Agron., State Coll. of Wash., 1941-46; Prof. of Agron. and Asst. Dir. of Wash. Agri. Exp. Sta., 1946-48; Prof. of Agron., Chmn., Dept. of Agron., Asst. Dir., ibid., 1948; Visiting Consultant, Office of Milit. Govt. for Germany, 1948; Dean, Coll. of Agri., State Coll. of Wash., 1949—. Mem.: Amer. Soc. of Agron.; A.A.A.S., Fellow; Genetics Soc. of Amer.; Amer. Genetic Assn.; Biometric Soc.; Alpha Gamma Rho; Alpha Zeta; Sigma Xi; Kiwanis Internat. Contrb. to: Jour. Agri. Rsch.; Agron. Jour. Ph.D. Dissertation: Genetic and Cytologic Studies of a Brachytic Mutation in Barley. Travel: Europe. Hobbies: Fishing; Photography; Golf. Listed in: A.M.S.; Who's Who in Amer.

SWEO, Benjamin J., Ferro Corp., 4150 E. 56th St., Cleveland, Ohio. **CERAMICS.**

SWETT, Wilbur Frank, Asst. Clinical Prof. Survey, Stanford Hosp., 490 Post St., San Francisco, Calif. **OPHTHALMOLOGY.**

SWICK, Clarence Herbert, retired, Capitol Heights, Md. **GEODESY.**

SWICKER, Victor C., Alexander H. Kerr and Co., 3440 Wilshire Blvd., Suit 812, Los Angeles, Calif. **CERAMICS.**

SWIFT, Charles Henry, Assoc. Prof. of Anatomy, Univ. of Chicago, Chicago, Ill. **GROSS ANATOMY.**

SWIFT, E. H., Calif. Inst. of Tech., Pasadena, Calif. **CHEMISTRY, ANALYTICAL.**

SWIFT, Homer Fordyce, Mem. Emer., Rockefeller Inst. Med. Rsch., 66th St. and York Ave., N. Y., N. Y. **CLINICAL INVESTIGATION.**

SWIFT, Marguerite Nettleton, Biologist, U. S. Naval Radiological Defense Lab., San Francisco 24, Calif. **PHYSIOLOGY.** b. Watertown, Conn., Nov. 6, 1919. d. Gordon Clarke and R. Marguerite (Gaylord) S. Edn.: B.A., Wellesley Coll., 1940; M.S., Univ. of Chicago, 1942. Exp.: Rsch. Asst., Pulmonary Special Rsch. Project, Dept. of Physiol., Univ. of Chicago, 1942-44; Chemist, Med. Rsch. Lab., Edgewood Arsenal, Chem. Warfare Service, Md., 1944-45; Assoc. Physiologist, Argonne Natl. Lab., Chicago, Ill., 1945-48; Biologist (Radiol.), U. S. Naval Radiol. Defense Lab., San Francisco, Calif., 1948—. Mem.: Sigma Xi; Sigma Delta Epsilon; A.A.A.S.; Atomic Scientists of Chicago; Radiation Rsch. Soc. Contrb. to: Amer. Jour. Physiol.; Federation Proc.; Science; U. S. Naval Radiol. Defense Lab. Reports. Special Int.: Physiol. Effects of Ionizing Radiations, Particularly on Mammals; Pituitary-Adrenal Physiol.

SWIFT, Marjorie Elizabeth, Rsch. Mycologist, Heyden Chem. Corp., Princeton, N. J. **MYCOLOGY AND PLANT PATHOLOGY.** b. Garretson, S. Dak., Sept. 2, 1905. s. Everett L. and Stella (Hughes) S. Edn.: B. S., Northwestern Univ., 1927; M.A., ibid., 1928. Exp.: Asst. Plant Pathol., N. Y. Botanical Garden, N. Y. C., 1929-32; Sec. Tech., Div. of Plant Pathol., The Rockefeller Inst., Princeton, N. J., 1932-44; Mycologist, Heyden Chem. Corp., Princeton, N. J., 1944—. Mem.: Mycol. Soc. of Amer.; Soc. of Amer. Bacteriol.; Soc. for Indus. Microbiol.; N. Y. Acad. of Sci.; Sigma Xi; Phi Beta Kappa; Sigma Delta Epsilon. Contrb. to: Mycologia; Jour. N. Y. Botanical Garden; Bull. of Torrey Botanical Club; Torrey. Special Int.: Plant Pathol.

SWIFT, Raymond Walter, Acting Hd. and Prof., Dept. of Animal Nutrition, Pa. State Coll., State College, Pa. **NUTRITION, AGRICULTURE.**

SWINDELLS, Frank Evans, Photo Products Dept., E. I. du Pont de Nemours and Co., Inc., Parlin, N. J. **PHYSICAL CHEMISTRY.**

SWINDLE, Percy Ford, Prof. and Dir. of Physiol., Marquette Univ. Schl. of Med., 561 N. 15th St., Milwaukee, Wis. **PHYSIOLOGY.**

SWINDLER, James Albert, Prof. and Hd., Dept. of Physics, Westminster Coll., New Wilmington, Pa. **PHYSICS.**

SWINEFORD, Ada, Petrographer, State Geol. Survey, Univ. of Kans., Lawrence, Kans. **GEOLOGY; MINERALOGY.** b. Chicago, Ill., July 12, 1917. d. Charles Roscoe and Kate (Watson) S. Edn.: S.B., Univ. of Chicago, 1940; S.M., ibid., 1942. Exp.: Petrographer, State Geol. Survey of Kans., 1942—. Mem.: Fellow, Geol. Soc. Amer.; Mineralogical Soc. Great Britain and Ireland; Soc. Econ. Paleontologists and Mineralogists; Amer. Assn. Petroleum Geologist; Kans. Acad. Sci.; Sigma Xi. Contrb. to: Jour. Geol.; Amer. Jour. Sci.; Jour. Sedimentary Petrology; Amer. Mineralogist; Trans. Kans. Acad. Sci. Special Int.: Sedimentary Petrography; Clay Mineralogy; Great Plains Volcanic Ash Deposits.

SWINGLE, Walter Tennyson, Prin. Physiologist, Bureau Plant Introduction and Exploration, U. S. Bureau Plant Indus., 4763 Reservoir Rd., N. W., Washington, D. C. **BOTANICAL SCIENCES.**

SWINNERTON, Allyn Coats, Prof. of Geol. and Dir. Quartz Rsch., Antioch Coll., Yellow Springs, Ohio. **GROUNDWATER HYDROLOGY.**

SWITZER, Jesse Elmer, Prof., Dept. of Geography, Ind. Univ., Bloomington, Ind. REGIONAL GEOGRAPHY.

SYKES, Wesley Pope, Metallurgical Engr., Cleveland Wire Works, General Electric Co., Cleveland, Ohio. METALLURGY.

SYMONDS, Percival Mallan, Prof. of Edn., Tchrs. Coll., Columbia Univ., N. Y., N. Y. PSYCHOLOGY AND EDUCATION.

SYMONS, Thomas Baddeley, Dean, Coll. of Agri. and Dir. Extension Service, Univ. of Md., College Park, Md. AGRICULTURE.

SYVERTON, J., Univ. of Minn., Minneapolis, Minn. MICROBIOLOGY.

SYZ, Hans C., Rsch. Assoc., Lifwynn Foundation, Westport, Conn. PHYLO BIOLOGY.

TABER, Stephen, State Geologist and Hd., Geol. Dept., Univ. of S. C., Columbia, S. C. **GEOLOGY.**

TABOR, Celia White, Rsch. Asst. Pharmacol., Schl. of Med., Geo. Washington Univ., Washington, D. C.

TABOR, Paul, Asst. Chf. Reg. Nursery Div., U. S. D. A., Soil Conservation Service, Spartanburg, S. C. **GEOLOGY.**

TAEUSCH, Carl Frederick, Prof. of Public Admin., St. Louis Univ., 221 N. Grand, St. Louis, Mo. **PHILOSOPHY, PUBLIC ADMINISTRATION.**

TAFT, Clarence E., Ohio State Univ., Columbus, Ohio. **MICROSCOPY.**

TAFT, Robert, Prof. of Chem., Univ. of Kans., Lawrence, Kans. **CHEMISTRY.** b. Tokyo, Japan, March 24, 1894. s. George W. and Jessie (Humpstone) T. Edn.: A.B., Grand Island Coll., 1916; M.Sc., Univ. of Iowa, 1919; Ph.D., Univ. of Kans., 1925. m. Josephine (Miller) T., July 24, 1916. c.: Robert W. Taft, Jr.; Dorothy L. Taft. Exp.: Instr. in Chem., Grand Island Coll., 1916-17; Sci. Tchr., Gilbert Technical H. S. Minn., 1917-18; Instr. in Chem., Univ. of Iowa, Iowa City, Iowa, 1918-19; Prof. of Chem., Ottawa Univ., Ottawa, Kans., 1919-22; Prof. of Chem., Univ. of Kans., Lawrence, Kans., 1922—. Hon. Pos.: Pres., Kans. Acad. of Sci., 1932-33; Pres. Kans. State Historical Soc., 1952. Mem.: Amer. Chem. Soc.; Kans. Acad. Sci.; Kans. State Historical Soc.; Sigma Xi. Author: Photography and the Amer. Scene, 1938; Across the Years on Mount Oread, 1941; Artists and Illustrators of the Old West 1953. Editor: Trans. Kans. Acad. Sci. Quarterly. Contrb. to: Jour. of Physical Chem.; Jour. of Chem. Edn.; Kans. Acad. of Sci. Gen. Int.: Authority on Amer. Historical Prints and Photographs. Special Int.: Electro-Chem.; Phase Law.

TAGGART, Arthur Fay, Vinton Prof. Emeritus of Mining, Columbia Univ. Address: 19 Donellan Rd., Scarsdale, N. Y. **MINERAL ENGINEERING.** b. N. Y., N. Y., Oct. 1, 1884. s. Jesse and Ophelia (Fay) T. Edn.: A.B., Stanford Univ., 1909; E.M., ibid., 1910. m. Ruth Field on Aug. 31, 1911. c.: Mary; Lois; Jesse Field. Exp.: Instr. and Asst. Prof. of Mining, Yale Univ., 1912-19; Prof. of Mineral Engrng., Columbia Univ., 1919-51; Vinton Prof. Emeritus of Mining, ibid., 1951—. Hon. Pos.: Pres., Bd. of Edn., Scarsdale, N. Y., 1940-42. Mem.: Sigma Xi; Tau Beta Pi; Amer. Inst. of Mining & Met. Engrs. Author: Manual of Flotation Processes, 1921; Handbook of Ore Dressing, 1927; Handbook of Mineral Dressing, 1945; Elements of Ore Dressing, 1951; etc. Contrb. to: Trans. Amer. Inst. Mining & Met. Engrs.; Jour. of Phys. Chem.; Mining Engrng. Special Int.: Ore Dressing; Petroleum Refining.

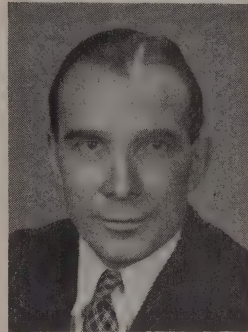
TAINTER, Maurice Lane, Dir., Sterling-Winthrop Rsch. Inst., Rensselaer, N. Y. **RESEARCH IN THE**

FIELDS OF MEDICAL AND DENTAL PHARMACOLOGY. b. Carroll, Iowa, May 10, 1899. s. Emory Baxter and Winnifred Alice (Lane) T. Edn.: A.B., Stanford Univ., 1921; A.M., ibid., 1924; M.D., ibid., 1925. Hon. Deg.: Dr. of Sci., Rensselaer Poly. Inst., 1951. m. Dorothy McGuinness on Sept. 1, 1925. c.: Shirley Anne; Cynthia Mae. Exp.: Asst. in Pharmacology, Stanford Univ., 1922-24; Instr., ibid., 1924-27; Fellow, Natl. Rsch. Council, Johns Hopkins, 1926-27; Asst. Prof. of Pharm., Stanford Univ., 1927-29; Assoc. Prof., ibid., 1929-35; Prof. of Pharm., Coll. of Physicians and Surgeons Dental Schl., 1934-43; Prof., Stanford Univ., 1935-43; Hd. of Dept. of Physiol. Sci., Coll. of Phys. and Surgeons Dental Schl., 1940-43; Prof. of Applied Physiol., Albany Med. Coll., 1943-47; Dir. of Rsch., Winthrop Chem. Co., 1943-46; Dir.,



Sterling-Winthrop Rsch. Inst., 1946—; Vice Pres., Sterling Drug, Inc., 1946—. Mem.: A.A.A.S.; Amer. Physiol. Soc.; Amer. Soc. of Pharm. and Exptl. Therapeutics; Soc. of Exptl. Biol. and Med.; Fellow, A.M.A.; Hon. Mem., Amer. Soc. of Anesthetists; Internatl. Assn. of Dental Rsch.; Hon. Mem. Calif. State Dental Assn.; Hon. Mem. San Francisco District Dental Soc.; Hon. Mem. Ariz. State Dental Soc.; N. Y. Acad. of Sci.; Med. Soc. of the State of N. Y.; Amer. Pharmaceutical Assn.; Amer. Soc. of Tropical Med.; N. Y. Acad. of Med.; Acad. of the Med., Physical and Natural Sci. of Havana; Soc. of Pharmacology and Therapeutics of the Argentine Med. Assn. of Buenos Aires. Special Int.: Rsch. in the Fields of Med. and Dental Pharm.

TAKALA, Reino Mathew, Math. Instr., 232 N. Elmwood Ave., Oak Park, Ill. **MATHEMATICS.**



b. Chassell, Mich., April 12, 1909. s. John and Katherine (Autio) T. Edn.: A.B., Univ. of Mich., 1939; A.M., ibid., 1940. m. Vieno Niemi of Chassell, Mich., Mar. 26, 1932. d. Andrew and Olga Niemi. c.: Helen; Warren. Exp.: Tchr., Rural Elem. and Rural H. S., Mich., 7½ yrs.; Dir., Adult Edn. Program, Upper Peninsula of Mich., 1940-41; Chmn., Math. Dept., Mooseheart, Ill., 1941-42; Asst. Critic Tchr. of Math., Univ. Schl. Ind. Univ., 1942-44; Math. Tchr., Shorewood H. S., Milwaukee, Wis., 1944-47; Chmn., Math. Dept., Hinsdale Twp. H. S., Hinsdale, Ill., 1947-50; Math. Instr., Oak Park and River Forest H. S., Oak Park, Ill. Mem.: Phi Delta Kappa; Phi Kappa Phi; Formerly, Exchange Club; Moose Lodge; Chicago Men's Math. Club; Central Assn. of Sci. and Math.; Natl. Council of Tchr. of Math.; Ill. State Council of Math.; N.E.A.; Ill. Edn. Assn. Contrb. to: Math. Tchr.; Jour. of Sec. Schl. Prin. Hobbies: Sports; Boy Scouts; Reading; Mathematical Visual Aids. Listed in: Who's Who of Finnish Extradition in Amer.

TALBERT, Thomas Jesse, Prof. Emeritus of Hort., Whitten Hall, Univ. of Mo., Columbia, Mo. **HORTICULTURE.** b. Mar. 15, 1880, Exeter, Mo. s. David and Frances Ruth (Sallee) T. Edn.: B.S., Univ. of Mo., 1913; M.A., ibid., 1917. m. Mary Allene, Aug. 2, 1916. c.: John David; Patricia Ann; and Frances Jane. Exp.: Ext. Asst. Prof. of Hort., Univ. of Mo., Columbia, Mo., 1915-17; Supt., Farmer's Inst. and Ext. Schls., Kans. State Coll., 1919-22; Chmn., Dept. Hort. and Forestry, Prof. of Hort., Columbia Univ. of Mo., 1922-50; Prof. Emeritus, ibid., 1950—. Mem.: A.A.A.S.; Amer. Soc. for Hort. Sci.; Mo. Acad. of Sci.; Alpha Zeta; Gamma Sigma Delta; A.A.U.P.; Mason. Author: Prof. ans. Prof. in Fruit Growing, 1939; Fruit Crops, 1939; Gen. Hort., 1946. Contrb. to: Amer. Soc. for Hort. Sci.; Pres. Amer. Pomol. Soc., 1942-46; Mo. State Hort. Sci.

TALBOT, Murrell Williams, Assoc. Dir., Calif. Forest and Range Expt. Sta., U. S. Forest Service, 330 Giannini Hall, Berkeley, Calif. **FOREST AND WILDLAND ECOLOGY.**

TALBOTT, John Harold, Prof. of Med., Univ. of Buffalo Schl. of Med., Buffalo 3, N. Y. **METABOLIC DISEASES AND INTERNAL MEDICINE.** b. Grinnell, Iowa, July 10, 1902. s. Arthur David and Caroline (Flook) T. Edn.: A.B., Grinnell Coll., 1924; M.D., Harvard Med. Schl., 1929. Hon. Deg.: D.Sc., Grinnell Coll., 1946. m. Mildred Cherry, Sept. 3, 1932. c.: John Andrew; Cherry. Exp.: Tutor in Biochem., Harvard Coll., Cambridge, Mass., 1931-32; Instr. in Med., ibid., Med. Schl., 1932-46; Asst. Physician, Mass. Gen. Hosp., Boston, Mass., 1933-46; Prof. of Med., Univ. of Buffalo Schl. of Med., Physician-in-Chf., Buffalo Gen. Hosp., Buffalo, N. Y., 1946—. Mem.: Assn. of Amer. Physicians; Amer. Soc. for Clin. Investigation; Amer. Rheumatism Assn.; Amer. Heart Assn.; A.M.A.; Phi

Beta Kappa; Alpha Omega Alpha; Sigma Xi. Author: Heat Cramps, 1935; Periodic Paralysis, 1941; Gout, 1943. Contr. to: Jour. of Clin. Investigation; Jour. of Biol. Chem.; Arch. of Internal Med.; Annals of Internal Med.; New England Jour. of Med.; N. Y. State Jour. of Med.; Annals of Neurol. and Psychiatry; Amer. Jour. of Physiol.; Jour. of Applied Physiol.; Amer. Jour. of Med. Sci. Special Int.: Gout and Uric Acid Metabolism; Diseases of Metabolism; Ill Effects of High and Low Temperatures.

TALIAFERRO, William Hay, Eliakim H. Moore Distinguished Ser. Prof. of Parasitology, and Chmn.,



Dept. of Bacteriol. and Parasitology, Univ. of Chicago, 5724 Ellis Ave., Chicago 37, Ill. **IMMUNOLOGY AND PARASITOLOGY.** b. Portsmouth, Va., Feb. 10, 1895. s. William Hay and Mary Watkins (Leigh) T. Edn.: B.S., Univ. of Va., 1915; Ph.D., Johns Hopkins Univ., 1918. Hon. Deg.: Sc.D., Univ. of N. C., 1946; LL.D., Temple Univ., 1949. m. Lucy Engel Graves, June 6, 1919. Exp.: Instr. in Protozool., Johns Hopkins Schl. of Hygiene and Public Health, 1919-20; Assoc. in Protozool, *ibid.*, 1920-23; Assoc. Prof., *ibid.*, 1923-24; Assoc. Prof. of Parasitol., Univ. of Chicago, 1924-27; Prof. of Parasitol., *ibid.*, 1927-39; Eliakim H. Moore Distinguished Service Prof. of Parasitol., *ibid.*, 1939—; Chmn., Dept. of Bacteriol. and Parasitol., *ibid.*, 1932—; Assoc. Dean, *ibid.*, 1931-35; Dean of the Div. of Biol. Sciences, *ibid.*, 1935-44; Adviser to the Chancellor in Biol. Sciences, *ibid.*, 1944-47. Hon. Pos.: Editor-in-Chf., Jour. Infectious Diseases; Elected Hon. Fellow, Royal Soc. Tropical Med. and Hygiene, 1949. Mem.: Natl. Acad. Sci.; Amer. Philos. Soc.; Amer. Acad. Tropical Med.; Amer. Soc. Zoologists; Amer. Soc. Naturalists; Amer. Soc. Parasitologists; Amer. Soc. Tropical Med.; Amer. Assn. Immunologists; Soc. Amer. Bacteriologists; Soc. Exptl. Biol. and Med.; Inst. of Med., Chicago; Beta Theta Pi; Sigma Xi; Phi Beta Kappa; Raven Soc. of Va. Co-author: Human Protozool., 1924; The Histopathol. of Malaria, 1937; etc. Author: Immunology of Parasitic Infections, 1929. Editor: Medicine and the War, 1944. Contr. to: Jour. Infectious Diseases; etc. War Record: Pvt. and 2nd Lt., U. S. Army, 1917-19; Responsible Investigator on two OSRD (CMR) Projects relating to Malaria, World War II. Gen. Int.: Awarded Chalmers Medical of Royal Soc. of Tropical Med. and Hygiene, 1935; Mary Kingsley Medal of Liverpool Schl. of Tropical Med., 1949. Special Int.: Cytology and Behavior of Lower Invertebrates; Cytology, Genetics and Immunology of the Animal Parasites; The Cellular Basis of Immunity; The Dynamics of Antibody Formation.

TALKIN, Herbert W., Physicist, Radiation Instruments Branch, U. S. Atomic Energy Commn., 1901



Constitution Ave., Washington, D. C. **APPLIED PHYSICS.** b. Baltimore, Md., Aug. 3, 1914. s. Joseph D. and Marie (Trauty) T. Edn.: B.A., Johns Hopkins Univ., 1935; George Washington Univ., The Univ. of Chicago. m. Eleanor T. Starkins, 1941. c.: David T. Exp.: Phys. Sci. Aide, USN Engrng. Expt. Sta., Annapolis, Md., 1935-39; Physicist, U. S. Natl. Adv. Com. Aeronautics, Langley Field, Va., 1939-46; Physicist, Argonne Natl. Lab., 1946-50; Staff Physicist, Chicago Operations Office of Atomic Energy Commn.,

1950-52; Physicist, Chf. of Govtl. and Milit. Liaison Sect., 1952—. Mem.: Phi Beta Kappa. Special Int.: Mech. Shaft Seals; Diesel Engrng.; Aerodynamics; Nuclear Physics; Electronic Computers; Radiation Detection Instruments; Scientific Admin.

TALLMAN, Gladys Griffith, Kent, Conn.

TALLMAN, Russell Warrick, Dir. of Trng. and Civilian Asst. to Commanding Officer, 842nd A.A.F. Specialized Depot, War Dept. U.S.A.A.F., 2024 Avalon Rd., Des Moines, Iowa. **PSYCHOLOGY OF LEARNING.**

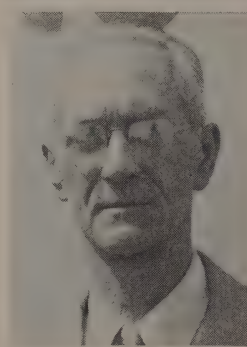
TALMAGE, Sterling Booth, 306 Ness Bldg., Salt Lake City, Utah. **GEOLOGY AND GEOGRAPHY.**

TANBERG, Arthur Percival, Admin. Dir., Expt. Sta., E. I. du Pont de Nemours and Co., Inc., 2302 Delaware Ave., Wilmington, Del. **CHEMISTRY.**

TANNENBAUM, Albert, Michael Reese Hosp., Chicago, Ill. NUTRITION.

TANNER, Herbert Giles, Physical Chemist, War Dept., Camp Detrick, Frederick, Md. **PHYSICAL CHEMISTRY.**

TANNER, Wellington Lee, Chf. Chemist, Reade Mfg. Co., Inc., Panasoffkee, Fla. **AGRICULTURAL CHEMISTRY.** b. Roseville, Ohio, Sept. 5, 1889.



s. Charles Albert and Elizabeth Local (Bichard) T. Edn.: B.S., Sprague Coll., 1912. Exp.: Chemist, Pierce Powder Co., Zanesville, Ohio, 1913-15; Chf. Chem., Bethlehem Steel Co., New Castle, Del., 1915-19; Rsch. Chem., The Grasselli Chem. Co., Cleveland, Ohio, 1921-25; Chf. Chem., Reade Mfg. Co., Inc., Panasoffkee, Fla., 1925—. Mem.: Amer. Chem. Soc.; Amer. Inst. of Chem.; A.A. A.S.; Fla. Acad. of Sci. Hon. Pos.: Councilor, Amer. Inst. of Chem., 1923. Author: Assaying, 1926; Aceites Essentials, 1927. Contr. to: Sci.; Jour. Amer. Chem. Soc. Special Int.: Organic Compounds for Agriculture.

TANSEY, V. O., Assoc. Prof., Univ. of Ark., Fayetteville, Ark. **GEOLOGY.**

TAO, Deh-chang, Chf. Engr., Portage Machine Co., 1031 Sweitzer Ave., Akron 11, Ohio. **KINEMATICS.** b. Shanghai, China, May 20, 1925. s. Yuen-sen and Mary (Hsu) T. Edn.: B.S. in M.E., Chiao-tung Univ., 1944; M.S.M.E., Purdue Univ., 1949; Ph.D., *ibid.*, 1951. Exp.: Locomotive Engr. and Inspector on Nanking Shanghai Railway, 1944-48; Consulting Engr., Natl. Homes Corp., 1950-51; Asst. Prof., Akron Univ., 1951-52; Chief. Engr., Portage Machine Co., Akron, Ohio, 1952—. Mem.: Amer. Soc. Tool Engrs.; Pi Tau Sigma; Sigma Xi. Author: Steam Locomotive Mgt. and Repair Manual for Round House, Translated into English, 1949. Contr. to: Product Engrng.; A.S.M.E. Special Int.: Kinematics and Automatic Machinery and Machine Tools.



TAPPAN, Anna Helen, Prof. of Math., Western Coll. for Women, Oxford, Ohio. **ALGEBRAIC GEOMETRY, MATHEMATICS.**

TARASSUK, N. P., Prof. of Dairy Chem., Univ. of Calif., Davis, Calif. **DAIRY CHEMISTRY.**

TARBELL, D. S., Dept. of Chem., Univ. of Rochester, Rochester, N. Y. **CHEMISTRY.**

TARNOPOL, Lester, Dir. of Survey Rsch. and Training, Luckmann-Tarnopol and Associates Faculty of Engrng. and Psychology at City Coll. of San Francisco, San Francisco 12, Calif. **INDUSTRIAL PSYCHOLOGY AND PHYSICAL METALLURGY.** b. Haverhill, Mass., Feb. 23, 1913. s. Morris and Sarah (Goldshine) T. Edn.: Sc.D., Harvard Univ., 1938; S.M., Mass. Inst. of Tech., 1935; S.B., *ibid.*, 1934. m. Julia Rosberg, Nov. 24, 1946. c.: Kevin Lee; David Howard. Exp.: Rsch. Assoc. in Geophysics, Harvard Univ., Cambridge, Mass., 1935-36; Asst. in Metallurgy, *ibid.*, 1937-38; Asst. Prof. of Metallurgy, Univ. of Ky., Lexington, Ky., 1938-40; Asst. Prof. of Physical Metallurgy, *ibid.*, 1940-41; Chief Metallurgist, Raytheon Production Co., Newton, Mass., 1941-43; Prof. of Math., Loyola Univ., Los Angeles, Calif., 1943-44; Consulting Engr., Van Tuyl Engrng. Co., Los Angeles and Mexico City, 1944-45; Lectr. in Metallurgy, Lectr. Mech. Engrng., Lectr. in Physics, Univ. of Southern Calif., Los Angeles, 1945-46; Faculties of Engrng. and Psychology, City Coll. of San Francisco, 1946—; Lectr. in Edn., Univ. of San Francisco, 1949—; Dir. of Rsch. and Training, Luckmann-Tarnopol and Associates, Management Engineering Consultants, San Francisco, 1950—. Mem.: Sigma Chi; Indian Inst. of Metals; A.A.U.P.; Amer. Assn. for Group Psychotherapy. Contrb. to: Jour. of the Indian Inst. of Metals; A.A.U.P.; Amer. Assn. for Group Psychometrics; Metal Progress; The Welding Jour.; Jour. of Applied Physics; Nature. Spec. Int.: Industrial Psychology, Group Dynamics; Atomic Structure; Physics of Metals; Electronics; X-Ray Crystallography and Radiography; Edn. Psychology; Human Relations As Applied to Industrial and Ednl. Groups; Psychological Survey Rsch.

TARSKI, Alfred, Univ. of Calif., Berkeley, Calif. **MATHEMATICAL LOGIC.**

TARTAR, Herman Vance, Prof. of Chem. and Dir. Chem. Labs., Univ. of Wash., Seattle, Wash. **CHEMISTRY.**

TARZWELL, C. M., Environmental Health Center, 1014 Broadway, Cincinnati 2, Ohio. **AQUATIC BIOLOGY.**

TASHIRO, Shiro, Prof. of Biol. Chem., Med. Coll., Univ. of Cincinnati, Cincinnati, Ohio. **BIOCHEMISTRY.**

TASKER, Arthur Newman, retired, 317 Tuscany Rd., Baltimore, Md. **INTERNAL MEDICINE.**

TATE, H. D., U. S. Rubber Co., Bethany, Conn. **AGRICULTURAL, CHEMICAL RESEARCH.**

TATNALL, Robert Richardson, retired, 1100 West 10th St., Wilmington, Del. **BOTANY.**

TATUM, Arthur Lawrie, Prof. of Pharmacol., Univ. of Wis., Madison, Wis.

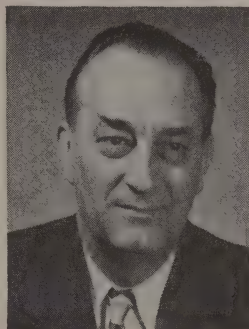


PHARMACOLOGY. b. Wall Lake, Iowa, May 17, 1884. s. Elwood and Deborah (Hawley) T. Edn.: B.S., William Penn Coll., 1905; M.S., State Univ. of Iowa, 1907; Ph.D., Univ. of Chicago, 1913; M.D., Rush Med. Coll., 1914. Hon. Deg.: Doctor Honoris Causa, San Marcos Univ., Lima, Peru, 1948. m. Mabel Webb, Dec. 20, 1908. 2nd m. Celia Harriman, Sept. 9, 1940. c.: Edward L.; Besse T.; Howard J. Exp.: Instr. in Chem., Univ. of Colo., 1907-10; Instr. in Pharmacol., Univ. of Wis., 1911-13; Instr. in Physiology, Univ. of Pa., 1915-16; Prof. of Physiol., Univ. of S. Dak., 1916-17; Asst. Prof. in Pharmacol., Univ. of Chicago, 1918-25; Assoc. Prof., *ibid.*, 1925-28; Prof. of Pharmacol., Univ. of Wis., Madison, Wis., 1928—. Hon. Pos.: Vice-Pres., Amer. Soc. Pharmacol. and Exptl. Therapeutics,

1933-34; Pres., *ibid.*, 1937-38; Assoc. Editor, *ibid.*, 1940-50. Mem.: A.A.A.S.; Soc. Exptl. Biol. and Med.; Amer. Physiol. Soc.; Natl. Malaria Soc.; Amer. Soc. Anesthesiologists; Inst. Med. of Chicago; A.M.A.; Sigma Xi; Alpha Chi Sigma; Phi Chi. Author: Prescription Notes, 1925. Contrb. to: Amer. Jour. Physiol.; Jour. Pharmacol. and Exptl. Therapeutics; Science; Proc. Soc. Exptl. Biol. and Med.; etc. Special Int.: Pharmacol.; Physiol.; Biochem.; Parasitol.

TATUM, Edward Lawrie, Stanford Univ., Stanford, Calif.

TATUM, Gordon Russell, Dir. of Rsch. and Development and Dir. of the Silver Spring Lab., Vitro Corp.



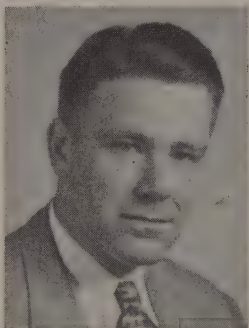
of Amer., 962 Wayne Avenue, Silver Spring, Md. **PHYSICS; ACOUSTICS.** b. Fincastle, Tex., Nov. 30, 1904. s. John Marvin and Linna Beatrice (Tindel) T. Edn.: A.B., Baylor Univ., 1928; M.A., Univ. of Tex., 1931; Ph.D., Harvard Univ., 1937. m. Mary Elizabeth Harrison, May 28, 1931. c.: Gordon Russell, Jr.; John Robert. Exp.: Prin., Katy, Tex., H. S., 1925-26; Instr. of Sci., Bellville, Tex., H. S., 1926-27; Advanced from Tehng. Fel. in Physics, 1927 to Prof. of Physics,

Baylor Univ., 1939; Visiting Lectr. on Electronics and Assoc. Dir. of Officers Electronics Trng. Courses, Harvard Univ., 1941-45; Technical Supvr. for Liaison and Planning, Applied Physics Lab., Johns Hopkins Univ., 1945-46; Assoc. Dir., Applied Phys. Lab., *ibid.*, 1946-48; Dir. of Rsch. and Development and Dir. of the Silver Spring Lab., Vitro Corp. of Amer., 1948—. Mem.: Amer. Ordnance Assn.; Natl. Security Industrial Assn.; Amer. Mgt. Assn.; Amer. Physical Soc.; Acoustical Soc. Amer.; A.A.P.T.; A.A.A.S.; Wash. Philos. Soc.; Sigma Xi. Contrb. to: Library Quarterly; Jour. Acoustical Soc. Special Int.: Scientific Admin.; High Intensity Ultrasonics; Electronic Circuits.

TAUB, A. H., Inst. for Advanced Study, Princeton, N. J. **MATHEMATICAL PHYSICS.**

TAUBER, Oscar Ernst, Prof. of Zool. and Entomol., Iowa State Coll., Ames, Iowa. **GENERAL PHYSIOLOGY.**

TAUFEN, Harvey James, Mgr., Synthetics Rsch. Div., Hercules Expt. Station, Wilmington, Del. **ORGANIC CHEMISTRY.** b. Lewiston, Idaho, Mar. 30, 1919. s. Otto J. and Carrie A. (Greif) T. Edn.: B.S., Gonzaga Univ., 1940; M.S., Ill. Inst. of Tech., 1941; Ph.D., *ibid.*, 1944. m. Helen Ann Krzanowski, 1942. c.: Lester J.; Mary Beth; John H.; Linda H.; Paul M. Exp.: Instr., Chem., Ill. Inst. of Tech., Chicago, Ill., 1941-44; Foreman, Tenn. Eastman Corp., Oak Ridge, Tenn., 1944-45; Rsch. Chem., Hercules Powder Co., Wilmington, Del., 1945-50; Supvr., Synthetics Rsch. Div.,



ibid., 1950-53. Mem.: Amer. Chem. Soc.; Sigma Xi; Phi Lambda Upsilon; Alpha Chi Sigma; Alpha Sigma Nu. Contrb. to: Jour. of Amer. Chem. Soc.; Jour. of Chem. Physics. Special Int.: Chem. of Monocyclic and Bicyclic Terpenes; Reaction Mechanisms; Chlorination of Hydrocarbons; Oxidation of Hydrocarbons.

TAYLOR, Alvah Lloyd, 15041 Drysdale St., Rt. 1, Wyandotte, Mich. **CHEMISTRY, CHEMICAL ENGINEERING.**

TAYLOR, Aravilla Meek, Prof. and Hd., Dept. of Biol., Lake Erie Coll., Painesville, Ohio. PLANT ECOLOGY.

TAYLOR, Aubrey Bryant, Asst. Prof. of Physiol., Univ. of Ill., Urbana, Ill. PHYSIOLOGY.

TAYLOR, Carl, U. S. Dept. of Agri., Washington, D. C. SOCIAL RESEARCH.

TAYLOR, Chester H., 1119 Judson Ave., Evanston, Ill. PHARMACY.

TAYLOR, Clara M., Columbia Univ., New York, N. Y. NUTRITION.

TAYLOR, Edson Homer, Prof. Emer. Math., Eastern State Tchrs. Coll., 885 Seventh St., Charleston, Ill. MATHEMATICS.

TAYLOR, Fred Anderson, Chemist, William H. Singer Memorial Rsch. Lab., 320 E. North Ave., Pittsburgh, Pa. BIOCHEMISTRY.

TAYLOR, Fred Herbert, Asst. Prof. of Botany, Univ. of Vt., Burlington, Vt. BOTANY.

TAYLOR, Guy Baker, Rsch. Chemist, E. I. du Pont de Nemours and Co., Inc., 2306 Saymour Rd., Wilmington, Del. CHEMISTRY.

TAYLOR, Harden Franklin, Consultant, 115 Broadway, Rm. 1117-18, N. Y., N. Y. FISHERIES, FISHERY PRODUCTS.

TAYLOR, Harold Claire, Dir., The W. E. Upjohn Inst. for Community Rsch., 709 S. Westnedge Ave., Kalamazoo, Mich. PSYCHOLOGY. b. Barnes City, Iowa, Dec. 21, 1905. s. M. D. and Effie (Hoffman) T. Edn.: Ph.B., Univ. of Chicago, 1929; M.S., Yale Univ., 1932; Ph.D., ibid., 1934. m. Juanita Williams, June 7, 1930. c.: Linnea Dell. Exp.: Technical Asst., Indus. Relations Div., Procter and Gamble Co., 1934-36; Chf., Personnel Rsch. Dept., Western Electric Co., 1936-44; Employment Mgr., ibid., 1944-45; Dir., The W. E. Upjohn Inst. for Community Rsch., 1945—.



hon. ros. Mem., Amer. Bd. of Examiners in Professional Psychol.; Mem., Exec. Com., Div. of Bus. and Indus. Psychol., Amer. Psychol. Assn., 1949-52, Mem., Finance Com., Amer. Psychol. Assn., 1950-52. Mem.: Amer. Psychol. Assn.; Midwest Psychol. Assn.; Mich. Psychol. Assn.; Mich. Acad. Sci., Arts and Letters; Psychometric Soc.; Sigma Alpha Epsilon; Sigma Xi; Phi Beta Kappa; Rotary. Co-author: Full Employment in Your Community, 1947; Current Trends in Industrial Psychol., 1949. Contrb. to: Jour. Exptl. Psychol.; Jour. General Psychol.; Jour. Social Psychol.; Personnel; Jour. Applied Psychol.; etc. War Record: Consultant, Div. of Admin. Mgt., Bureau of Budget, 1942. Special Int.: Business and Industrial Personnel; Econ., Social and Governmental Problems at the Community Level.

TAYLOR, Hawley Otis, Prof. of Physics Emer., Wheaton Coll., Wheaton, Mass.; 3077 Olive Ave., Altadena, Calif. PHYSICS.

TAYLOR, Haywood Maurice, Prof. of Toxicol. and Assoc. Prof. of Biochem., Duke Univ. Schl. of Med., Box 3093 Duke Hosp., Durham, N. C. TOXICOLOGY, CLINICAL CHEMISTRY. b. Edgecombe Co., N. C. May 11, 1898. s. David Dawson and Margaret Elizabeth (Brown) T. Edn.: B.S., Univ. of N. C., 1920; M.S., ibid., 1921; Ph.D., ibid., 1924. m. Alice Lee Brown, Oct. 28, 1922. c.: Alice Lee; Martha Anne Swayze. Exp.: Instr. in Chem., Univ. of N. C., Chapel Hill, N. C., 1920-24; Instr., Pharmaceutical Chem., ibid., 1924-25; Rsch. Chemist, E. R. Squibb and Son, Brooklyn, N. Y., 1925-26; Rsch. Chemist, Fisk Rubber Co., Chicopee Falls, Mass.,

1926-28; Instr., Wilmer Ophthalmological Inst., Johns Hopkins Med. Schl. and Hosp., Baltimore, Md., 1928-30; Asst. Prof., Assoc. Prof., Duke Univ. Schl. of Med., Durham, N. C., 1930—; Prof. of Toxicol., ibid., 1950—; Consultant Toxicologist, State Bur. of Investigation, 1939—; Area Consultant in Biochem., V. A., 1952—. Mem.: Amer. Soc. of Clinical Chemists; Soc. for Experimental Pathol.; Amer. Bd. of Clinical Chem.; Pi Kappa Alpha; Alpha Chi Sigma; Phi Delta Chi; Soc. of Sigma Xi; Phi Lambda Upsilon. Special Int.: Toxicology, Clinical Chemistry.

TAYLOR, Hugh Stott, Dean, Grad. Schl. and Chmn. Dept., Frick Chemical Lab., Princeton Univ., Princeton, N. J. PHYSICAL CHEMISTRY.

TAYLOR, James Herbert, Asst. Prof. of Bot., Columbia Univ., N. Y. CYTOGENETICS. b. Jan. 14, 1916, Corsicana, Tex. s. Charles A. and Delia May (McCain) T. Edn.: B.S., Southeastern St. Coll., 1939; M. S., Univ. of Okla., 1941; Ph.D., Univ. of Va., 1944. m. Shirley Hoover of Roanoke, Va., 1946. d. Mr. and Mrs. Roy M. Hoover. Exp.: Asst. Prof. of Plant Sci., Univ. of Okla., 1946-47; Assoc. Prof. of Bot., Univ. of Tenn., 1947-51; Asst. Prof. of Bot., Columbia Univ., N. Y., 1951—. Mem.: Sigma Xi; Bot. Soc. of Amer.; Genetics Soc. of Amer.; Amer. Soc. of Plant Taxonomists; Amer. Genetic Assn.; Southeastern Biologists and Tenn. Acad. of Sci. Contrb. to: Jour. of Heredity; Brittonia; Amer. Jour. Bot. Ph.D. Dissertation: Cytotaxonomy and Phylogeny of the Oleaceae. War Record: South Pac., Staff Sgt., Med. Travel: U. S.; Mexico; Pacific Islands; New Zealand. Hobbies: Photography; Woodwork. Listed in: Who's Who in the South and Southwest; A.M.S. Special Int.: Isotopes in the study of cytology; autoradiographs.

TAYLOR, James Sturdevant, Prof. of Math. and Hd. Dept., Cathedral of Learning, Univ. of Pittsburgh, Pittsburgh, Pa. MATHEMATICS.

TAYLOR, Jane Bliss, SPEECH AND HEARING.

TAYLOR, Leland Hart, Prof. of Zool., W. Va. Univ., Morgantown, W. Va. ZOOLOGY.

TAYLOR, Leslie Owen, Assoc. Prof. of Edn., Univ. of Omaha, Omaha, Nebr. SECONDARY EDUCATION. b. Clear Lake, S. Dak., Nov. 10, 1889. s. Charles W. and Barbara (Daufel) T. Edn.: A.B., W. Va. Univ., 1917, A.M., Univ. of Chicago, 1922; Ph.D., Univ. of Minn., 1932. m. Mersaline Peterson, Dec. 22, 1917. c.: Bob Leslie. Exp.: Tchrr., Rural Schl., 1907-09; Prin., Graded Schl., 1913-14; Prin., H. S., 1917-18; Tchrr., Normal Trng. H. S., 1919; Supt. of Schl., 1919-21; Hd., Dept. of Edn., State Normal Schl., Shepherdstown, W. Va., 1922-24; State Supvr. of H. S., W. Va., 1924-27; Asst. Prof. of Edn., Univ. of Omaha, Omaha, Nebr., 1929-36; Assoc. Prof. of Edn., ibid., 1936—. Mem.: A.A.A.S.; A.S.C.D.; Natl. Education Assn.; N.A.S.S.P.; Phi Delta Kappa; Sigma Phi Epsilon. Contrb. to: Jour. Higher Edn.; Schl. Exec.; Amer. Schoolboard Jour.; Jour. Ednl. Psychol. War Record: World War I, 1918. Special Int.: Possibilities and Limitations of the Six-Year H. S. as a Type of Secondary Schl. Organization for the Small Community.

TAYLOR, Lewis Walter, Prof. of Poultry Husbandry, Expt. Sta., Univ. of Calif., Berkeley, Calif. POULTRY HUSBANDRY.

TAYLOR, Lloyd William, Prof. and Hd. Dept. of Physics, Oberlin Coll., Oberlin, Ohio. OPTICS.

TAYLOR, Lucien Bradford, Prof. of Physics and Hd. Undergrad. Dept., Boston Univ., Boston, Mass. PHYSICS.

TAYLOR, Mildred Ellen, Prof. and Hd., Dept. of Math. and Astron., Mary Baldwin Coll., Staunton, Va. MATHEMATICS.

TAYLOR, Nelson W., New Products Div., Minn. Mining and Mrg. Co., 367 Grove St., St. Paul 1, Minn. CERAMICS.

TAYLOR, Norman, Dir., Cinchona Products Inst., 10 Rockefeller Plaza, N. Y., N. Y. ECONOMIC BOTANY.

TAYLOR, Raymond Frank, 2723 Wooleigh Rd., Oakmont, Pa. AGRICULTURE.

TAYLOR, Richard Moreland, Internatl. Health Div., Med. Rsch., Rockefeller Inst., 66th St., N. Y., N. Y. MEDICAL RESEARCH.

TAYLOR, Thomas Smith, Dir. of Rsch., U. S. Testing Co., 1415 Park Ave., Hoboken N. J. PHYSICS.

TAYLOR, Walter Penn, Prof., Dept. of Fish and Game, Tex. A. and M. Coll., College Station, Tex. ZOOLOGY.

TAYLOR, William Alton, retired, 30 Berkley Pl., Columbus, Ohio. POMOLOGY.

TAYLOR, William Chittenden, Vice-Pres., Corning Glass Works, Corning, N. Y. CHEMISTRY.

TAYLOR, William Palmer, Rsch. and Development Dept., Champion Paper and Fibre Co., 416 Ross Ave., Hamilton, Ohio.

TAYLOR, William Randolph, Prof. of Botany and Curator Algae, Univ. of Mich., Ann Arbor, Mich. PHYCOLOGY, CYTOLOGY.

TAYLOR, William Sentman, Prof. of Psychol., Smith Coll., Northampton, Mass. ABNORMAL PSYCHOLOGY.

TAYLOR, William T., Prof. Biol., Georgetown Univ., 2221-40 Place, N. W., Wash. 7, D. C. HEMATOLOGY. b. March 21, 1909, N. Y. City, N. Y. s. Thomas J. and Bride (Dooley) T. Edn.: A.B., Fordham Univ., 1931; M.S., *ibid.*, 1933; Ph.D., *ibid.*, 1940. m. Anna Margaret Treacy of N. Y. City, Oct. 10, 1944. d. Mr. and Mrs. James Treacy. c.: Wm. T., Jr. Exp.: Instr., St. Francis Coll., N. Y., N. Y., 1935; Instr., Georgetown Univ., D. C., 1936; Asst. Prof., Georgetown Univ., 1939; Assoc. Prof., Georgetown Univ., 1947. Mem.: A.A.S.A.; Amer. Genetic Assn.; Curricular Comm., D. C., Natl. League of Nursing Edn.; Chmn., Com. on Recommendations for the Coll. of Arts and Scis. Contrb. to: *Annals of Med.*, D. C. Ph.D. Dissertation: Blood Changes Produced in Rabbits by Indol. Author: *Laboratory Manual of Pharmacol.*, 1947; *Functional Mammalian Anat.*, 1951. Hobby: Math. Listed in: A.M.S. Special Int.: Neuroanatomy, Zoology.

TEAGARDEN, Florence M., Prof. of Psychol., Univ. of Pittsburgh, Pittsburgh, Pa. PSYCHOLOGY.

TEAR, James DeGraff, Rsch. Dir., Ford Instrument Co., Long Island City, N. Y. PHYSICS.

TEAS, Livingstone Pierson, Office, 2227 Commerce Bldg., Houston, Tex. PETROLEUM GEOLOGY.

TEASDALE, Robert Daniel, Staff Asst. to the Dir. of Engrng., Magnetic Metals Co., Camden 1, N. J.



APPLIED MATHEMATICS, ELECTROMAGNETISM, WAVE GUIDES, CIRCUIT THEORY. b. Mt. Lebanon, Pittsburgh, Pa., June 25, 1924. s. Russell Charles and Elizabeth (Davis) T. Edn.: B.S., Carnegie Inst. of Tech., 1946; M.S., *ibid.*, 1947; Ph.D., *ibid.*, 1949; LL.B., John Marshall Law Schl., 1951. m. Audrey Brinkerhoff, June 12, 1948. c.: Betty Clara; Robert Daniel, Jr.; Russell Cleaver. Exp.: At Westinghouse Electric Corp. as a train-

ing program engineer in accordance with the provisions of the Westinghouse Sci. Scholarship, D. C. Generator Div., East Pittsburgh, Pa., 1942, Radio Interference Lab., East Pittsburgh, Pa.; Test Shop, Baltimore, Md., Industrial Electronics Div., Baltimore, Md.; Lamp Div., Baltimore, Md., 1945; Engr., General Electric Co., 1947; Engr. Ga. Tech. Rsch.

Station, 1949-52; Tchr. of Elec. Engrng., Ill. Inst. of Tech., 1946-49; Assoc. Prof. of Elec. Engrng., Ga. Inst. of Tech., 1949-52; Lectr. Evening Div., LaSalle Coll., Phila., 1952—; Engr., RCA Victor, Camden, N. J., 1952-1953. Mem.: Tau Beta Pi; Sigma Xi; Eta Kappa Nu; Phi Kappa Phi; I.R.E., A.I.E.E., A.A.S.A.; Engrs. Club of Philadelphia. Contrb. to: *Proc. I.R.E.*; *Elec. Engrng.*; *Trans. A.I.E.E.*; *Proc. Natl. Electronics Conf.* Special Int.: Propagation in and Cut off Frequency for Metallic Wave Guides containing Two Coaxial Dielectrics; Input Admittance of Coupled Circuits; Time Domain Approximation for Circuit Synthesis, Magnetic Shields and Ferromagnetic Materials, Engrng. Edn.

TEBROCK, Harry E., Medical Dir., Sylvania Elec. Products Inc., 1740 Broadway, New York 19, N. Y. INDUSTRIAL MEDICINE. b. New York, N. Y., Oct. 28, 1909. s. Harry E. and Minnie (Viernitz) T. Edn.: B.S., New York Univ., 1930; M.D., Long Island Coll. of Med., 1934. m. Gertrude, Jan. 8, 1937. c.: Georgina; Edward; Otto. Exp.: Private Practice of Med., Bay Shore, Long Island, 1936-41; Assoc. Med. Dir., Lederle Labs. of the Amer. Cyanamid Corp., New Orleans, 1941-42; Cmdr., U. S. Navy Reserve, M. C., 1943-46; Assoc. Med. Dir., Schenley Labs., N. Y. City, 1946-47; Med. Dir., Sylvania Electric Products Inc., New York, N. Y., 1948—. Mem.: Amer. Med. Assn.; Fellow, N. Y. Acad. of Med.; Amer. Coll. of Chest Physicians; Acad. of Occupational Med.; Industrial Med. Assn.; New York State Med. Assn. Contrb. to: *N. Y. State Jour. of Med.*; *Amer. Jour. of Nursing*; *Medical Times*; *Industrial Med. and Surgery*; *International Archives of Allergy and Applied Immunology*; *U. S. Navy Med. Bull.* War Record: World War II. Special Int.: Clinical Investigative Work, Vascular, Pulmonary Diseases, Toxicology—Occupational Diseases Primarily.

TEDESCHE, Leon Greenfield, Med. Dir., West End Industrial Dispensary, 1016 Valley Lane, Cincinnati, Ohio. INDUSTRIAL ACCIDENTS.

TEETER, Thomas Anderson Hendricks, Prof. of Engrng., Univ. of Minn., Minneapolis, Minn. ENGINEERING, MATHEMATICS.

TEETOR, Paul, Central Commercial Co., Northfield, Ill. CERAMICS.

TEHON, Leo Roy, Hd., Section Applied Botany and Plant Pathol., Ill. State Natural History Survey, 1003 S. Busey, Urbana, Ill. APPLIED BOTANY.

TELLER, Edward, Univ. of Chicago, Chicago 37, Ill.

TEMLIN, Mildred C., SPEECH AND HEARING.

TenBROECK, Carl, Mem., Rockefeller Inst. Med. Rsch. and Dept. Animal and Plant Pathol., 94 Battle Rd., Princeton, N. J. BACTERIOLOGY.

TENDLER, Alexander D., Asst. Prof. of Psychol., N. Y. Post Grad. Med. Schl., 303 E. 20th St., N. Y., N. Y. PSYCHOLOGY.

TER KEURST, Arthur John, Hd. Edn. Div., Central Mo. State Coll., Warrensburg, Mo. EDUCATIONAL PSYCHOLOGY.

TERMAN, Frederick Emmons, Dean, Schl. of Engrng., Stanford Univ., Stanford, Calif. RADIO ENGINEERING; ELECTRONICS. b. English, Ind., June 7, 1900. s. Lewis Madison and Anna Belle (Minton) T. Edn.: A.B. in Ch.E., Stanford Univ., 1920; E.E., *ibid.*, 1922; Sc.D. in E.E., M. I. T., 1924; Hon. Sc.D., Harvard Univ., 1925; Univ. Br. Col., 1950. m. Sibyl Walcutt of Tucson, Ariz., March 22, 1928. c.: Fred. Walcutt, Terence C. Lewis Madison. Exp.: All Pos. at Stanford Univ.: Instr. in E. E., 1925-27; Asst. Prof., 1927-30; Assoc. Prof., 1930-37; Prof. and Exec. Hd., E. E. Dept., 1937-45; Dean, Schl. of Engrng., 1945—. Mem.: Natl. Acad. of Sci.; A.A.A.S.; Natl. Rsch. Coun.; Inst. of Radio Engrs., Pres., 1941; Medal of Honor, 1950, Amer. Inst. of E. E.; Amer. Soc. Engrng. Edn., Vice-Pres., 1949-51; Theta Xi; Phi Beta Kappa; Sigma Xi; Tau Beta Pi; Phi Lambda Upsilon. Author: *Transmission Line Theory*, 1927; *Radio Engr.*, 1932-37-47; and Others. War Record: Dir., Harvard Univ. Radio Rsch. Lab., Chief U. S. Agency Developing Counter-measures

Against Enemy Radar, 1942-45; Medal for Merit, 1948.

TERMAN, Lewis Madison, 761 Dolores St., Stanford, Calif. **PSYCHOLOGY**.

TERRILL, Clair Elman, Animal Husbandman, Western Sheep Breeding Lab., Dubois, Idaho. **ANIMAL BREEDING**.

TERRY, Benjamin Taylor, Rsch. Pathologist, 604 Ninth Ave., S. W., Rochester, Minn. **RESEARCH PATHOLOGY AND TEACHING**.



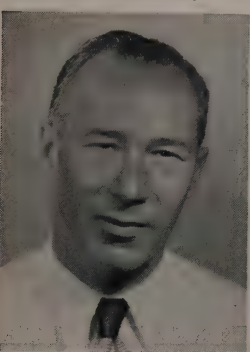
b. Birmingham, Ala., June 10, 1876. s. John Talioferro and Mary Elizabeth (Taylor) T. Edn.: A.B., Vanderbilt Univ., 1898; M.D., Johns Hopkins Univ., 1904. m. Marta Anna Sophie von Mayer, July 25, 1907. c.: Mary Elizabeth. Exp.: Staff Mem., Rockefeller Inst. for Med. Rsch., 1906-13; Co-Editor, Jour. Exptl. Med., 1911-13; Dir. of Labs., Kings County Hosp., Brooklyn, N. Y., 1913-18; Instr. in Pathol., Columbia Univ. Med. Schl., 1914-18;

Prof. of Pathol., Vanderbilt Univ., Schl. of Med., and Pathologist, Vanderbilt Hosp., 1918-25; Dir. of Labs., Toledo Gen. Hosp., Toledo, Ohio, 1925-26; Independent Rsch. Worker on Malignancy at Mayo Clinic, Rochester, Minn., 1926-32; Acting Prof. of Pathol., Univ. of Tex., 1932-33; Dir. of Labs. and Pathologist, Tacoma Gen. Hosp., Tacoma, Wash., when left for private practice as Pathologist, Tacoma, Wash.; Now retired from active practice of Pathol. and engaged in research problems in Pathol. Mem.: A.M.A.; A.S.C.P.; Sigma Xi; Pierce Co. and Wash. State Med. Assns.; A.A.A.S.; Pacific Northwest Soc. of Pathologists; Wash. State Soc. of Pathologists; Rotary. War Record: Commissioned Surgeon in Reserve of U. S. Public Health Service, 1943—. Gen. Int.: Awarded Gold Medal from Amer. Soc. of Clinical Pathologist; Awarded Silver Medal from A.M.A. Special Int.: Originator of "Terry's Neutralized Polychrome Methylene Blue Stain" for Frozen and Fixed Tissue, used to Locate Malignancy in Tissues to be Examined Microscopically, now being manufactured and distributed by Natl. Aniline Div.; Inventor of Easily Made, Inexpensive, Safety Razor Blade Microtome with Technic Especially Useful in the Immediate Diagnosis of Tissue.

TERRY, Melvin Carhart, Rsch. Specialist Geophysics, Humble Oil Co., 6401 Belmont St., Houston, Tex. **PHYSICS**.

TERRY, Ralph Eugene, Assoc. Prof. of Pharmacy, Coll. of Pharmacy, Univ. of Ill., 808 S. Wood St., Chicago, Ill. **PHARMACEUTICAL CHEMISTRY**.

TESTER, Albert Lewis, Sr. Prof. of Zool., Univ. of Hawaii, Honolulu, T. H. **FISHERIES BIOLOGY**.



b. Toronto, Ont., Can., Nov. 27, 1908. s. Jesse and Fanny (Kinge) T. Edn.: B.A., Univ. of Toronto, 1931; M.A., ibid., 1932; Ph.D., ibid., 1936. m. Laura May Arnold, May 21, 1934. c.: Murray Arnold; Loretta May. Exp.: Rsch. Asst., Ont. Fisheries Rsch. Lab., 1928-31; Began as Scientific Asst., advancing to Sr. Biologist, Fisheries Rsch. Bd. of Can., Pacific Biol. Station, Nanaimo, B. C., 1931-48; Prof. of Zool., Univ. of Hawaii, Honolulu, T. H., 1948—. Hon. Pos.: Chmn., Univ. of Hawaii Rsch. Com. Mem.: Amer. Fisheries Soc.; Amer. Statistical Assn.; A.A.A.S.

Amer. Soc. of Limnology and Oceanography; Amer. Soc. of Zoologists; Foundation for the Study of Cycles; Hawaiian Acad. of Sci.; A.A.U.P.; Sigma Xi; Masonic Order. Contbr. to: Jour. Fisheries Rsch. Bd. of Can.; Journal du Conseil; Trans. Amer. Fisheries Soc.; Proc. Hawaiian Acad. Sci.; Pacific Sci.; etc. Gen. Int.: Investigation (with P. B. van Weel and J. Naughton) of a Chemical Attractant for Tuna Held in Captivity. Special Int.: Investigations of British Columbia Herring Populations; Scientific Management of British Columbia Herring Fishery; Investigation of Life Hist. of Tropical Baitfish; Investigation of Reactions of Tuna to Stimuli; Specialist in Applied Statistics and Biometry.

TERRY, Robert James, Prof. Emer. Anatomy, Schl. of Med., Wash. Univ., University Club, St. Louis, Mo. **ANATOMY**.

TERWILLIGER, Charles Van Orden, Prof. and Hd., Dept. of Elec. Engrng., Postgrad. Schl., U. S. Naval Acad., Annapolis, Md. **ELECTRICAL ENGINEERING**.

TETRICK, James D., 1102 E. Fourth St., Vinton, Iowa. **CERAMICS**.

TEUSCHER, Henry, Curator, Montreal Botanical Garden, 4101 Sherbrooke St. E., Montreal, Que., Can. **HORTICULTURE**.

THALHIMER, William, Asst. Dir. of Pathol., Bellevue Hosp., 111 E. 80th St., N. Y., N. Y. **PATHOLOGY**.

THANNHAUSER, Siegfried Josef, Prof. of Clinical Med., Med. Schl., Tufts Coll., Boston, Mass. **BIOLOGICAL CHEMISTRY, INTERNAL MEDICINE**.

THARP, Benjamin Carroll, Prof. of Botany, Univ. of Tex., Austin, Tex. **ECOLOGY**.

THAYER, James Russell, Prof. of Chem., St. Louis Coll. of Pharmacy, St. Louis, Mo. **CHEMISTRY**.

THEIS, Charles V., Distinct Geologist, U. S. Geol. Survey, 309 Federal Bldg., Albuquerque, N. Mex. **GROUND WATER GEOLOGY**.

THEODORSEN, Theodore, 7203 Meadow Lane, Chevy Chase, Md. **AERONAUTICS**.

THEROUX, Ernest G., Prof. and Chmn., Dept. of Physics, St. John's Univ., 75 Lewis Ave., Brooklyn, N. Y. **TEACHING**.

THERRELL, Daniel MacLauchlin, retired, 882 Park St., S. W., Atlanta, Ga. **ENGINEERING**.

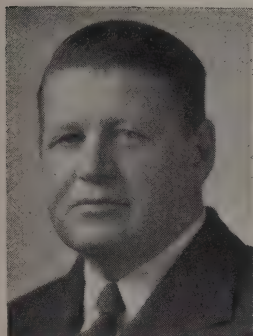
THIEL, George A., Prof. and Chmn., Dept. of Geol., Univ. of Minn., Minneapolis, Minn. **SEDIMENTATION**.

THIELKE, Ruben Christian, Assoc. Prof. and Hd., Organic Div., Univ. of Idaho, Moscow, Idaho. **ORGANIC CHEMISTRY**.

THIELMAN, Henry Peter, Prof. of Math., Iowa State Coll., Ames, Iowa. **MATHEMATICAL ANALYSIS**. b. Altonau, Russia, Aug. 3, 1902. s. Peter Johann and Helena (Thiessen) T. Edn.: A.B., Bluffton Coll., 1926; M.A., Ohio State Univ., 1927; Ph.D., ibid., 1930. m. Lydia Liechty, Sept. 14, 1930. c.: Pauline Helen; John Henry. Exp.: Prin., Public Schl., Suvorovskaya Caucasus, 1922-24; Instr. of Math., Bluffton Coll., Ohio, 1927-28; Instr. in Math., Ohio State Univ., 1930-34; Prof. of Math., Coll. of St. Thomas, St. Paul, Minn., 1934-42; Prof. of Math., Iowa State Coll., Ames, Iowa, 1942—. Hon. Pos.: Chmn., Iowa Section of Math. Assn. Amer., 1945; Regional Gov., ibid., 1948-51; Pres., Iowa State Chapter of Sigma Xi, 1952-53. Mem.: Fellow, A.A.A.S.; Amer. Math. Soc.; Math. Assn. Amer.; Fellow, Iowa Acad. Sci.; Pi Delta; Pi Mu Epsilon; Gamma Alpha; Phi Kappa Phi; Sigma Xi. Author: Theory of Functions of Real Variables, 1953. Contbr. to: Annals of Math.; Amer. Jour. of Math.; Math. Monthly; etc. Special Int.: Integral and Functional Equations; Functions of Real Variables; Applications to Servomechanisms.

THIEMECKE, Harry W. Homer Laughlin China Co. Newell, W. Va. **CERAMICS**.

THIENES, Clinton Hobart, Dir., Inst. of Med. Rsch., Huntington Memorial Hosp., 734 Fairmount Ave., Pasadena 2, Calif. **PHARMACOLOGY AND TOXICOLOGY**. b. Evansville, Ind., Aug. 9, 1896. s. William C. and Sarah Ann (Stinchfield) T. Edn.: A.B., Univ. of Ore., 1918; A.M., *ibid.*, 1923; M.D., Univ. of Ore. Med. Schl., 1923; Ph.D., Stanford Univ., 1926. m. Ruth Susan Workman, June 20, 1923. c.: Arthur Howard; Paul E.; Geraldine May. Exp.: Asst., in Zool., Univ. of Ore., 1917-18; Instr., in Anatomy, *ibid.*, 1919-22; Instructor in Pharmacol., *ibid.*, 1922-25; Asst.



Prof. of Pharmacol., *ibid.*, 1926-29; Natl. Rsch. Council Fellow, Stanford Univ., 1925-26; Assoc. Prof. of Pharmacol., Univ. of Southern Calif., 1929-31; Prof. and Hd. of Dept. of Pharmacol., *ibid.*, 1931-52; Dir., Inst. Med. Rsch., Huntington Memorial Hosp., Pasadena, Calif., 1952—. Mem.: Amer. Soc. Pharmacol. and Exptl. Therapeutics; A.A.A.S.; Soc. Exptl. Biol. and Med.; Los Angeles County Med. Assn.; Calif. Med. Assn.; A.M.A.; Indus. Med. Assn.; Los Angeles County Heart Assn.; Los Angeles Soc. Internal Med.; Psi Upsilon; Theta Kappa Psi; Phi Beta Kappa; Alpha Omega Alpha; Sigma Xi. Author: Field Manual in Toxicol. for Agril. Workers 1938; Clinical Toxicol., 1940; Fundamentals of Pharmacol., 1945. Contrb. to: Jour. of Pharmacol. and Exptl. Therapeutics; Arch. Internationales de Pharmacodynamie et de Therapie; Amer. Jour. Physiol.; Arch. of Dermatol.; Jour. of Infectious Diseases, etc. Special Int.: Indus. Toxicol.; Chronic Nicotine Poisoning; Pharmacol. of Autonomic Drugs.

THIES, Oscar Julius, Jr., Coll. Engr. and Assoc. Prof. of Chem., Davidson Coll., Davidson, N. C. **ANALYTICAL CHEMISTRY**.

THIESS, L. E., Locke Dept., General Electric Co., Box 57, Baltimore 3, Md. **CERAMICS**.

THIESSEN, Gilbert, Asst. Mgr. Technical Development, Koppers Co., Inc., Pittsburgh, Pa. **CHEMISTRY**.

THIMANN, Kenneth Vivian, Prof. of Biol., Harvard Univ., Biological Labs., Cambridge 38, Mass. **PHYSIOLOGY OF PLANTS AND MICROORGANISMS**. b. Ashford, Kent, England, Aug. 5, 1904. s. I. Phoebe and Muriel K. (Harding) T. Edn.: B.Sc., Imperial Coll., London, 1924; A.R.C.S., London, 1924; Ph.D., London Univ., 1928. Hon. Deg.: A.M., Harvard Univ., 1938. m. Ann Mary Bateman, 1929. c.: Vivianne; Karen; Linda. Exp.: Instr. in Bacteriol., King's Coll. for Women, London, England, 1927-29; Beit Memorial Fellowship in Biochem., 1927-30; Instr. in Biochem., Calif. Inst. of Tech., 1930-35; Lectr. in Botany, Harvard Univ., 1935-36; Tutor in Biol. Sci., 1936-42; Asst. Prof. of Biol., Harvard Univ., 1936-39; Assoc. Prof., *ibid.*, 1939-46; Prof., *ibid.*, 1946—; Dir., Harvard Biol. Labs., 1946-51. Hon. Pos.: Pres., Soc. Gen. Physiol., 1949; Pres., Amer. Soc. Plant Physiol., 1950; Vice-Pres., Amer. Soc. Naturalists, 1950; Chmn., New England Section, Amer. Soc. Plant Physiologists, 1941. Mem.: Chem. Soc., London; Biochem. Soc.; Botanical Soc. Amer.; Amer. Soc. Plant Physiol.; Soc. Study of Growth and Development; Soc. Gen. Physiologists; Amer. Soc. Naturalists; Amer. Acad. Arts and Sci.; Natl. Acad. Sci. Co-author: Phytohormones, 1937; etc. Contrb. to: Biochem. Jour.; Jour. Biol. Chem.; Arch. Biochem. Biophys.; Plant Physiol.; Amer. Jour. Botany; Jour. Gen. Physiol.; Proc. Natl. Acad. Sci.; Biol. Bull. War Record: Civilian Scientist, U. S. N., Operations Rsch., 1942-45. Special Int.: Plant Hormones and Growth Factors; Growth of Seedlings; Flowering and Photoperiodism; Physiology of Fungi and Bacteria.

THOM, Charles, 207 Grant St., Port Jefferson, N. Y. **MYCOLOGY**. b. Minonk, Ill., Nov. 11, 1872.



s. Angus Sutherland and Louisa Electa (Herrick) T. Edn.: A.B., Lake Forest, 1895; A.M., *ibid.*, 1897; D.Sc., *ibid.*, 1936; Ph.D., Univ. of Mo., 1899. m. 1st Ethel Winifred Slater, Dec. 20, 1906. m. 2nd Charlotte J. Bayles, Sept. 11, 1944. c.: Charles Richard. Exp.: Instr. in Biol., Univ. of Mo., Columbia, Mo., 1897-99; Instr. in Botany, *ibid.*, 1899-1901; Grad. Asst., Cornell Univ., Ithaca, N. Y., 1902-04; Mycol. Rsch., U. S. Dept. of Agri., Washington, D. C., 1904-42; Consultant in Mycol. Problems, 1942—. Mem.: Botanical Soc. of Amer.; Mycol. Soc. of Amer.; Soc. of Amer. Bacteriol.; Washington Acad. of Sci.; Natl. Acad. of Sci.; Sigma Xi; Phi Beta Kappa; Cosmos Club. Author: The Book of Cheese, 1917; Hygienic Fundamentals of Food Handling, 1924; The Aspergilli, 1926; The Penicillia, 1930; Manual of Aspergilli, 1944; Manual of the Penicillia, 1941. Contrb. to: Amer. Jour. of Botany; Mycologia; Jour. Bacteriol.; Jour. of Agri. Rsch. Special Int.: Biol. of Cheese Ripening; Food Microbiol.; Soil Microbiol.

THOM, H. C. S., U. S. Weather Bureau, Washington 25, D. C. **CLIMATOLOGY**.

THOM, William Taylor, Jr., Prof. of Geol., Princeton, N. J. **GEOLOGY, GEOGRAPHY**.

THOMAS, Adrian, Chf. Chemist, Huron Milling Co., Harbor Beach, Mich. **CHEMISTRY**.

THOMAS, Arthur Waldorf, Prof. of Chem., Exec. Officer, Dept. of Chem., Columbia Univ., N. Y., N. Y. **COLLOID AND FOOD CHEMISTRY**.

THOMAS, Charles Allen, Pres., Monsanto Chem. Co., 1700 S. Second St., St. Louis 4, Mo. **ORGANIC CHEMISTRY**. b. Scott County, Ky., Feb. 15, 1900. s. Charles Allen and Frances (Carrick) T. Edn.: B.A., Transylvania Coll., 1920; M.S., Mass. Inst. of Tech., 1924; D.Sc., Transylvania Coll., 1933. Hon. Deg.: D.Sc., Washington Univ., 1947; LL.D., Hobart Coll., 1950; D.Sc., Kenyon Coll., 1952; D.Sc., Princeton Univ., 1952; D.Sc., Ohio Wesleyan Univ., 1953. m. Margaret Talbott, September 25, 1926. c.: Charles Allen, III; Margaret Talbott, II; Frances Carrick; Katharine Tudor. Exp.: Research Chemist, Gen. Motors Rsch. Corp., 1923-24; Rsch. Chemist and Co-Owner, Thomas and Hochwalt Labs., 1926-36; Dir., Central Rsch. Dept., Monsanto Chem. Co., St. Louis, Mo., 1936-45; Vice-Pres. and Tech. Dir., *ibid.*, 1945-46; Exec. Vice-Pres. and Tech. Dir., *ibid.*, 1947-51; Pres., *ibid.*, 1951—. Hon. Pos.: Chmn. of Bd. of Dir., Amer. Chem. Soc., 1950-53. Mem.: Natl. Acad. of Sci.; Amer. Phil. Soc.; Phi Beta Kappa; Alpha Chi Sigma; A.A.A.S.; Phi Beta Kappa; Amer. Chem. Soc.; Amer. Inst. of Chem. Engrs.; Amer. Inst. of Chemist; Chem. Soc.; Soc. of Chem. Indus.; Soc. of Sigma Xi. Author: Anhydrous Aluminum Chloride in Organic Chem., 1941. Gen. Int.: Co-Author, Acheson-Lilienthal Report on Control of Atomic Energy; Mem. Manhattan Project, in Chg., Clinton Lab., Oak Ridge, Tenn., 1945-48; Awarded Indus. Rsch. Inst. Medal, 1947; Amer. Inst. of Chemists' Gold Medal, 1948; Medal for Merit, 1946; Named Recipient of Perkin Medal, 1953; Univ. of Mo. Honor Award for Distinguished Service in Engrng., 1952; Chmn., Scientific Man-



power Advisory Comm., NSRB. Special Int.: Synthetic Organic Chem.: Diolefins, Olefins and Aromatic Hydrocarbons, Plastics, Synthesis of Various Aliphatic Compounds.

THOMAS, Charles Frank, Prof. Emer. Math., Case Schol. of Applied Sci., Cleveland, Ohio. MATHEMATICS.

THOMAS, Charles K., SPEECH AND HEARING.

THOMAS, D. Boyd, Prof. of Math., Apprentice Schl., N. N. S. and D. D. Co., Box 202, Rt. 1, Hilton Village Br, Newport News, Va. MATERIALS.

THOMAS, Edward Sinclair, Curator, Natural History, Ohio State Museum, 319 Acton Rd., Columbia, Ohio. ORTHOPTERA, ECOLOGY.

THOMAS, Frank Lincoln, Chf., Div. Entomol., Tex. Agri. Expt. Sta. and State Entomologist, Tex. A. and M. Coll., College Station, Tex. ENTOMOLOGY.

THOMAS, Harold E., Dir. and Pathologist, Strawberry Inst. of Calif., 219 Cochrane Rd., Morgan Hill, Calif. PLANT PATHOLOGY.

THOMAS, Harvey Earl, Prof. of Plant Pathol., Univ. of Calif., Berkeley, Calif. FRUIT DISEASES.

THOMAS, Helen Goss, retired, 67 Whittier Rd., Wellesley Hills, Mass. GEOGRAPHY.

THOMAS, Jacob Earle, Prof. of Physiol., Jefferson Med. Coll., Philadelphia, Pa. PHYSIOLOGY.

THOMAS, Joseph Miller, Prof. of Math., Duke Univ., Durham, N. C. MATHEMATICS.

THOMAS, Llewellyn Hilleth, Mathematical Physicist, Watson Scientific Computing Lab., 612 W. 116th St., N. Y., N. Y. PHYSICS.

THOMAS, Lyell Jay, Assoc. Prof., Dept. of Zool., Univ. of Ill., Champaign, Ill. PARASITOLOGY.

THOMAS, Norman Louis, Geologist, Pure Oil Co., P. O. Box 479, Corpus Christi, Tex. PETROLEUM GEOLOGY.

THOMAS, Orpha Mae, Assoc. Prof., Columbia Univ., Tchrs. Coll., N. Y. 27, N. Y. WORK SIMPLIFICATION, INSTITUTION



MANAGEMENT AND HOUSEHOLD EQUIPMENT. b. Greenville, Ohio, Feb. 24, 1906. d. William J. and Jennie F. (Good) Huffman. Edn.: A.B., MacMurray Coll., 1927; B.S. in Edn., Goshen Coll., 1936; B.S. in Home Econ., 1938; M.S., Mich. State Coll., 1939; M.S., Columbia Univ., 1946; Ph.D., Purdue Univ., 1946. m. Samuel O. Thomas, June 16, 1944. Exp.: Tch. of Math. and Sci., Madison H. S., St. Joseph Co., Ind., 1927-28; Tch. of Math., Central Jr. H. S.,

Elkhart, Ind., 1928-38; Supvr., Student Employees, Union Cafeteria, Mich. State Coll., East Lansing, Mich., 1938-39; Instr., Inst. Mgmt., Purdue Univ., Lafayette, Ind., 1939-42; Instr. to Assoc. Prof., Tchrs. Coll., Columbia Univ., 1942—. Mem.: Pi Lambda Theta; Kappa Delta Pi; Delta Kappa Gamma; Omicron Nu; Sigma Xi; Amer. Dietetics Assn.; Natl. Restaurant Assn.; Amer. Schl. Food Service Assn.; Amer. Home Econ. Assn.; Greater N. Y. Dietetics Assn.; N. Y. State Schl. Food Service Assn.; E. E. N. Y. Home Econ. Assn.; Residential Lighting Forum; Elec. Women's Round Table. Contr. to: Jour. of Amer. Dietetics Assn.; Jour. Amer. Home Economics Assn.; Nation's Schls.; Amer. School and University Yearbook; College and Univ. Bus.; Practical Home Economics; Modern Hospitals; Schl. Bd. Jour.; Kitchen Reporter. Special Int.: Motion Study Applied to Inst. and Homes; Household Equipment; Inst. Management.

THOMAS, Roy Curtis, Assoc. Plant Pathologist, Ohio Agri. Expt. Sta., 1547 Beall Ave., Wooster, Ohio. PLANT PATHOLOGY.

THOMAS, Ruth Beatrice, Asst. Prof. of Biol., Millikin Univ., Decatur, Ill. BOTANY. b. Ringgold, La. d. Carey Allen and Mittie (Batchelor) T. Edn.: B.S., Northwestern Coll. of La.; M.A., Peabody Coll.; Ph.D., Vanderbilt Univ., 1951. Exp.: Asst. Prof. Biol., Millikin Univ., Decatur, Ill.; Grad. Student, Fellowship, Vanderbilt Univ., Nashville, Tenn.; Instr., Peabody Coll., ibid.; Instr., Sullins Coll., Bristol, Va.; Counselor, Ogontz White Mt. Camp, Lisbon, N. H.; Tehr. Public Schl. of La.; Asst. Prof. of Biol., Millikin Univ., Decatur, Ill. Mem.: Sigma Xi; Kappa Delta Pi; Pi Delta Epsilon; Lambda Delta Lambda; Tenn. Acad. of Sci.; A.A.-A.S.; Assn. Southeastern Biologists; Ill. Soc. of Amer. Soc. of Amer. Bacteriologists. Special Int.: Plant Morphology and Plant Anatomy.

THOMAS, Stanley Judson, Prof. of Bacteriol. and Hd., Dept. of Biol., Lehigh Univ., Bethlehem, Pa. BACTERIOLOGY.

THOMAS, Tracy Yerkes, Prof. and Chmn., Dept. of Math., Hd., Grad. Inst. for Applied Math., Indiana Univ., Bloomington, Ind. MATHEMATICS. b. Alton, Ill., 1899. s. Tracy R. and Blanche (Yerkes) T. Edn.: A.B., Rice Inst., 1921; M.A., Princeton Univ., 1922; Ph.D., ibid., 1923. m. Virginia Rowland, June 28, 1928. c.: Tracy A. Exp.: Natl. Rsch. Fellow in Physics, Univ. of Chicago, Chicago, Ill., 1924; Math., Zurich, Switzerland, 1924-25; Harvard and Princeton Univ., 1925-26; Asst. Prof. of Math., Princeton Univ., Princeton, N. J., 1926-31; Assoc. Prof., ibid., 1931-38; Prof. of Math., Univ. of Calif., Los Angeles, Calif., 1938-44; Faculty Rsch. Lectr., ibid., 1943; Prof. and Chmn. of Dept. of Math., Ind. Univ., Bloomington, Ind., 1944—. Mem.: Natl. Acad. of Sci.; Amer. Math. Soc.; Math. Assn. of Amer.; Sigma Xi. Author: The Elem. Theory of Tensors, 1931; Differential Invariants of Generalized Spaces, 1934; Principles of Coll. Algebra, 1942; Essentials of Plane and Spherical Trigonometry, 1943. Contr. to: Various Scientific Math. Jours. both Amer. and Foreign. Special Int.: Differential Geometry; Differential Invariants; Compressible Fluids; Gas Dynamics; Theory of Plasticity.

THOMAS, Walter, Prof. of Plant Nutrition, Pa. State Coll., State College, Pa. MINERAL NUTRITION PLANTS.

THOMPSON, A. Paul, Rsch. Labs., The Eagle-Picher Co., Joplin, Mo. CERAMICS.

THOMPSON, Charles Goodwin, Instr. in Physics and Math., A-to-Z Educational Schl., 3037 Telegraph St., Berkeley, Calif.

THOMPSON, Charles Henry, Dean, Grad. Schl., Howard Univ., 2401 Sixth St., N. W., Washington, D. C. EDUCATION AND PSYCHOLOGY.

THOMPSON, Claude Edward, Dir. Adult Testing and Guidance, Prof., Univ. of Omaha, Omaha, Nebr. PSYCHOLOGY.

THOMPSON, Clyde L., 4922 New Plymouth Rd., Pittsburgh, Pa. CERAMICS.

THOMPSON, Daisy Ruth, Prof. and Hd., Dept. of Chem., Sterling Coll., Sterling, Kans. CHEMISTRY.

THOMPSON, David H., Cooke Co. Forest Preserve District, Harlem Ave., River Forest, Ill. ICHTHYOLOGY.

THOMPSON, Elizabeth L., 1319 Forest Court, Ann Arbor, Mich. MEDICAL SCIENCE.

THOMPSON, George Edward, Assoc. Prof. of Plant Pathol., Univ. of Ga., Athens, Ga. PLANT PATHOLOGY.

THOMPSON, George G., Assoc. Prof. Ednl. Psychol., Schl. of Edn., Syracuse Univ., Syracuse, N. Y. CHILD PSYCHOLOGY.

THOMPSON, Helen, Assoc. Attending Psychologist, N. Y. Post-Grad. Med. Schl. and Hosp., 12 E. 86 St., N. Y., N. Y. PEDIATRIC PSYCHOLOGY.

THOMPSON, Henry Dewey, Assoc. Prof. of Geology and Geography, Hunter Coll., 695 Park Ave., N. Y. C. **GEOMORPHOLOGY; STRUCTURAL GEOLOGY; PHOTOGRAMMETRY.** b. May 21, 1898, Montebello, Va. s. Wm. Henry and Sarah Jane (Bartley) T. Edn.: B.S., Bridgewater Coll., 1922; M.A., Columbia, 1927; Ph.D., N. Y., 1935. m. Pearle V. Cline, Weyers Cave, Va., Sept. 1, 1923. d. David A. and Effie Huff Cline. c.: Effie Jeanne; Wm. Henry; Frances May. Exp.: Tchr. of Math., Chem., and Geog., Cowen H. S., Cowen, W. Va., 1922-24; Prin., H. S., Cowen, W. Va., 1924-28; Tchr. of Geog., Concord Coll., Athens, W. Va., Summers, 1926, 1928; Instr. of Geol., Hunter Coll., N. Y. C., 1928-35; Asst. Prof., 1935-41; Assoc. Prof., 1941—; Chmn., Dept. of Geol. and Geog., 1942-47. Mem.: G.S.A.; N. Y. Acad. of Sci.; Amer. Geophysical Union; A.A.A.S.; Sigma Xi. Author: Fundamentals of Earth Sci., 1947. Contrb. to: Bull., Geol. Soc. of Amer.; Jour. of Geol.; Annals and Transactions, N. Y. Acad. of Sci. Ph.D. Dissertation: Geomorphology of the Hudson Gorge in the Highlands. Awarded the George Frederick Kunz Prize, 1949.

THOMPSON, Homer C., Prof. and Hd. Dept. Vegetable Crops, Coll. of Agri., Cornell Univ., Ithaca, N. Y. **VEGETABLE CROPS.**

THOMPSON, Ian MacLaren, Prof. of Anatomy, Univ. of Manitoba, Winnipeg, Man., Can. **ANATOMY, NEUROLOGY.**

THOMPSON, James Stratton, Prof. and Chmn., Dept. of Physics, Ill. Inst. of Tech., Chicago, Ill. **PHYSICS.**

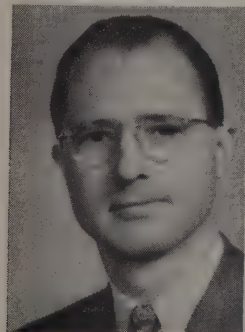
THOMPSON, Joseph Osgood, Prof. Emer. Physics, Amherst Coll., 209 Lincoln Ave., Amherst, Mass. **PHYSICS.**

THOMPSON, Louis Ten Eyck, Technical Dir., Naval Ordnance Test Sta., Inyokern, Calif. **BALISTIC PHYSICS.**

THOMPSON, Mark Joseph, Prof. and Supt., N. E. Expt. Sta., Duluth, Minn. **AGRONOMY, SOILS, HORTICULTURE.**

THOMPSON, Marvin R., Pres. and Dir. of Rsch. and Development, Marvin R. Thompson, Inc., 67 Greenwich Ave., Stamford, Conn. **PHARMACOLOGY.**

THOMPSON, Ralph Newell, Staff Engr., Calgon, Inc., Hagan Bldg., 323 Fourth Ave., Pittsburgh, Pa. **PULP AND PAPER TECHNOLOGY.** b. Boston, Mass., Mar. 4, 1918. s. Ralph and Lillian (Davenport) T. Edn.: B.S., Mass. Inst. of Tech., 1940. m. Virginia Kenniston, Jan. 31, 1942. c.: Pamela; Nicholas. Exp.: Rsch. Engr., Middlesex Products Corp., Cambridge, Mass., 1940-42; Tech. Dir., Falulah Paper Co., Fitchburg, Mass., 1945-48; Staff Engr., Calgon, Inc., Pittsburgh, Pa., 1948—. Hon. Pos.: Mem., T.A.P.P.I. Coating Comm.; Chmn., Subcomm. on Coating Color



Preparation. Mem.: Tech. Assn. of Pulp and Paper Indus.; Soc. of Rheol. Contrb. to: Jour. of Phys. Chem.; T.A.P.P.I. War Record; Aviation Supply Officer, U. S. Navy, 1942-45; U. S. Volunteer Naval Reserve. Special Int.: Rheology and Colloid Chem. of Paper Coating.

THOMPSON, Randall Leslie, Dept. of Microbiol., Ind. Univ., Med. Center, Indianapolis, Ind. **BACTERIOLOGY.**

THOMPSON, Royal Burleigh, Prof. of Poultry Husbandry and Hd., Poultry Dept., Okla. A. and M. Coll., Stillwater, Okla. **POULTRY HUSBANDRY.**

THOMPSON, Russell Irvin, Prof. of Edn. and Psychol., Dickinson Coll., Carlisle, Pa. **EDUCATIONAL PSYCHOLOGY.**

THOMPSON, Stanley G., Radiator Lab., Univ. of Calif., Berkeley 4, Calif. **NUCLEAR CHEMISTRY.**

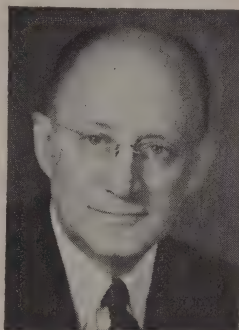
THOMPSON, Theo. Jefferson, Dean, Student Affairs and Prof., Univ. of Nebr., Lincoln, Nebr. **CHEMISTRY.**

THOMPSON, Thomas Gordon, Oceanographic Labs., Univ. of Wash., Seattle 5, Wash. **OCEANOGRAPHY.**

THOMPSON, Walter Phaner, Dean of Arts and Prof. of Biol., Univ. of Saskatchewan, Saskatoon, Sask., Can. **GENETICS.**

THOMPSON, Warren S., Dir., Scripps Foundation, Miami Univ., Oxford, Ohio. **POPULATION.**

THOMPSON, Willard Chandler, Prof. of Poultry Sci. and Applied Statistics, Rutgers Univ., and Poultry



Husbandry, N. J. St. Agricultural Experiment Station, Coll. Farm, New Brunswick, N. J. **APPLICATION OF STATISTICAL METHODOLOGY TO POULTRY SCIENCE DATA.** b. Sun Prairie, Wis., Nov. 24, 1890. s. George Ezra and Frances Augusta (Chandler) T. Edn.: B.Sc., Univ. of Wis., 1912; Ph.D., N. Y. Univ., 1934. m. Mabel Clare Bell of Fayetteville, Ark., June 21, 1920; d. Robert Fielding and Loretta Short Bell. c.: Willard Chandler, Jr. Exp.: Asst. Dept. of Animal Husb., Univ. of Ark., Fayetteville, Ark., 1912-13; Dept. of Poultry Husb., Rutgers Univ. and the N. J. Agri Expt. Sta., becoming Hd. of Dept. and Prof. in Sept., 1921, 1913—; on leave in Army as 2nd Lt., San. Corps, U.S.A., 1918; Leave of Absence to Act as Dir. of Natl. Inst. of Poultry Husb., Newport, Shropshire, England, 1924-26. Mem.: Amer. Statistical Assn.; Amer. Acad. of Pol. and Social Sci.; Poultry Sci. Assn.; Alpha Zeta; Sigma Xi. Author: Egg Farming; The Home Poultry Flock. Ph.D. Dissertation: The Philosophy and History of the Land-Grant Colleges. War Record: In First World War as 2nd Lt., San. Corps, U. S. A. Travel: Spain, France, Switzerland, England. Hobbies: Writing for Country Gentleman; Rural New Yorker. Listed in: A.M.S.; Who's Who in the East; Who's Who in New Jersey; Who's Who in Amer.

THOMPSON, William Francis, Dir. and Prof., Schl. of Fisheries, Univ. of Wash., Seattle, Wash. **FISHERIES.**

THOMPSON, William Rae, Sr. Biochemist, N. Y. State Dept. of Health, Div. of Labs. and Rsch., Albany, N. Y. **BIOCHEMISTRY.**

THOMPSON, Earl Wentworth, Sr. Prof., Dept. of Elec. Engrng., U. S. Naval Acad., Annapolis, Md. **PHYSICS.**

THOMPSON, John F., Rsch. Assoc. and Instr., Univ. of Chicago, Chicago, Ill. **PHARMACOLOGY.**

THOMPSON, Ruth Haines, Prof. of Psychol., San Francisco State Coll., 124 Buchanan St., San Francisco 2, Calif. **MENTAL HYGIENE AND PERSONALITY DEVELOPMENT.** b. Forest Grove, Ore., Feb. 13, 1896. d. Edward Wright and Nettie (Shipley) Haines. Edn.: A.B., Pacific Univ., 1917; A.M., Univ. of Wash., 1921; Ph.D., Stanford Univ., 1931. m. Somerville Thomson, Dec. 5, 1927. Exp.: H. S. Tchr., Wasco, Ore., 1917-19; H. S. Tchr., Washougal, Wash., 1919-20; Rsch. Assoc., Stanford Univ., 1923-24 and 1929-31; Tchr., Territorial Normal Schl., Honolulu, Hawaii, 1924-27; Faculty San Francisco State Coll., San Francisco, Calif., 1931—. Mem.: Fellow, A.P.A.; Fellow, A.A.A.S.; Fellow, Internatl. Council Women Psychologists;

Diplomate in Clinical Psychology. Special Int.: Personality and Mental Hygiene.

THOMSEN, Edgar George, Consulting Chemist, 306 Center St., Winona, Minn. CHEMISTRY.

THONE, Frank E. A., Editor Biol. Sci. Service, 1719 N. St., N. W., Washington, D. C. PLANT ECOLOGY.

THOR, Clifford J. B., Asst. Chf. Chemist, Visking Corp., 6733 W. 65th St., Chicago, Ill. BIOCHEMISTRY.

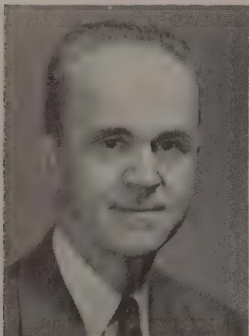
THORDARSON, T. W., State Dir. Supervised Study, N. Dak. Agri. Coll., Fargo, N. Dak. EDUCATION.

THORKELSON, Halsten Joseph, retired, University Club, 803 State St., Madison, Wis. ENGINEERING.

THORN, George W., Peter Bent Brigham Hosp., Boston, Mass. ENDOCRINOLOGY—CLINICAL RESEARCH.

THORN, Sister Doloretta, Prof. of Chem. and Dean Coll., Villa Maria Coll., Erie, Pa. ORGANIC CHEMISTRY.

THORNBERRY, Halbert Houston, Assoc. Prof. of Plant Pathol., Univ. of Ill., Urbana, Ill. PLANT PATHOLOGY, BIOCHEMISTRY. b. Corydon, Ky., Dec. 28, 1902.



s. Thomas Lynn and Gertrude (Walker) T. Edn.: B.S., Univ. of Ky., 1925; M.S., ibid., 1926; Ph.D., Univ. of Minn., 1934. m. Kathryn Winder, June 18, 1946. c.: Martha Lynn. Exp.: Asst. in Plant Pathol., Univ. of Minn., Minneapolis, Minn., 1926-28; Asst. in Plant Pathol., Univ. of Ill., Urbana, Ill., 1929-31; Fellow, Rockefeller Inst. for Med. Rsch., 1931-34; Jr. Plant Pathologist, Univ. of Calif., 1935;

Plant Pathologist, Univ. of Ky., 1936; Pathologist, U. S. Dept. of Agri., 1937; Asst. Prof. of Plant Pathol., Univ. of Ill., Urbana, Ill., 1938-42; U. S. Army, 1942-45; Assoc. Prof. of Plant Pathol., Univ. of Ill., Urbana, Ill., 1945—. Hon. Pos.: Pres., North Central Div. of Amer. Phytopathol. Soc.; Chmn., Com. on Utilization of Plant Pathologists and Facilities in Natl. Emergencies, A.P.S. Mem.: Amer. Chem. Soc.; Soc. Amer. Bacteriologists; A.A.A.S.; Sigma Xi. Contrb. to: Phytopathol.; Archives of Biochem. and Biophysics; Science; Jour. Bacteriol. War Record; Classification Officer, U. S. Army, World War II. Special Int.: Purification of Plant Viruses; Techng. Plant Virology; Biochem. of Plant Diseases.

THORNBURY, William David, Assoc. Prof. Geol., Ind. Univ., Bloomington, Ind. GLACIAL GEOLOGY.

THORNDIKE, Edward Lee, Prof. Emer., Columbia Univ., 501 W. 120th St., N. Y., N. Y. PSYCHOLOGY.

THORNDIKE, Edward Moulton, Asst. Prof. of Physics, Queens Coll., Flushing, N. Y. PHYSICS.

THORNDIKE, Robert Ladd, Assoc. Prof. of Edn., Tehrs. Coll., Columbia Univ., N. Y., N. Y. PSYCHOLOGY.

THORNDIKE, Samuel Lothrop, Asst. Prof. of Math., Univ. of Maine, Brunswick, Maine. ASTRONOMY.

THORNE, David Wynne, Assoc. Prof. of Agron., Utah State Agri. Coll., Logan, Utah. SOIL SCIENCE.

THORNTON, Bruce J., Assoc. Botanist, Hd. Seed Lab., Chf. Weed Control Investigations, Colo. Agri. Expt. Sta., Colo. A. and M. Coll., Fort Collins, Colo. SEED LABORATORY, WEED CONTROL.

THORNTON, Nan Virginia, Prof. of Chem., Randolph Macon Woman's Coll., Lynchburg, Va. CHEMISTRY.

THORNTON, Samuel Farrar, Dir. of Chem. Control Farm Service, F. S. Royster Guano Co., P. O. Box 479, Norfolk, Va. AGRONOMY, CHEMISTRY.

THORP, Eldon Marion, Chf. Sedimentation Studies, Region 6 and Sedimentation Specialist, Flood Control Div., Soil Conservation Service, P. O. Box 1348, Albuquerque, N. Mex. SEDIMENTATION.

THORP, James, Regional Inspector Soil Surveys, Great Plains, U. S. D. A., Bureau Plant Indus., Soils and Agri. Engrng., Univ. of Lincoln, Lincoln, Nebr. SOIL SURVEY.

THORPE, Malcolm Rutherford, Assoc. Fellow, Davenport Coll., P. O. Box 1924, Yale Sta., New Haven, Conn. PALEONTOLOGY.

THORVALDSON, Thorbergur, Dean, Coll. Grad. Studies and Hd., Dept. of Chem., Univ. of Saskatchewan, Saskatoon, Sask., Can. CHEMISTRY SILICATES, ALUMINATES.

THROCKMORTON, Ray Iams, Dean of Agri. and Dir., Agri. Expt. Sta., Kans. State Coll., Manhattan, Kans. AGRONOMY.

THRODAHL, Monte Corden, Development Mgr., Rubber Chemicals, Organic Chemicals Div., Monsanto Chem Co., Nitro, W. Va. ORGANIC CHEMISTRY OF RUBBER AND RUBBER CHEMICALS. b. Minneapolis, Minn., Mar. 25, 1919.



s. Monte C. and Hilda (Larson) T. Edn.: B.S., Iowa State Coll., 1941. m. Josephine Crandall, Nov. 6, 1948. c.: Mark. Exp.: Rsch. Chemist, Monsanto Chem. Co., Organic Chem. Div., 1941-45; Group Leader, Rsch. Dept., ibid., 1945-50; Asst. Dir. of Rsch., ibid., 1950-52; Development Mgr., Rubber Chemicals, ibid., 1952—.

Mem.: Amer. Chem. Soc.; Amer. Inst. of Chem. Engrs.; A.A.A.S.; A.S.T.M.; Amer. Inst. of Math.; Statistics; Philosophy of Sci. Assn.; Soc. of Rheol.; Amer. Inst. Phys.; Alpha Chi Sigma. Contrb. to: Indus. and Engrng. Chem.; Chem. Engrng. Progress; Rubber Chem. and Tech.; Jour. Colloid Sci.; India Rubber World; Rubber Age; Modern Plastics. Special Int.: Organic Chemicals for Acceleration, Vulcanization, and Prevention of Degradation of Rubber Like Materials.

THURNAUER, Hans, 1811 Hixson Pike, Chattanooga 5, Tenn. CERAMICS.

THURSTONE, Louis Leon, Rsch. Prof. and Dir., Psychometric Lab., Univ. of N. C., Chapel Hill, N. C. PSYCHOLOGICAL MEASUREMENT. b. Chicago, Ill., May 29, 1887.

s. Conrad and Sophie (Stroth) T. Edn.: M.E., Cornell Univ., 1912; Ph.D., Univ. of Chicago, 1917. m. Thelma Gwinn, July 17, 1924. c.: Robert Leon; Conrad Gwinn; Fredrick Louis. Exp.: Asst. to Thomas Edison, 1912; Instr. in Coll. of Engrng., Univ. of Minn., 1912-14; Asst. Carnegie Inst. of Tech., 1915-17; Instr., ibid., 1917-18; Asst. Prof., ibid., 1918-19; Assoc. Prof., 1919-20; Prof. and Hd. Dept., ibid., 1920-23; Psychologist, Inst. for Govt. Rsch., Wash., D. C., 1923-24; Assoc. Prof. of Psychol., Univ. of Chicago, 1924-27; Prof. of Psychol., ibid., 1928-38; Charles F. Grey Distinguished Service Prof., ibid., 1938—; Rsch. Prof. and Dir., Psychometric Lab., Univ. of N. C., Chapel Hill, N. C., 1952—; Visiting Prof. of Psychol., Univ. of Frankfurt, Germany, 1948; U. S. Delegate, Internatl. Congress of Psychol., Oxford, 1923 and Edinburgh, 1948. Mem.: Amer. Psychol. Assn.; Midwestern Psychol. Assn.; Psychometric Soc.; Chicago Psychol. Club; Soc. for Promotion of Engrng. Edn.; A.A.U.P.; Amer. Soc. Human Genetics; Fellow, Amer. Statistical Assn.; Chaos Club,

Chicago; Fellow, A.A.A.S.; Fellow, Amer. Acad. Arts and Sci.; Natl. Acad. Sci.; Amer. Philos. Soc.; Hon. Fellow, British Psychol. Soc.; Hon. Fellow, Swedish Psychol. Soc.; Quardrangle Club, Chicago; Chicago Literary Club; Eta Kappa Nu; Sigma Xi; Phi Delta Kappa; Acacia.

THUT, Hiram Frederick, Assoc. Prof. of Botany, Eastern Ill. State Tchrs. Coll., Charleston, Ill. PLANT PHYSIOLOGY.

THWAITES, Fredrik Turville, Asst. Prof. of Geol. Sci. Hall, Madison, Wis. GEOLOGY, GEOMORPHOLOGY.

THYSELL, John C., Assoc., Agronomist U. S. D. A., 700 13th St., Bismack, N. Dak. AGRICULTURE.

TIBBALS, Charles Austin, Dean Emer., Ill. Inst. of Tech., Chicago, Ill.; 272 Poplar St., Winnetka, Ill. EDUCATION, CHEMISTRY.

TIDD, George W., P. O. Box 517, Blacksburg, Va. PHYSICS.

TIDWELL, Herbert Collier, Prof. and Chmn., Dept. of Biochem., Southwestern Med. Coll., 2211 Oak Lawn Ave., Dallas, Tex. BIOCHEMISTRY.

TIEDEMAN, David Valentine, Lectr., Edn., Harvard Univ., Cambridge 38, Mass. PSYCHOLOGY AND STATISTICS. b. Aug. 12, 1919, Americus, Ga. s. Walter and Edna (Komfort) T. Edn.: Ed.D., Harvard, 1949; Ed.M., ibid., 1948; A.M., Univ. Rochester, 1943; A.B., Union Coll., 1941. m. Marjorie Denman of Ithaca N. Y., Sept. 26, 1942. d. Ralph and Mollie Denman. c.: David Michael; Jeffrey Denman. Exp.: Lectr., Edn., Harvard, 1952—; Asst. Prof. of Edn., Harvard, 1951-52. Instr., ibid., 1949-51; Sheldon Fellow, ibid., 1948-49; Tchng. Fellow, Instr., ibid., 1946-48; Manhattan, Univ. Rochester, 1944-46; Coll. Exam. Bd., 1943-44; Natl. Rsch. Coun., 1942-43. Mem.: N.E.A.; Amer. Bdn. Rsch. Assn.; Phi Beta Kappa; Phi Delta Kappa; Sigma Xi; Psychol. Assn.; Psychometric Soc.; Biometric Soc.; Amer. Statistical Assn. Ed.D. Dissertation: A Classification of Elem. Coll. Amer. Hist., Math. and Physics Courses by and Analysis of the Prerequisite Knowledge Necessary. Travel: Eng. Listed in: A.M.S.; Who Knows—and What; Who's Who in New England.

TIEDJENS, Victor Alphons, Dir. of Rsch., "Na Churs" Plant Food Co., Marion, Ohio. SOIL AND PLANT NUTRITION. b. June 13, 1895, Brillion, Wis. s. John A. and Anna C. (Nelesen) T. Edn.: B.S., Univ. of Wis., 1921; M.S., ibid., 1922; Rutgers Univ., Ph.D., 1932. m. Dorothy Janet Dopp, June 2, 1923. d. Frank E. and Lillian Dopp. Wild Rose, Wis. c.: Dorothy Loraine and Penelope Emily. Exp.: Lab. Asst., Univ. of Wis., 1919-23; Asst. Rsch. Prof. Veg. Gardening, Mass., 1923-29; Rsch. Fellow in Horti., Rutgers, 1929-32; Dir. of Rsch., Yoder Bros., 1932-34; Assoc. Prof. Veg. Gard., Rutgers, 1934-45; Dir. Va. Truck Expt. Sta., 1945-51; Dir. of Rsch., "Na Churs" Plant Food Co., 1951—. Hon. Pos.: Dir. Sec. O.A.A.A.S., 1941-45; Vice-Pres., ibid., 1951-52; Recd. Thomas Roland Award, Mass. Hort. Soc. 1953. Mem.: A.A.A.S.; Amer. Chem. Soc.; A.S.H.A.; A. S. Pl. Phys.; Amer. Soc. Agron.; Farm House; Delta Theta Sigma; Alpha Zeta; Sigma Xi; Phi Kappa Phi; Phi Sigma; Rotary; Knights of the Round Table. Author: Ency. of Veg. Garden., 1943; Chem. Garden. for the Amateur, 1939; A Practical Guide to Successful Farming, 1944; The Handy Book of Garden., 1950. Ph.D. Dissertation: Relationships of Amphotyles to Assimilation and Recovery of Ammonium and Nitrate Nitrogen in Plant Tissue. War Record: Ensign in Navy, World War I. Hobbies: Fishing; Golf. Listed in: Who's Who in East; Who's Who in South and Southwest; Harvard Alumni Dir; A.M.S.; Who Knows—and What; W.W.A.

TIFFANY, Burton E., Project Engr., Chem. and Meteorological Rsch. Dept., Ford Motor Co., Dearborn, Mich. PHYSICAL CHEMISTRY.

TIFFANY, Lewis Hanford, William Deering Prof. of Botany, 204 Locy Hall, Northwestern Univ., Evanston, Ill. BOTANY. b. Lawrenceville, Ill., July 29, 1894. s. Charles Edward and Mary Frances (Hull) T. Edn.: S.B., Univ. of Chicago, 1919; M.Sc., Ohio State Univ., 1921; Ph.D., ibid., 1923.

Hon. Deg.: Pd.D., E. Ill. State Coll., 1949. m. Loel Zehner, Sept. 10, 1921. Exp.: Tchrr., Charleston, Ill. H. S., 1915-17; Instr., Prof. of Botany, Ohio State Univ., 1921-37; Prof. of Botany and Chmn. of Dept., Northwestern Univ., 1937-49; William Deering Prof. of Botany, ibid., 1945—. Hon. Pos.: Vice-Chmn. and Secy., Ill. Bd. of Natural Resources and Conservation, 1947—. Mem.: A.A.A.S.; Soc. Naturalists; Botanical Soc. Amer.; Physiocological Soc. Amer.; Microscopical Soc. Amer.; Limnol. Soc. Amer.; Ecol. Soc. Amer.; Sigma Xi. Author: The Oedogoniaceae, 1930; Algae, the Grass of Many Waters, 1938; Textbook of Botany, 1940, rev. ed., 1953; The Study of Plants, 1944; Culturing of Algae, 1951; The Algae of Ill., 1952; etc. Contrb. to: Amer. Jour. of Botany; Ecology; Trans. Amer. Microscopical Soc.; Science; etc. War Record: 2nd Lt., F.A.U.S.A., 1918-19. Special Int.: Freshwater Algae.

TILDEN, Evelyn Butler, Assoc. Prof. Bacteriol., Dental Schl., Northwestern Univ., Chicago, Ill. BACTERIOLOGY.

TILFORD, Paul Edward, Assoc. Prof. of Pathol., Ohio Agri. Expt. Sta., Wooster, Ohio. PLANT PATHOLOGY.

TILLETT, William Smith, N. Y. Univ. Coll. of Med., 477 First Ave., N. Y. 16, N. Y.

TILLEY, Ethel, Hd. Dept. of Psychol. and Philos., Meredith Coll., Raleigh, N. C. PSYCHOL. b. Bellevue, Pa., Dec. 12, 1894. d. J. Frank and Dollie (Smashey) T. Edn.: A.B., Ohio Wesleyan Univ., 1922; A.M., Boston Univ., 1926; Ph.D., 1936. Exp.: Prof. of Philos. and Psychol. and Dean of Women, Hastings Coll., 1937-43; Chmn., Coll. Section, Natl. Assn. of Deans of Women, 1942-44; Dean of Students, Greensboro, Coll., 1946-48; Prof. of Philos. and Psychol., Brenau Coll., 1948-51; Hd., of Psychol. and Philos., Meredith Coll., Raleigh, N. C., 1951—. Mem.: Amer. Philos. Assn.; A.A.A.S.; N. C. Acad. Sci.; Southern Soc. for Philos. and Psychol.; N. C. Psychol. Assn.; Phi Beta Kappa; Pi Gamma Mu; Altrusa.

TILLEY, Frank William, Sr. Bacteriologist, Ornithol. Div., Bureau Animal Indus., Washington, D. C. DISINFECTION.

TILLMAN, Arthur George, Prof. of Geol. and Geog. W. Ill. State Coll., Macomb, Ill. GEOGRAPHY. b. La Crosse, Wis., May 1, 1890. s. Philip and Elizabeth (Scharpf) T. m. Florence Whitebeck of Madison, Wis., August 8, 1928. d. Nellie May Smith and Ray Hughes Whitebeck. c.: Clifford (dec.); Roderick; Elizabeth. Edn.: State Nor. Schl., La Crosse, Wis., 1912; B.A., Univ. of Wis., 1917; M.A., Univ. of Wis., 1926; Ph.D., Univ. of Wis., 1928. Exp.: Hd. of Commercial Dept., Columbus, Wis., H. S., 1912-15; Hd. of Geog. Dept., Riverside H. S., Milwaukee, Wis., 1919-25; Asst., Dept. of Geog. and Geol., Univ. of Wis., 1925-28; Hd. of Dept. of Geol. and Geog., W. Ill. State Coll., 1928—. Mem.: Assn. of Amer. Geog.; Natl. Geog. Soc.; Com. on Tchng. of Earth Sci. in H. Schls. of U.S.A.; Ill. State Acad. of Sci.; Ill. Geol. Soc.; N.E. A.; Phi Sigma Epsilon; Natl. Coun. of Geog. Tchrs.; Ill. Edn. Assn.; Schoolmasters Club; A.A.A.S.; Assn. of Geol. Tchrs.; Natl. Coun. for Ednl. Travel: Kiwanis; Sigma Xi; Gamma Theta Upsilon; Gamma Alpha; Sigma Zeta; Tri-State Geol. Soc. Ph.D. Dissertation: Geog. of Miss. River Gorge from Winona, Minn., to La Crosse, Wis. Rschs. of Gen. Int.: Glacial Geol.; Meteorol. War Record: Army Y.M.C.A., Sec. in U. S. A., during part of World War I; and Med. Corps in A.E.F. Travel: M.S.A.; Canada; Alaska; Europe. Hobbies: Photography; Travel; Astron.; Meteorol. Listed in: A.M.S.; Who's Who in Ill.

TILLOTSON, E. Ward, Mellon Inst., 4400 Fifth Ave., Pittsburgh 13, Pa. CERAMICS.

TILLYER, Edgar Derry, Dir. of Rsch., Amer. Optical Co., Southbridge, Mass. PHYSICS.

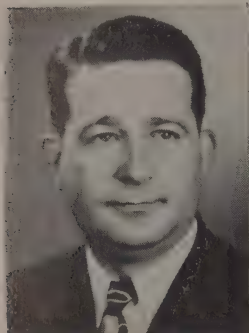
TILTON, John Warren, Assoc. Prof. of Ednl. Psychol., Grad. Schl., Yale Univ., New Haven, Conn. EDUCATIONAL PSYCHOLOGY.

TIMBERLAKE, Philip Hunter, Assoc. Entomologist. Div. Beneficial Insect Investigation, Univ. of Calif. Citrus Expt. Sta., Riverside, Calif. ENTOMOLOGY.

TIMOSHENKO, Stephen Prokop, Rm. 262, Engrng. Bldg., Stanford Univ., Stanford, Calif. MECHANICS.

TIMS, Eugene Chapel, Assoc. Plant Pathologist, Agri. Expt. Sta., La. State Univ., Baton Rouge, La. PLANT PATHOLOGY.

TIMS, George Barton, Jr., Prof. and Hd., Dept. of Indus. Engrng., Lamar State Coll. of Tech., Beaumont, Tex. INDUSTRIAL ENGINEERING.



TRIAL ENGINEERING. b. Purcell, Okla., June 23, 1918. s. George and Kate (Lewis) T. Edn.: B.S., Okla. A. and M. Coll., 1947; M.S., *ibid.*, 1949. m. Virgie Short of Bartlesville, Okla., Dec. 29, 1941. d. Floyd and Laura Short. c.: Rebecca Laura; Georgann. Exp.: Asst. Instr. in Machine Shop, 1939; Okla. A. and M.; Instr., 1940; National Defense Training Program; Asst. Instr., 1946, O.A.M.C.; Asst. Instr. in Indus. Engrng., 1947, *ibid.*; Instr., 1948-49, *ibid.*; Asst. Prof. of Ind. Engrng., *ibid.*, 1950-51; Prof. and Hd., Dept. of Ind. Engrng., Lamar State Coll. of Tech., Beaumont, Tex., 1951—; Rsch. Collaborator for Agri.-Ind. Devl. Serv., 1951, *ibid.* Hon. Pos.: Chmn. of Advisory Bd., Okla. State Engrg.; Vice-Chmn., Engrng. Coll. Mag. Assn. Mem.: Phi Eta Sigma; Scabbard and Blade; Sigma Tau; Alpha Pi Mu; Sigma Xi; Amer. Inst. of Ind. Engrs.; Amer. Soc. for Engrng. Edn.; A.A.U.P.; Okla. Soc. of Professional Engrs.; Masons; Amer. Legion. Author: Factory Planning Guide, 1950. War Record: U. S. Army, 1941-46; Rank of Maj. Travel: U. S.; N. Africa; France; Luzon; P. I. Hobbies: Gardening; Square Dancing. Special Int.: Job Design—a technique for getting more accomplishment with less human effort.

TINDAL, Charles Howard, Assoc. Prof., Ordnance Rsch. Lab., Pa. State Coll., State College, Pa. PHYSICS.

TINGELSTAD, Oscar Adolf, Prof. of Philos., Luther Coll., Decorah, Iowa. EDUCATION.

TINKER, Martin Buel, The Knoll, Cornell Hgts., Ithaca, N. Y. SURGERY.

TINKER, Miles Albert, Prof. of Psychol., Univ. of Minn., Minneapolis, Minn. EXPERIMENTAL PSYCHOLOGY.

TINKER, Miles Albert, Prof. of Psychol., Univ. of Minn., Minneapolis, Minn. EXPERIMENTAL PSYCHOLOGY.

TINKLEPAUGH, Otto Lief, Vice-Pres., J. M. Mathes, Inc., 122 E. 42nd St., N. Y., N. Y. PSYCHO-BIOLOGY.

TIPPO, Oswald, Asst. Prof. of Botany, Univ. of Ill., Urbana, Ill. PLANT ANATOMY.

TISDALE, Wendell Holmes, Mgr. Pest Control Rsch., Grasselli Chem. Dept., E. I. du Pont de Nemours and Co., Inc., Wilmington, Del. PLANT PATHOLOGY.

TISDALE, Wilbur Earle, retired, El Paso Club, Colorado Springs, Colo. PHYSICS.

TISDALE, William B., Hd., Plant Pathol. Dept. and Botany Dept., Coll. of Agri., Univ. of Fla., Gainesville, Fla. PLANT PATHOLOGY.

TISDALL, Frederick Fitzgerald, Physician, Hosp. Sick Children and Asst. Prof., Dept. of Pediatrics, Univ. of Toronto, Toronto, Ont., Can. PEDIATRICS.

TISLOW, Richard Frederick, Chf. Pharmacologist, Wyeth Inst. of Applied Biochem., 900 N. Broad St., Philadelphia 30, Pa. PHARMACOTHERAPY; ENDOCRINOLOGY.



b. Czernowitz, Austria, Mar. 6, 1906. s. Frederick T. Edn.: M.D., Doebling Gymnasium and Univ. of Vienna, 1931; Dr. of Med. Sci., Univ. of Warsaw, 1936. m. Sybil Barnard-Ray, June, 1946. Exp.: Sr. Asst., Dept. General and Exptl. Pathol., Univ. of Warsaw, 1934-38; Rsch. at Pharmacotherapeutic Lab., Univ. of Amsterdam, Netherlands, 1937-38; Asst., Johns Hopkins Univ. Med. Schl. and Johns Hopkins Hosp., 1939-40; Rsch. in Endocrinol. in the Dept. of Pediatrics and the Dept. of Embryol., Carnegie Inst. of Wash. in Baltimore, 1939-40; Postgrad. Rsch., Harvard Med. Schl., Dept. of Pharmacol., Boston, Mass., 1940-43; Asst., Peter Bent Brigham Hosp., Boston, Mass., 1942-43; Dir. of Biol. Rsch. Labs., Schering Corp., Bloomfield, N. J., 1943-52; Chf. Pharmacologist, Wyeth Inst. of Applied Biochem., Philadelphia, Pa., 1953—.

Mem.: Fellow, N. Y. Acad. Sci.; Fellow, A.A.A.S.; Amer. Physiol. Soc.; Amer. Soc. for Pharmacol. and Exptl. Therapeutics; Soc. for Exptl. Biol. and Med.; Amer. Cancer Soc.; Amer. Chem. Soc.; The Endocrine Soc.; Amer. Pharmaceutical Assn.; German Pharmacol. Soc.; Swiss Soc. of Physiologists and Pharmacologists; The Internat. Physiol. Congress; The Laurentian Hormone Conf. Contrb. to: Abstracts, Internat. Physiological Congress; Amer. Jour. Physiol.; Endocrinol.; Federation Proc.; Proc. Soc. Exptl. Biol. and Med.; Science. Gen. Int.: Studies on Properties and Extraction of Corticotrophic Hormone (ACTH), Antithyroid Drugs, 1940-43; Rsch. and Development of Antihistaminic and other Pharmacotherapeutic Agents, 1943-53. Special Int.: Pharmacotherapy and Development of New Drugs.

TISSOT, Archie Newton, Entomologist and Hd., Dept. of Entomol., Fla. Agri. Expt. Sta., Gainesville, Fla. ENTOMOLOGY.

TITIEV, Mischa, Assoc. Prof. of Anthropol., Univ. of Mich., Ann Arbor, Mich. ETHNOLOGY.

TITUS, Harry Waltner, Technical Counselor and Dir. Nutritional Rsch., Lime Crest Rsch. Lab., Limestone Products Corp. of Amer., Newton, N. J. ANIMAL NUTRITION.

TITUS, Rolla Williams, Dir. of Rsch., Chg. Control Lab., Nestles Milk Products, Inc., Marysville, Ohio. FOOD PRODUCTS.

TOBEN, G. J., c/o IBM Labs., Poughkeepsie, N. Y. COMPUTING MACHINES.

TOBERT, B. M., Univ. of Calif., Radiation Lab., Berkeley, Calif. TRACER CHEMISTRY.

TOBOLSKY, A. V., Frick Chem. Lab., Princeton Univ., Princeton, N. J. MECHANICAL PROPERTIES OF HIGH POLYMERS.

TOCANTINE, Leandro Maues, Assoc. Prof. of Med., Jefferson Med. Coll., Philadelphia, Pa. HEMATOLOGY.

TODD, Arlie, Univ. of Wis., Madison, Wis. ANIMAL PARASITOLOGY.

TODD, Clare Chrisman, Dean, Coll. of Arts and Sci. and Hd., Dept. of Chem. and Chem. Engrng., State Coll. of Wash., Pullman, Wash. CHEMISTRY.

TODD, Leslie Jay, Assoc. Prof. of Chem., Ind. Univ., Bloomington, Ind. COLLOID CHEMISTRY.

TODHUNTER, Elizabeth Neige, Prof. and Hd., Dept. of Foods and Nutrition, Schl. of Home Econ., Univ. of Ala., University, Ala. NUTRITION.

TODHUNTER, E. Neige, Dean, Schl. of Home Econ., Univ. of Ala., University, Ala.



TRITION (VITAMIN C NUTRITIONAL STATUS). b. Christ Church, New Zealand. d. Richard Waterhouse and Louisa Elizabeth (Bone) T. Edn.: B.S., Univ. of New Zealand, 1926; M. S., *ibid.*, 1928; Ph.D., Columbia Univ., 1933. Exp.: Staff, State Coll. of Wash., 1934-41; Prof. and Hd., Dept. of Food and Nutrition, Univ. of Ala. Schl. of Home Econ., 1941-52; Dean, *ibid.*, 1953—. Hon. Pos.: Chmn., Amer. Home Econ. Assn.; etc. Mem.: Amer. Chem. Soc.; Amer. Inst. of Nu-

trition; A.A.A.S.; Biochem. Soc. (Great Britain); Sigma Xi; Sigma Delta Epsilon; Omicron Nu. Author: *Everyday Nutrition*, 1935; *Everyday Nutrition for Schl. Children*, 1945; *Nutrition Tchng.—Some Suggestions and Devices*, 1951. Contrb. to: *Jour. Nutrition; Sci.; Jour. Home Econ.; etc.* Special Int.: Vitamins A and C; Nutritional Status, Gen. Nutrition.

TOLLE, Chester D., Asst. Chf. Vitamin Div., U. S. Food and Drug Admin., Washington, D. C. NUTRITION AND VITAMINS.

TOLLES, Walter Edwin, Supvr. Engr., Airborne Instruments Lab., Inc., 160 Old Country Rd., Mineola, L. I., N. Y. PHYSICS.

TOLLEY, Howard Ross, Dir. of Economics and Statistics, Food and Agri. Organization United Nations, Washington, D. C. ECONOMICS.

TOLMACHOFF, Innokenty Paul, retired, Sosanty Farm, R. F. D. 7, Cheswick, Pa. GEOLOGY, PALEONTOLOGY.

TOLMAN, Edward Chace, Univ. of Calif., Berkeley 4, Calif. PSYCHOLOGY.

TOLMAN, Lucius Moody, retired, 7217 Yale Ave., Chicago, Ill.

TOLMAN, Richard Chace, Dean, Grad. Schl., Calif. Inst. of Tech., Pasadena, Calif. PHYSICS, CHEMISTRY.

TOLONEN, Frank John, Assoc. Prof. of Rsch. Metallurgy, Mich. Coll. Mining and Tech., Houghton, Mich. METALLURGY.

TOMBAUGH, Clyde William, Chief, Rsch. Evaluation Br., Flight Determination Lab.; White Sands Proving Ground, 636 S. Alameda Blvd., Las Cruces, New Mex. ASTRONOMY, OPTICAL INSTRUMENTATION, GEOGRAPHY, PHYSICS, NAVIGATION. b. Streator, Ill., Feb. 4, 1906. s. Muron D. and Adella Pearl (Chritton) T. Edn.: B.A., Univ. of Kans., 1936; M.A., *ibid.*, 1939. m. Patricia Edson, June 7, 1934. c.: Annette Roberta, Alden Clyde. Exp.: Observatory Asst., Lowell Obs., Flagstaff, Ariz., 1929-38; Asst. Astronomer, *ibid.*, 1938-43; Sci. Instr. Ariz. St. Coll., Flagstaff, Ariz., 1943-45; Visiting Asst. Prof. Univ. of Calif., Los Angeles, Calif., 1945-46; Chief, Optical Measurements Br., Ballistic Rsch. Lab., White Sands Proving Ground, Las Cruces, N. Mex., 1946-51; Chf., Rsch. Evaluation Br., Flight Determination Lab., *ibid.*, 1951—. Hon. Pos.: Awarded Jackson-Gwilt Medal and Gift, 1931. Mem.: Amer. Astronomical Soc.; Astronomical Soc. of the Pacific;



Sigma Xi; Amer. Rocket Soc.; Meteoritical Soc.; Amer. Lunar and Planetary Observers; Astronomical Soc. of Las Cruces. Contrb. to: *Astronomical Jour.; A.A.A.S.; Publications of the Astronomical Soc. of the Pacific.* Gen. Int.: Discovered Ninth Planet, Pluto, Observer and Student of the Moon and Planets, Particularly, Mars, Proposed New Hypothesis on the Nature and Origin of the Surface Markings on Mars, Particularly the Canals. Special Interest.: Conducted Extensive Search for New Planetary Bodies Beyond the Orbit of Saturn. Design, Grinding and Figuring of Planetary Telescope Optics; Planetary Photography; Development of Long Focal Length Optics and Photographic Techniques for the Instrumentation of Rocket and Guided Missile Flights.

TOMIHIRO, Todd, Pharmacist, San Jose Hosp., 675 E. Santa Clara St., San Jose, Calif. PHARMACY.

TOMLINSON, Charles Weldon, Oil Producer, 509 Simpson Bldg., Ardmore, Okla. PETROLEUM GEOLOGY.

TOMPKINS, Pendleton. STERILITY.

TOOL, Arthur Quincy, Physicist, Natl. Bureau of Standards, Washington, D. C. PHYSICS.

TOOLE, Eben Henry, Sr. Physiologist, Div. Fruit and Vegetable Crops and Diseases, Plant Indus. Sta., Beltsville, Md. SEED PHYSIOLOGY.

TOOLEY, F. V., 1008 S. Garfield Ave., Urbana, Ill. CERAMICS.

TOOPS, Herbert Anderson, Prof. of Psychol., Ohio State Univ., Columbus, Ohio. PSYCHOLOGICAL STATISTICS.

TORGERSON, Theodore L., Prof. of Edn., Univ. of Wis., Madison, Wis. MEASUREMENTS, CLINICAL PSYCHOLOGY.

TORREY, George Safford, Prof. of Botany, Univ. of Conn., Storrs, Conn. MYCOLOGY.

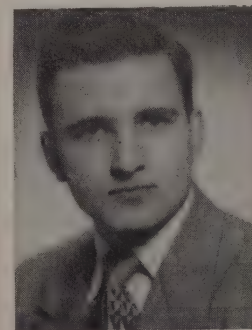
TORREY, Harry Beal, Prof. Emer. Biol., Stanford Univ., Calif.; 2801 Stuart St., Berkeley, Calif. MEDICINE, BIOLOGY.

TORREY, Theodore Willett, Assoc. Prof. of Zool., Ind. Univ., Bloomington, Ind. EMBRYOLOGY.

TOTH, Stephen John, Asst. Prof. and Asst. Rsch. Specialist Soils, Rutgers Univ., New Brunswick, N. J. SOIL CHEMISTRY.

TOTTEN, Henry Roland, Prof. of Botany, Univ. of N. C., Chapel Hill, N. C. WOODY PLANTS SOUTHEAST STATES.

TOUSIMIS, Anastasios John, Electron Microscopist, Dept. of Biophysics, Univ. of Pittsburgh, Pittsburgh, Pa. BIOPHYSICS (ELECTRON MICROSCOPY, RADIATION EFFECTS ON VIRUSES, ULTRA-CENTRIFUGATION, ELECTROPHORESIS). b. Agra, Edessis, Greece, Feb. 13, 1928. s. John and Maria (Tsonis) T. Edn.: B.S., Univ. of Pittsburgh, 1950; M.S., *ibid.*, 1952. Exp.: Rsch. Asst., Dept. of Biophysics, Univ. of Pittsburgh, 1950-52; Electron Microscopist, Dept. of Biophysics, *ibid.*, 1952—. Mem.: Amer. Chem. Soc.; A.A.A.S.; Electron Microscope Soc. Amer.; Phi



Sigma; Sigma Xi. Special Int.: Biophysical Properties of Bacterial Viruses; Electron Microscopy of Biological Specimens (Bacteria, Viruses, Macromolecules (Physical and Biochemical), Tissue Sections, Nervous Tissue).

TOWER, James Allen, Assoc. Prof. of Geography, Birmingham-Southern Coll., Birmingham, Ala. GEOGRAPHY.

TOWNEND, Robert Vose, Supt., Inorganic Rsch., General Chemical Co., Long Island City, N. Y. CHEMISTRY, CHEMICAL ENGINEERING.

TOWNES, Charles Hard, Dept. of Physics, Columbia Univ., N. Y., N. Y. RADIO SPECTROSCOPY.

TOWNS, Myron Bumstead, Prof. of Chem. and Hd. Dept., A. and I. State Univ., Nashville 8, Tenn. PHYSICAL CHEMISTRY (ELECTROCHEMISTRY). b. Atlanta, Ga., Oct. 4, 1910. s. George A. and Nellie (McNair) T. Edn.: A.B., Atlanta Univ., 1930; A.M., Univ. of Mich., 1933; Ph.D., ibid., 1942. m. Miriam Gould, June 9, 1938. c.: Myron B., Jr.; Theodore G. Exp.: Tchr., Sr. H. S., Atlanta, Ga., Public Schls., 1930-34; Prof. of Chem., A. and T. Coll., Greensboro, N. C., 1936-45; Prof. of Chem., Lincoln Univ., Pa., 1947-51; Prof. of Chem., A. and I. State Univ., Nashville, Tenn., 1945-47, 1952—. Mem.: A.A.A.S.; Amer. Chem. Soc.; Electrochem. Soc.; Phi Beta Kappa; Sigma Xi; Phi Kappa Phi; Phi Lambda Upsilon; Alpha Phi Alpha. Co-author: General Coll. Chemistry, 1945. Contr. to: Trans. Electrochem. Soc. Special Int.: Hydrogen Over-voltage and Electrode Reactions.

TOZZER, Alfred Marston, Peabody Museum, Harvard Univ., Cambridge 38, Mass.

TRABUE, Marion Rex, Dean, Schl. of Edn., Dir. Summer Sessions, Pa. State Coll., State College, Pa. EDUCATION AND PSYCHOLOGY.

TRACEY, Joshua Irving, Assoc. Prof. of Math. and Fellow, Timothy Dwight Coll., Yale Univ., New Haven, Conn. MATHEMATICS.

TRACY, Joseph Prince, Vice-Pres., Belcher Abstract and Title Co., Eureka, Calif. TAXONOMY AND ECOLOGY LOCAL CALIFORNIA FLORA.

TRACY, Paul Hubert, Prof. of Dairy Manufacturer, Univ. of Ill., Urbana, Ill. DAIRY MANUFACTURER.

TRAGER, William, Assoc., Rockefeller Inst., Princeton, N. J. EXPERIMENTAL BIOLOGY.

TRALLI, Nunzio, Asst. Prof. of Physics, St. John's Univ., 75 Lewis Ave., Brooklyn, N. Y. SOUND AND VIBRATION.

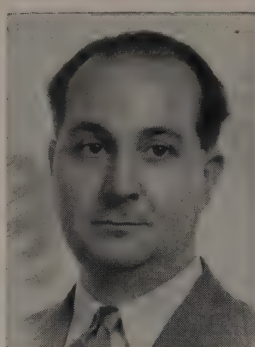
TRALLI, Nunzio Thomas, Sr. Scientist, Walter Kidde Nuclear Labs., Garden City, L. I., N. Y. THEORETICAL PHYSICS. b. N. Y., N. Y., Dec. 5, 1917. s. Carmine and Anna Maria (D'Onofrio) T. Edn.: B.S., Coll. of the City of N. Y., 1939; M.S., N. Y. Univ., 1944; Ph.D., ibid., 1951. Exp.: Physicist, U. S. Testing Co., Inc., N. J., 1940-43; Powers Electronic and Communication Co., Inc., N. Y., 1943-45; Instr. in Engrng. Sci. and Mgt. War Trng., Manhattan Coll., 1943; Asst. Prof. of Physics, St. John's Univ., 1944-50; Assoc. Prof. of Physics, ibid., 1950-51; Physicist, Oak Ridge Natl. Lab., summer 1949; Scientist, Atomic Energy Div., The H. K. Ferguson Co., Inc., N. Y., 1951-52; Physicist, Nuclear Engrng. Project, Mass. Inst. of Tech., summer 1952; Scientist, Walter Kidde Nuclear Labs., Inc., N. Y., 1952-53; Sr. Scientist, ibid., 1953—. Hon. Pos.: Rech. Assoc., Natl. Defense Resch Com., Tiffany Foundation, N. Y., 1945. Mem.: Fellow, A.A.A.S.; Amer. Physical Soc.; Optical Soc. Amer.; Acoustics Soc. Amer.; Sigma Pi Sigma; A.A.U.P. Contr. to: Physical Rev. Special Int.: Theoretical Nuclear Physics; Applied Acoustics and Optics.

TRANSEAU, Edgar Nelson, Prof. Emer., Ohio State Univ., Columbus, Ohio. PLANT ECOLOGY.

TRAUB, Hamilton Paul, Prin. Physiologist in Chg. Section Special Physiol. Investigations, Bureau Plant Indus., U. S. D. A., Beltsville, Md. PLANT PHYSIOLOGY, PLANT HORMONES.

TRAYER, Jay R., Asst. Prof. of Zool., Mass. State Coll., Amherst, Mass. ENTOMOLOGY.

TRAUB, Hamilton Paul, Editor and Rsch. Dir., Amer. Plant Life Soc., Prin. Physiologist, U. S. Dept. Agric. Retired, 16-31 Rodeo Rd., Arcadia, Calif. PLANT PHYSIOLOGY: GENETICS.



b. Crozier, Iowa, June 18, 1890. s. Rev. Lorenz and Elizabeth (Graf) T. Edn.: A.B., Univ. of Minn., 1922; M.S., ibid., 1924; Ph.D., ibid., 1927. Exp.: Asst. Horticulturist, Coll. of Agri., Univ. of Minn., 1924-28; Chf., Div. of Horticulture, Tex. Agri. Expt. Sta., 1928-30; Prin. Horticulturist, U. S. Dept. Agri., 1930-42; Prin. Physiologist, ibid., 1942-52; Prin. Physiologist, ibid., retired, 1952—.

Editor, Natl. Horticultural Magazine, 1922-26; Editor, Amer. Plant Life Soc., 1933—; Edited *Herbertia*, 1934-48; *Plant Life*, 1945—. Hon. Pos.: Chmn., Delegation to Internatl. Horticultural Congress, for State Dept. and U. S. Dept. of Agri., Berlin, 1938. Mem.: Fellow, A.A.A.S.; Amer. Soc. of Plant Physiologists; Amer. Genetic Assn.; Soc. for the Study of Evolution; Amer. Plant Life Soc.; Sigma Xi; Gamma Alpha; Alpha Zeta. Author: *Amaryllidaceae: Tribe Amaryllidaceae*, 1949. Contr. to: *Sci. Nature*; *Plant Physiol.*; *Proc. Amer. Soc. for Hort. Sci.*; *Jour. of Genetics*; *Botanical Gazette*; *Euclides*; *Plant Life*. War Record: U. S. Natl. Army, 1917-19. Special Int.: Factors Affecting Keeping Quality of Citrus Juices; Guayule (Rubber) Physiol., Rapid Methods for Rubber Analysis; Induced Mutations in Plants; Rapid Methods for Mounting Chromosomes; Systematics and Evolution of the *Amaryllidaceae*.

TRAVIS, Lee E., SPEECH AND HEARING.

TRAVIS, Roland Charles, Rsch. Assoc., Psychol. Lab., Tufts Coll., Medford, Mass. PSYCHOLOGY.

TRAXLER, Ralph Newton, Dir., Asphalt Rsch., Texas Co., Port Neches, Tex. BITUMINOUS CHEMISTRY.

TRAYER, George William, Chf., Div. Forest Products, Forest Service, U. S. D. A., Washington, D. C. ENGINEERING.

TREACY, John P., Hd., Dept. of Edn., Marquette Univ., Milwaukee, Wis. EDUCATION, COUNSELING.

TREAT, Wolcott Coit, Assoc. Prof. of Psychol., Chmn. Dept., San Diego State Coll., San Diego 15, Calif. PERSONALITY; PROJECTIVE TECHNIQUES; MOTIVATION. b. South Lee, Mass., Feb. 25, 1900. s. Sidney Hubbell and Elizabeth Coit Downing (Bunker) T. Edn.: A.B., Harvard Coll., 1923; A.M., Harvard Univ., 1935; Ph.D., Stanford Univ., 1950. m. Ariss, Sept. 29, 1942. c.: Caroline Thalia; Michael Ariss. Exp.: Asst. Instr., Harvard Univ., Cambridge, Mass., 1934-36; Prof. of Psychol. and Philosophy, Portia Coll., Boston, Mass., 1936-39; Psychologist, Veterans Administration, 1945-50; Instr., Univ. of Calif. Ext. Div., Berkeley, Calif., 1945-50; Asst. Prof., San Diego State Coll., San Diego, Calif., 1950—. Mem.: A.A.U.P.; Amer. Psychological Assn.; Soc. for Projective Techniques and Rorschach Inst., Inc.; Music Tchr. Assn. of Calif. Special Int.: Rorschach Test; Motivation in Learning; History of Psychol.; Theories of Learning; Factor Analysis.

TREISCHER, C. C., R. T. Vanderbilt Co., 230 Park Ave., N. Y. 17, N. Y. CERAMICS.

TRELEASE, Sam Farlow, Prof. of Botany, Columbia Univ., N. Y., N. Y. PLANT PHYSIOLOGY.

TREMBLEY, Helen Louise, Lab. of Tropical Diseases, Natl. Inst. of Health, Bethesda 14, Md. PARASITOLOGY; TROPICAL DISEASES.

TRENOR, Albert Delafield, Vice-Pres. and Asst. Treas., Hammond Rsch. Corp., Gloucester, Mass. RADIO-DYNAMIC CONTROL AND AVIATION. b.

N. Y., N. Y., Jan. 29, 1888. s. John D. and Ida A. (Cole) T. Edn.: M.S., Princeton Univ., 1912. m. Bernice W. T., Sept. 24, 1918. c.: Patricia; Pamela. Exp.: Engr., Hammond Radio Rsch. Lab., 1913-28; Vice-Pres. and Asst. Treas., *ibid.*, 1928—. Mem.: A.S.M.E.; Inst. Radio Engrs.; Fellow, A.A.-A.S.; Fellow, Royal Soc. Arts and Sci.; Alpha Sigma Phi; Tau Beta Pi. War Record: Lt. in Civil Air Patrol, 1942-52.

TRESSLER, Willis Lattanner, Assoc. Prof. of Zool., Univ. of Md., College Park. Md. LIMNOLOGY.

TRIEBOLD, Howard O., Hd., Dept. of Agri. and Biol. Chem., Pa. State Coll., State Coll., Pa. BIO-



CHEMISTRY. b. Cottage Grove, Minn., Feb. 15, 1902. s. August F. and Mary (Stutzmann) T. Edn.: B.S., Univ. of Minn., 1923; M.S., *ibid.*, 1926; Ph.D., *ibid.*, 1929. m. Louise E. Korfhage, June 30, 1924. c.: Marjorie Jeanne; Howard O., Jr. Exp.: Part-time Instr., Dunwoody Inst., 1924; Strietman Fellow, Univ. of Minn., 1924-26; Instr., Dept. of Agri. and Biol. Chem., Pa. St. Coll., St. Coll., Pa., 1927-29; Asst. Prof., *ibid.*, 1929-31; Assoc. Prof. *ibid.*, 1931-36; Prof., *ibid.*, 1936—; Act. Hd., *ibid.*,

1951-53; Hd., *ibid.*, 1953—. Mem.: Amer. Chem. Soc.; Amer. Assn. Cereal Chem.; Amer. Oil Chem. Soc.; Inst. Food Tech.; Sigma Xi; Phi Lambda Upsilon; Gamma Sigma Delta; Alpha Zeta; Alpha Gamma Rho; Mason. Author: Quantitative Analysis with Applications to Agri. and Food Products, 1946. Contrb. to: Cereal Chem.; Indus. and Engrng. Chem.; Jour. Amer. Oil Chemists Soc.; Analytical Chem. Special Int.: Fat Deterioration and Antioxidants; Physical Characteristics of Fat Acid Esters.

TRIGGS, Frances Oralind, Personnel Researcher, Educational Records Bureau, 437 W. 59th St., N. Y., N. Y. PSYCHOLOGY, EDUCATION.

TRIMBLE, Harry C., Asst. Prof. Biol. Chem., Harvard Med. Schl., 25 Shattuck St., Boston, Mass BIOLOGICAL CHEMISTRY.

TRIMBLE, Harvey McCormick, Prof. of Physical Chem., Okla. A. and M. Coll., Stillwater, Okla. PHYSICAL CHEMISTRY.

TRIVELLI, Adrian Peter Herman, Assoc. Supt., Rsch. Lab., Eastman Kodak Co., Rochester, N. Y. PHOTOGRAPHY.

TROSTEL, L. J., General Refractories Co., Box 1673, Baltimore, Md. CERAMICS.

TROTTER, Allen Richard, Mgr., Southern Breeding Sta., Associated Seed Growers, Inc., New Haven, Conn. PLANT BREEDING.

TROTTER, Ida Peebles, Dir., Tex. Extension Service, Tex. A. and M. Coll., College Station, Tex. AGRONOMY, ADULT EDUCATION.

TROTTER, Mildred, Prof. Gross Anatomy, Wash. Univ., St. Louis, Mo. ANATOMY.

TROUT, David McCamel, Dean of Students, Central Mich. Coll., Mt. Pleasant, Mich. EDUCATIONAL PSYCHOLOGY.

TROUT, William Edgar, Jr., Prof. of Chem., Univ. of Richmond, Richmond, Va. INORGANIC AND PHYSICAL CHEMISTRY.

TROVIS, Lee Edward, SPEECH PATHOLOGY.

TROW, William Clark, Prof. of Ednl. Psychol., Univ. of Mich., Ann Arbor, Mich. EDUCATIONAL PSYCHOLOGY.

TROWBRIDGE, Arthur Carleton, Prof. and Hd., Dept. of Geol., State Univ. of Iowa, Iowa City, Iowa. GEOLOGY, GEOGRAPHY.

TROXEL, Shirley Monroe, Asst. Prof. of Sci., Trenton State Tchrs. Coll., Trenton, N. J. PHYSICAL CHEMISTRY.

TROXELL, Edward L., Prof. of Geol. and Dir., Conn. Geol. and Natural History Survey, Hartford, Conn. GEOLOGY.

TRUE, Rodney Philip, P. O. Box 92, Southern Forest Expt. Sta., Lake City, Fla. BOTANICAL SCIENCES.

TRUEBLOOD, Howard Moffitt, Protection Development Dir., Bell Telephone Labs., 463 West St., N. Y., N. Y. COMMUNICATION ENGINEERING.

TRUESDAIL, Roger Williams, Pres., Truesdail Labs., Inc., 4101 N. Figueroa St., Los Angeles 65,



Calif. BIOLOGICAL CHEMISTRY AND NUTRITION. b. Burlingame, Kans., Feb. 6, 1899. s. Ernest L. and Ruth (Williams) T. Edn.: B.S., Univ. of Redlands, 1921; M.S., Univ. of Ore., 1922. Ph.D. Univ. of Wash., 1926. m. Dorothy Painter, June 27, 1923. c.: Betty Barbara; Katherine Ann; Audrey Mae. Exp.: Hd., Dept. Chem. and Physics, Mt. Angel Coll., Ore., 1922-23; Acting Chmn., Dept. of Chem., Univ. of Redlands, Redlands, Calif., 1923-24; Instr. in Chem., Univ. of Nev., 1926-27; Asst. Prof. of Chem., Pomona Coll., 1927-31; Pres., Truesdail Labs., Inc., Los Angeles, Calif., 1931—; Lectr., Dept. of Chem., Univ. of Southern Calif., 1935-44. Hon. Pos.: Trustee, Univ. of Redlands, 1935—. Mem.: Fellow, Assn. of Official Racing Chemists; Fellow, A.A.A.S.; Amer. Inst. of Chemists; Amer. Pub. Health Assn.; Charter Mem., Inst. of Food Technologists; Assn. of Cons. Chemists and Chem. Engrs.; Amer. Chem. Soc.; Med. Rsch. Assn. of Calif.; Sigma Xi; Phi Lambda Upsilon; Rotary; Oneonta Club. Contrb. to: Jour. Amer. Chem. Soc.; Indus. and Engrng. Chem.; Food Technol. War. Record: Private, U. S. Army, WWI. Gen. Int.: Pres., Rotary Club of Los Angeles, 1946-47; Chmn., Southern Calif. Section, Amer. Chem. Soc., 1939-40; Pres., Amer. Council of Commercial Labs., 1949-51; Chmn., Western Div., ACCL., 1947-53; Pres., Assn. of Official Racing Chemists, 1953-54. Special Int.: Nutrition and Food Technol.

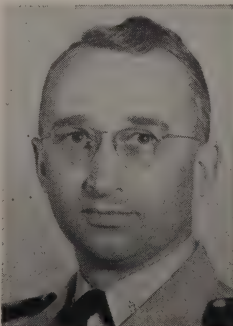
TRUITT, R. V., Biologist and Dir., Dept. of Rsch. and Edn., Solomons, Md. MARINE BIOLOGY.

TRUMAN, Orley Hosmer, retired, 8796 Hollywood Blvd., Hollywood, Calif. OIL PROSPECTING.

TRUMBULL, Harlan L., Asst. Dir. of Rsch., B. F. Goodrich Co., Akron, Ohio. CHEMISTRY

TRUMBULL, Richard, LCDR, MSC, USNR, Asst. Hd. of Aviation Psychology Br., Bureau of Med. and Surgery, Navy Dept., Washington, D. C.

PHYSIOLOGICAL PSYCHOLOGY; PERSONALITY. b. Johnstown, N. Y., Apr. 6, 1916. s. Milton and Hazel (Bussee) T. Edn.: A.B., Union Coll., 1937; M.S., Union Univ., 1939; Ph.D., Syracuse Univ., 1951. m. Alice McDaniel, June 11, 1939. c.: Judith Anne; Joanne Agnes; Janice Alice; Joyce Ellen. Exp.: Prof. of Psychol., Asst. Dir. Student Personnel, Green Mountain Junior Coll., Poultney, Vt., 1939-42; Aviation Psy-



chologist, U. S. Navy, 1943-46; Chmn. Psychol. Dept. and Dir. Student Personnel, Green Mountain Jr. Coll., Poultney, Vt., 1946-48; Chmn., Elem. Psychol. Program, Syracuse Univ., 1948-51; Rsch. Psychologist and Analyst, Schl. of Aviation Med., N. A. S., Pensacola, Fla. Hon. Pos.: Trustee, Green Mountain Jr. Coll., 1948-51. Mem.: Sigma Xi; Psi Chi; A.A.U.P.; A.A.A.S.; A.P.A. Contrb. to: Jour. General Psychol.; Jour. Psychol.; Jour. Social Psychol. Special Int.: Vision, Acuity and Depth; Studies on Arithmetic Processes; Personality Structure

TRUMBULL, Robert Samuel, Owner and Operator, Insurance Agency, 410 N. Main St., Butler, Mo. **CHEMISTRY.**

TRUMPER, Max, Lectr. in Physiol. Chem., Naval Med. Schl., Natl. Naval Med. Center, Bethesda, Md. **BIOCHEMISTRY.**

TRUMPLER, Robert J., Emeritus Prof. of Astron., Univ. of Calif., Rt. 2, Box 1750, Aptos, Calif. **ASTRONOMY.** b. Zurich, Switzerland, Oct. 2, 1886. s. W. Ernest and Louise (Hurter) T. Edn.: Ph.D., Univ. of Gottingen, 1910. m. Augusta C de la Harpe, Aug. 4, 1916. c.: Cecile; Margot; E. Julie; Robert H.; Alfred O. Exp.: Ingenieur, Swiss Geodetic Comm., 1911-15; Asst., Allegheny Observatory, Pittsburgh, Pa., 1915-19; Martin Kellogg Fellow, Lick Observatory, Mt. Hamilton, Calif., 1919-20; Asst. Astronomer, *ibid.*, 1920-26; Assoc. Astronomer, *ibid.*, 1926-29; Astronomer, *ibid.*, 1929-38; Prof. of Astron., Univ. of Calif. at Berkeley, 1938-51; Prof. Emeritus, *ibid.*, 1951—. Mem.: Natl. Acad. Sci.; Astron. Soc. of the Pacific; R. Astron. Soc., London; Internatl. Astron. Union; Sigma Xi. Co-author: Statistical Astron., 1953. Contrb. to: Astron. Jour.; Astrophys. Jour.; Lick Observatory Bull.; Publ. Astron. Soc. of the Pacific. Gen. Int.: Study of Galactic Star Clusters; Stellar Statistics. Special Int.: Test of Einstein Theory at Solar Eclipse, 1922; Determination of Light Absorption in Interstellar Space.

TRUOG, Emil, Prof. of Soils and Chmn. Dept., Univ. of Wis., Madison, Wis. **SOIL CHEMISTRY.**

TRUSLER, Ralf B., Vice-Pres. and Dir. of Rsch., Davies-Young Soap Co., Dayton, Ohio. **CHEMISTRY.**

TRYON, Henry Harrington, Dir., Black Rock Forest, Cornwall-on-Hudson, N. Y.

TRYTTEN, Merriam Hartwick, Dir., Office Scientific Personnel, Natl. Rsch. Council, Washington, D. C. **PHYSICS.**

TSAI, Loh Seng, Prof. of Psychology, Tulane Univ., New Orleans, La. **EXPERIMENTAL AND COMPARATIVE PSYCHOLOGY; PSYCHOLOGY OF LEARNING CHINESE; COOPERATIVE BEHAVIOR.** b. Chaochow, China, Feb. 6, 1901. s. Yu Sam and Lang (Ting) T. Edn.: B.A., Univ. of Nanking, 1924; M.S., Fuh Tan Univ., 1926; Ph.D., Univ. of Chicago, 1928. m. Aimee Tan, Nov. 20, 1932. c.: Sunny; Dorothy; Lily; Noel. Exp.: Asst. Prof., Univ. of Chicago, Chicago, Ill., 1929-31; Sec. and Act. Dir., Natl. Inst. of Psychol., Academia Sinica, 1931-35; Prof. of Psychol., Peiping Normal Univ., Peiping, China, 1935-39; Hd. of Psychol. Dept., Dean of Coll. of Arts, Univ. of Nanking, Nanking, China, 1939-46; Dir., Psychol. Inst., and Dean of Tehrs. Coll., Sun Yat Sen Univ., 1946-47; Visiting Prof. of Psychol., Brown Univ., Providence, R. I., 1947-48; Prof., Tulane Univ., New Orleans, La., 1948—. Mem.: Amer. Psychol. Assn.; A.A.A.S.; Chinese Sci. Soc.; Sigma Xi; Chinese Acad. of Sci. Author: The Laws of Minimum Effort and Maximum Satisfaction in Animal Behavior, 1932; The Selection of Basic Chinese Characters, 1946. Contrb.: Jour. of Experimental Psychol.; Jour. of Comparative Psychol.; Sci.; Amer. Jour. of Nutrition; Monography of the National Rsch. Inst. of Psychol.; Acad. Sinica. Gen. Int.: Discovered the Relation Between Vitamin B. and Intelligence; Discovered Cats and Rats Can Cooperate and Live in Peace. Invented Paper and Pencil Test for Selecting Aviators and Drivers. Demonstrated Rats can

Think. Special Int.: Effects of Dietary Deficiency and Brain Damage on Higher Mental Processes in Animals; Animal Cooperation; Psychology of Learning Chinese Language.

TSCHUDY, William, Consulting, Construction and Rsch. Engr., 1012 W. 163rd St., Gardena, Calif.



ALTERNATING CURRENT RECTIFICATION (ELECTRONICS), COMBUSTION ENGINEERING. b. Basle, Switzerland. s. William and Fanny (Puempin) T. Edn.: E.E. and M.E., Federal Tech. Univ., Zurich, Switzerland, 1908; D.Sc., *ibid.*, 1912. m. Ramona May Wofford May 10, 1930. Exp.: Rsch. Engr., Siemens-Schuckert Co., Berlin, Germany, 1908-10; Asst. Prof. of Elec. and Physical Labs., Federal Tech. Univ., Zurich, Switzerland, 1910-12; Rsch. Engr., Westing-

house Elec. and Mfg. Co., East Pittsburgh, Pa., 1913-15; Mechanical Designer and Draftsman, U. S. Bureau of Mines, Pittsburgh, Pa., 1915-16; Elec. and Mechanical Designer, Carnegie Steel Co., Pittsburgh, Pa., 1916-18; Engr. in Chg. of Construction and Operation, Port Huron Gas and Elec. Co., Mich., 1918-19; Private Rsch., N. Y. and Switzerland, 1919-23; Elec. and Mechanical Designer, Southern Calif. Edison Co., Los Angeles, Calif., 1923-25; Consulting, Construction and Rsch. Engr., Los Angeles and San Francisco, Calif., 1925-41; Designing Engr. in Div. of Operation and Engrng., Imperial Irrigation District, Imperial, Calif., 1941-42; During War, Calif. Shipbuilding Corp., Terminal Island, Calif., 1942-46; Test Engr., Todd Pacific Shipyards Inc., San Pedro, Calif., 1946-47; Consulting, Construction and Rsch. Engr., Gardena, Calif., 1947—. Mem.: Fellow, A.A.A.S. Contrb. to: Archiv fuer Elektrotechnik, 1913; Elec. World; Bull. Assn. Suisse des Electriciens; etc. Gen. Int.: Pointed out in a report to the Temporary Natl. Econ. Com. on hand of experiences made serious defects in patent litigation, followed more recently by various detail reports on that subject to the U. S. Senate Judiciary Com. and House Judiciary Com.; Tschudy large capacity mercury are rectifier based upon theorem of vacuum or density regulation, U. S. Patent, also Patents in England, France, Germany and Switzerland; Developed first vacuum gauge in U. S. A. applied to large capacity mercury are rectifier, U. S. Patent. Special Int.: Vacuum Gauge for large capacity mercury are rectifiers. Tschudy large capacity mercury are rectifier based upon theorem of vacuum or density regulation, Combustion of natural and liquid gases (Smokeless orchard heating system); Separation of oxygen from air, Power and ship installations and special test methods.

TUCKER, Albert William, Prof. of Math., Princeton Univ., Princeton, N. J. **GEOMETRY.**

TUCKER, Carlton Everett, Prof. of Elect. Engrng., Mass. Inst. of Tech., Cambridge, Mass. **ELECTRICAL ENGINEERING.** b. Nov. 13, 1896, Whitman, Mass. s. Amasa C. and Lizzie M. (Reed) T. Edn.: S.B., Mass. Inst. of Tech., 1918. S.B., Harvard Univ., 1918. m. Louise Porter of Whitman, Mass., Aug. 12, 1922. d. Alvin C. and Annie W. Porter. c.: Caroline Louise; Nancy Elisabeth. Exp.: Asst. in E. E., Mass. Inst. of Tech., 1918-19; Instr. in E. E., *ibid.*, 1919-24; Asst. Prof. of E. E., M. I. T., 1924-30; Assoc. Prof. of E. E., *ibid.*, 1930-38; Prof. of E. E., *ibid.*, 1938—; Exec. Officer, E. E. Dept., 1942—; Dir., M. I. T. Radar Schl., 1943-46; Student Placement Officer, 1943—. Fellow, Amer. Inst. E. E. Sr. Mem.: Inst. of Radio Engrng.; Amer. Soc. of Engrng. Edn.; Tau Beta Pi. Author: Ricker and Tucker. Elect. Engrng. Lab. Expts., 1922, 2nd Ed., 1927, 3rd Ed., 1934, 4th Ed., 1940; Sect. 19 on Elect. Measurements, in Gen. Engrng. Handbook, 2nd Ed.

TUCKER, Clarence Mitchell, Prof. of Botany, Univ. of Mo., Columbia, Mo. **PLANT PATHOLOGY.**

TUCKER, David Andrew, Prof. of History of Med., Coll. of Med., Univ. of Cincinnati, Cincinnati, Ohio. **INTERNAL MEDICINE.**

TUCKER, Forrest Glenn, Prof. of Physics, Oberlin Coll., Oberlin, Ohio. **PHYSICS.**

TUCKER, Rietz Courtney, Asst. State Geologist, W. Va. Geol. Survey, Box 265, Morgantown, W. Va. **PETROLEUM.**

TUCKER, William Motier, Prof. Emer. Geol., Fresno State Coll., 1556 Roosevelt Ave., Fresno, Calif. **GEOLOGY AND GEOGRAPHY.**

TUCKERMAN, Louis Bryant, Asst. Chf. Mechanics and Sound Div., Natl. Bureau of Standards, Washington, D. C. **PHYSICS, ENGINEERING.**

TUFTE, Engebret T. Tehr., 308 Manitou, Northfield, Minn. **BACTERIOLOGY, PHYSIOLOGY, ECOLOGY.** b. Northwood, N. Dak., Apr. 5, 1884. s. T. E. and Guri (Bry) T. Edn.: B.S., St. Olaf Coll., 1909; M.A., Univ. of N. Dak., 1911. m. Olga C. Hanson, June 12, 1928. Exp.: Supt. of Schls., Gary, Minn., 1909-10; Tehng. Assistantship, Univ. of N. Dak., 1910-11; Instr., ibid., 1911-12; In Chg. of Biol. Sta., Devils Lake, N. Dak., summers 1911-12; Prof. of Biol. and Hd. Dept., St. Olaf Coll., Northfield, Minn., 1912-49; Tehng., 1949-53. Hon. Pos.: Pres., Minn. Acad. Sci., 1941-42; Council, ibid., 1933-38; Vice Pres., ibid., 1939-40; Council, ibid., 1942-44. Mem.: Amer. Forestry Assn.; Fellow, A.A.A.S.; Natl. Sci. Tehrs.; Natl. Assn. Biol. Tehrs.; Amer. Legion; Natl. Placement Dirs.; Minn. Ednl. Assn.; Red Cross. War Record: 1st Lieut., Sanitary Corps, 1918-19. Gen. Int.: Placement Dir., St. Olaf Coll. 1912-49; Mem., Com. on Nerstrand Woods. Special Int.: Bacteriol.; Physiol.; Morphology of *Hosackia Americana*; Acclimatation of Fish to Alkali Waters (in Aquatic Assets of N. Dak.).

TUFTS, Warren Porter, Prof. of Pomol., Hd. Div. and Pomologist, Expt. Sta., Univ. of Calif., Davis, Calif. **POMOLOGY.**

TUGMAN, Orin, Prof. Emer., Univ. of Utah, 1252 E. Third South St., Salt Lake City, Utah. **PHYSICS.**

TUKEY, Harold Bradford, Hd., Dept. of Horticulture, Mich. State Coll., East Lansing, Mich. **HORTICULTURE.**

TUKEY, John Wilder, Asst. Prof. of Math., Princeton, N. J. **MATHEMATICS.**

TUKEY, Loren Davenport, Asst. Prof. of Pomology, Pa. State Coll., State College, Pa. **POMOLOGY DIVISION OF HORTICULTURE.** b. Geneva, N. Y., Dec. 4, 1921. s. Harold B. and Margaret (Davenport) T. Edn.: B.S., Mich. State Coll., 1943; M.S., ibid., 1947; Ph.D., Ohio State Univ., 1952. m. Louise A. Young, Feb. 2, 1952. Exp.: Asst. Prof. of Pomology, Pa. State Coll., State Coll., Pa., 1950—. Mem.: Amer. Soc. for Hort. Sci.; Amer. Soc. Plant Physiologists; Botanical Soc. Amer.; A.I.B.S.; Theta Chi; Sigma Xi; Gamma Sigma Delta; Phi Epsilon Phi. Contrb. to: Botanical Gazette; Proc. Amer. Soc. Hort. Sci. War Record: Capt., U. S. Army, 1943-46. Special Int.: Plant Growth; Growth Substances and Temperature.

TULGAN, Joseph, Physician, 515 E. 22nd St., Brooklyn, N. Y. **CARDIOLOGY.**

TULLER, Annita, Instr. on Math., Hunter Coll., 695 Park Ave., N. Y., N. Y. **GEOMETRY.**

TULLIS, Edgar Cecil, Chf. Rice Disease Investigations, U. S. D. A., Div. Cereal Crops and Disease, P. O. Box 2967, Beaumont, Tex. **PLANT PATHOLOGY.**

TULLIS, Edward Langdon, Prof. and Hd., Dept. of Geol., S. Dak. Schl. of Mines and Tech., Rapid City, S. Dak. **ECONOMIC GEOLOGY.**

TULLOSS, Rees Edgar, Pres., Wittenberg Coll., Springfield, Ohio. **PSYCHOLOGY.**

TULLY, Wilbur Campbell, Dir. of Rsch., Burrus Field Mills, Box 2458, Dallas, Tex. **ANIMAL AND POULTRY NUTRITION.**

TURK, Karl, Sr., Pemco Corp., 5601 Eastern Ave., Baltimore 24, Md. **CERAMICS.**

TURK, Richard H., Pemco Corp., 5601 Eastern Ave., Baltimore, Md. **CERAMICS.**

TURKEVICH, Anthony, Univ. of Chicago, Chicago, Ill. **CHEMISTRY.**

TURNER, Abby Howe, Prof. Emer. Physiol., Mount Holyoke Coll., South Hadley, Mass. **PHYSIOLOGY.**

TURNER, Arthur Bertram, retired, 245 N. Mountain Ave., Montclair, N. J. **ASTRONOMY.**

TURNER, Bird Margaret, Prof. of Math., W. Va. Univ., Morgantown, W. Va. **MATHEMATICS.**

TURNER, Charles Wesley, Prof. of Dairy Husbandry, Univ. of Mo., Columbia, Mo. **DAIRY HUSBANDRY, ENDOCRINOLOGY.**

TURNER, Clair Elsmere, Asst. to the Pres., Natl. Foundation for Infantile Paralysis, 120 Broadway, N. Y., N. Y. **PUBLIC HEALTH.** b. Harmony, Maine, Apr. 28, 1890. s. Frederick Orrison and Mary Frances (Chalmers) T. Edn.: A.B., Bates Coll., 1912; A.M., Harvard Univ., 1913; C.P.H., Harvard Univ., Schl. of Public Health, 1917; Dr. P.H., Mass. Inst. of Tech., 1928; Ed.M., Boston Univ., 1944; M.P.H., Harvard Schl. of Public Health, 1947. Hon. Deg.: ScD., Bates Coll., 1937. m. Naomi Cooke, Dec. 24, 1924. c.: Mary Frances; Frederick Clair. Exp.: Instr., Bates Coll., 1913-14; Instr., Asst. Prof., Assoc. Prof., Prof. and Hd., Dept. of Public Health, Mass. Inst. of Tech., 1914-44; Chf. Health Edn. Office, Inst. of Inter-Amer. Affairs, 1944-45; Instr., Assoc. Prof. of Hygiene, Tufts Coll. Med. and Den. Schl., 1917-29; Visiting Prof., Schl. of Public Health, Univ. of Calif., 1945-46; Asst. to the Pres., Natl. Foundation for Infantile Paralysis, N. Y., N. Y., 1946—. Hon. Pos.: Pres., Internatl. Union for Health Edn. of the Public, 1953—; Trustee, Bates Coll., 1922—. Mem.: A.A.A.S.; Amer. Acad. Arts and Sci.; A.P.H.A.; A.M.A.; Amer. Acad. Physical Edn.; N.E.A.; Phi Delta Kappa; Phi Beta Kappa; Delta Sigma Rho; Sigma Xi; Delta Omega. Contrb. to: Amer. Jour. Public Health; Jour. Health and Physical Edn.; etc. Special Int.: Health Edn.

TURNER, Clarence Lester, Prof. of Zool., Northwestern Univ., Evanston, Ill. **HISTOLOGY, ENDOCRINOLOGY.**

TURNER, Hubert Michael, Assoc. Prof. of Elec. Engrng., Yale Univ., New Haven, Conn. **ENGINEERING.**

TURNER, Lewis MacDonald, Dean, Schl. of Forest, Range, and Wild Life Mgt., Utah State Agril. Coll., Logan, Utah. **CONSERVATION SCHOOL ADMINISTRATION.** b. Sept. 7, 1898, Heyworth, Ill. s. Frank and Harriet Emma (Cogswell) T. Edn.: B.S., Ill., 1923; M.S., Ill., 1925; Ph.D., Univ. of Chicago, 1931. m. Josephine Brown of Divernon, Ill., 1925. d. F. S. Brown. c.: Frederick B.; Lewis M., Jr. Exp.: Sci. Tehr., Heyworth H. S., Ill., 1923-24; Tehng. Fellow, Univ. of Chicago, 1929-31; Hd. of Dept. of Biol., Blackburn Coll., 1925-29; Asst. Prof. of Forestry, Univ. of Ark., 1931-37;



Forester, Br. of Rsch., U. S. Forest Serv., 1937-40; Sr. Forester and Asst. Chief, Div., Forest Influences, Br. of Rsch., U.S.F.S., 1940-43; Dean, Schl. of Forest, Range, and Wild Life Mgt., Utah State Coll., 1943—. Hon. Pos.: Chmn., Inter-mountain Sect., Soc. of Amer. Foresters; Hon. Vice-Pres., Amer. For. Assn., 1949; Pres., Amer. Coun., Forestry Schl. Execs., 1950; Natl. Forester, Xi Sigma Pi, 1950-51. Mem.: Amer. Soc. Range Mgmt.; Sigma Xi; A.A.A.S.; S.A.F.; Ecol. Soc. of Amer.; Utah Acad. Sci.; Ill. Acad. Sci.; Amer. Geophys. Union; Kiwanis; Phi Delta Kappa; Phi

Kappa Phi; Xi Sigma Pi. Contr. to: Ecol.; Bot. Gaz.; Amer. Midland Natl.; Jour. of Forestry; Numerous Expt. Sta. and Ext. Bulls. Ph.D. Dissertation: Plant Ecological Studies in the Lower Ill. River Valley. War Record: Cpl., Inf., 19th Inf., 18th Div., 1918. Listed in: A.M.S.; Who's Who in Amer.; Who's Who in the West. Special Int.: Forest Ecology; Forest Soils.

TURNER, Ruth Dixon, Research Assistant, Department of Mollusks, Museum of Comparative Zoology, Cambridge 38, Mass. **MOLLUSCA**. b. Melrose, Mass., December 7, 1914. d. Henry Dixon and Frances Emma (Tomes) T. Edn.: B.S., Bridgewater Tchr. Coll., 1936; M.A., Cornell Univ., 1942. Exp.: Tchr., Bondville, Vermont, 1936-37; Tchr., Jr. High Schl., North Reading, Mass., 1937-39; Asst. Dir. of Edn., Boston Soc. Natural History, 1939-40; Acting Curator of Birds, *ibid.*, 1941-42; Instr., Vassar Coll., Poughkeepsie, N. Y., 1942-44; Biologist, William F. Clapp Lab., Duxbury, Mass., 1944-45; Rsch. Asst., Mollusk Dept., Museum of Comparative Zool., Cambridge, Mass., 1945—. Mem.: Sigma Xi; Amer. Soc. Limnol. and Oceanography; Amer. Malacological Union; Soc. Systematic Zoologists; Boston Malacological Club. Contr. to: Johnsonia; Revista de la Sociedad, etc. Special Int.: Western Atlantic Marine Mollusks; Boring and Fouling Mollusks.

TURNER, Thomas Wyatt, Prof. Emer. Biol., Hampton Inst., 18 Tyler St., Hampton, Va. **PLANT PHYSIOLOGY AND PATHOLOGY**.

TURNER, William Franklin, Entomologist, U. S. D. A., Bureau Entomol. and Plant Quarantine, P. O. Box 162, Fort Valley, Ga. **ENTOMOLOGY**.

TURNER-HIGH, Harry Holbert, Prof. and Hd., Dept. of Anthropol. and Sociology, Univ. of S. C., Columbia, S. C. **ETHNOGRAPHY**.

TURRELL, Franklin Marion, Asst. Plant Physiologist, Univ. of Calif. Citrus Expt. Sta., Riverside, Calif. **PLANT PHYSIOLOGY**.

TURRENTINE, John William, Pres. and Chmn., Bd. of Dirs., Amer. Potash Inst., 1155 16th St., N. W., Washington, D. C. **CHEMISTRY**.

TURRITTIN, Hugh Lonsdale, Prof. of Math., Univ. of Minn., Minneapolis, Minn., 4046 Beard Ave., So., Minneapolis, Minn. **MATHEMATICS**. b. Apr. 24, 1906, Rice, Minn. s. Albert Hugh and Bessie Lonsdale (Bouck) T. Edn.: B.S. in Civil Engrng., Univ. of Minn., 1927; M.S. in Math., 1933, Univ. of Wis.; Ph.D. in Math., 1934, *ibid.* m. Adele Fritz of Feldbach, Styria, Austria. d. Anton and Walpurga Fritz. c.: Anton Hugh, Rachel Mary. Exp.: Rodman, Minn. Highway Dept., 1926; Instr. of Mech., Univ. of Wis., 1927-29; Instr. of Math., Univ. of Wis., 1930-34; Instr. of Math., Drexel Inst., Phila., Pa., 1937; Asst. Prof. of Math., Coll. of Mines and Metallurgy, El Paso, Tex., 1934-37, 1938-39; Assoc. Prof. Math., Univ. of Minn., Minneapolis, Minn., 1939-53; Prof. Math., *ibid.*, 1953—. Mem.: Math. Assn. of Amer.; Math. Soc. of Amer.; Tau Beta Pi; Sigma Xi. Ph.D. Dissertation: Asymptotic Solutions of Certain Ordinary Differential Equations Associated with Multiple Roots of the Characteristic Equation. War Record: Operations Analyst with 15th Air Force, 1944-45.

TUTHILL, Dorothy Davis, **SPEECH AND HEARING**.

TUTTLE, O. F., Geophysical Lab., Washington, D. C. **GEOCHEMISTRY**.

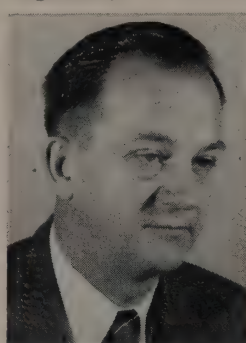
TWARDY, Stanley Albert, Assoc. Prof. of Geol., Upstate Coll., East Orange, N. J. **PALEONTOLOGY**.

TWEEDY, Wilbur Rudolph, Prof. Biol. Chem. and Chmn. Dept., Schl. of Med., Loyola Univ., Chicago, Ill. **BIOLOGICAL CHEMISTRY**.

TWELLS, Robert, Electric Auto-Lite Co., Spark Plug Div., Box 231, Fostoria, Ohio. **CERAMICS**.

TWETO, Ogden Linne, Geologists, U. S. Geol. Survey, Washington, D. C. **ECONOMIC GEOLOGY**.

TUVE, Merle Antony, Dir., Dept. of Terrestrial Magnetism, Carnegie Institution of Wash., 5241



Broad Branch Rd., N. W., Washington 15, D. C. **GEOPHYSICS**. b. Canton, S. Dak., June 27, 1901. s. Anthony G. and Ida Marie (Larsen) T. Edn.: B.S., Univ. of Minn., 1922; A.M., *ibid.*, 1923; Ph.D., Johns Hopkins, 1926. Hon. Deg.: D.Sc., Case, Kenyon, Williams, Johns Hopkins. m. Winifred Gray Whitman, Oct. 27, 1927. c.: Trygve Whitman; Lucy Winifred. Exp.: Instr. in Physics, Princeton Univ., 1923-24; Instr. in Physics, Johns Hopkins Univ., 1924-26; Staff Mem., Dept. of Terrestrial Magnetism, Carnegie Institution of Wash., Washington, D. C., 1926-46, on leave for war work, 1940-46, Dir., 1946—; Editor, Jour. Geophys. Rsch., 1949—; Chmn., Section T, OSRD, 1940-45; Dir., Applied Physics Lab., Johns Hopkins (Navy), 1942-46. Mem.: Fellow, Amer. Phys. Soc.; Inst. Radio Engrs.; A.A.A.S.; Amer. Acad. of Arts and Sci.; Amer. Philos. Soc.; Natl. Acad. Sci.; Philos. Soc. of Wash.; Wash. Acad. Sci.; Wash. Acad. Med.; Cosmos Club; Amer. Geophys. Union; Tau Beta Pi; Sigma Xi; Gamma Alpha; Phi Beta Kappa. Contr. to: Physical Rev.

TWISS, Wilfred Charles, retired, 6121 Glen Alder, Hollywood, Calif. **BOTANY**.

TWITTY, Victor Chandler, Dept. of Biol. Sci., Stanford Univ., Stanford, Calif.

TWOENHOFEL, William Henry, Prof. Emer. Geol., Univ. of Wis., Madison, Wis. **STRATIGRAPHY AND SEDIMENTATION**.

TYKOCINER, Joseph Tykocinski, Rsch. Prof. Elec. Engrng., Univ. of Ill., Urbana, Ill. **ELECTRICAL ENGINEERING**.

TYLER, Albert, Prof. of Embryology, Calif. Inst. of Tech., Pasadena 4, Calif. **EMBRYOLOGY**. b. June



26, 1906, Brooklyn, N. Y. s. Manuel H. and Lena (Miller) T. Edn.: A.B., 1927, A.M., 1928, Columbia Univ.; Ph.D., 1929, Calif. Inst. of Tech. m. Betty Spivack of Brooklyn, N. Y., Apr. 19, 1926. d. Samuel and Rose (Mitchell) Spivack. c.: James Stephen, Steven Robert. Exp.: Asst. in Zool., Columbia Univ., 1927-28; Tehng. Fellow in Biol., 1928-29; Instr. in Embryology, 1929-36; Asst. Prof., Embryology, 1937-45; Assoc. Prof. of Embryology, 1946-50; Prof. of Embryology, 1950—, all at Calif. Inst. of Tech.; Embryology Staff, Marine Biol. Lab., Woods Hole, summers, 1946-50. Hon. Pos.: Natl. Rsch. Council Fellow at the Kaiser Wilhelm-Inst. fur Zellphysiologie at Berlin and at Zool. Sta. at Naples, 1932-33; Walker-Ames Prof. of Zool., Univ. of Wash., Winter, 1950; Guggenheim Mem. Foundation Fellow, 1951-53. Mem.: Amer. Soc. Zool.; Amer. Soc. Naturalists; Amer. Assn. Immunologists; Soc. Exp. Biol. and Med.; Vice-Pres., So. Calif. Sect., 1947-48; Soc. Gen. Physiol.; Soc. Growth and Devl.; Inst. Internationale d'Embryologie; A.A.A.S.; Sigma Xi, Pres., Calif. Inst. Tech. Chapter, 1949-51; Trustee, Marine Biol. Lab., Woods Hole, 1948—; Vice-Pres., First Internatl. Congress of the Physiopathology of Animal Reproduction, Milan, 1948; For. Corres. Mem., Società Italiana per il Progresso della Zootecnica; Assoc. Ed., Jour. of Expt. Zool.; Assoc. Ed., Biol. Bull.; Advisory Bd., Expt. Cell Rsch. Author: The Energetics of Embryonic Differentiation, 1939.

Ph.D. Dissertation: Experimental Production of Double Embryos. Travel: France; Germany; Italy. Listed in: A.M.S.; Who's Who in Calif.; Who's Who in Amer., 1952. Special Int.: Fertilization and Early Development; Immunology; Biochem.; Marine Biol.

TYLER, Ralph Winfred, Prof. and Chmn., Dept. of Edn., Univ. Examiner, Univ. of Chicago, Chicago, Ill. EDUCATIONAL MEASUREMENT.

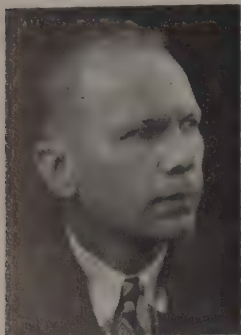
TYRREL, Joseph Burr, Pres., Kirkland Lake Gold Mining Co., 44 Victoria St., Toronto, Ont., Can. MINING GEOLOGY.

TYSL, Anton O., 3534 W. 26th St., Chicago, Ill. PHARMACY.

TYSON, Floyd Thaddeus, Prof. of Chem., Temple Univ., Broad and Montgomery Ave., Philadelphia, Pa. ORGANIC CHEMISTRY.

TYZZER, Ernest Edward, 175 Water St., Wakefield, Mass.

UBER, Fred M., Physicist, U. S. Navy Electronics Lab., San Diego 52, Calif. **ELECTROACOUSTIC TRANSDUCERS AND BIOPHYSICS.** b. Locust Lane, Pa., Mar. 6, 1905. s. William M. and Annie (Baun) U. Edn.: A.B., Dickinson Coll., 1926; M.A., Syracuse Univ., 1928; Ph.D., Univ. of Calif., 1931. m. Alma Goettsche on June 26, 1933. c.: Gordon T.; Lloyd D. Exp.: Tchr., H. S., Pa., 1926-27; Tchng. Fellow in Phys., Syracuse Univ., 1927-28; Tchng. Fellow in Phys., Univ. of Calif., 1928-30; Rsch. Assoc., Biophys., ibid., 1931-36; Lectr. in Botany, ibid., 1935-36; Asst. Prof. of Phys., Univ. of Mo., 1936-43; Assoc. Prof. of Biophys., ibid., 1943-44; Physicist, Univ. of Calif., Div. of War Rsch., 1944-46; Rockefeller Foundation Fellow, Univ. of Minn., 1942-43; Prof. of Phys., Iowa State Coll., 1946-48; Physicist, U. S. Navy Electronics Lab., 1948—. Mem.: Acoustical Soc.; Soc. Naturalists; Amer. Phys. Soc.; Radiation Rsch. Soc.; A.A.A.S.; Sigma Xi; Pi Mu Epsilon; Gamma Alpha. Co-author: Design and Construction of Crystal Transducers, 1948; Biophysical Rsch. Methods, 1950. Contbr. to: Phys. Rev.; Rev. Scientific Instruments; Proc. Natl. Acad. Sci.; Proc. Soc. Exptl. Biol. and Med.; etc. Special Int.: Biophys.; Biological Effects of X-rays and Ultra-Violet; Electro-acoustic Transducers and Underwater Sound.



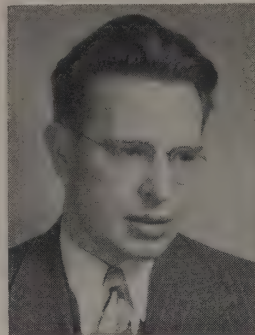
UCHLING, Edwin Albrecht, Assoc. Prof. of Physics, Univ. of Wash., Seattle, Wash. **PHYSICS.**

UDY, Marvin J., Consulting Engr., 546 Portage Rd., Niagara Falls, N. Y. **CHEMISTRY AND METALLURGY, ELECTRIC FURNACE SMELTING.** b. Farmington, Utah, Feb. 19, 1892. s. Mathias Cowley and Emily Rebecca (Hess) U. Edn.: B.S., Univ. of Utah, 1915; M.S., ibid., 1916. m. Tessa McMurray in 1915. c.: Murray Cowley; Lynn Stuart. Exp.: Asst. Rsch. Dir., U. S. Mining and Smelting Co., Midvale, Utah, 1916-18; Rsch. Engr., Hooker Electrochem. Co., Niagara Falls, N. Y., 1918-19; Chf. Chemist, Haynes Stellite Co., Kokomo, Ind., 1918-19; Mine Mgr., Haynes Stellite Co., Leesburgh, Idaho, 1919-20; Rsch. Engr., Union Carbide and Carbon Corp., Electrometallurgical Div., 1920-31; Monsanto Chem. Co., Anniston, Ala., 1931-34; Oldbury Electrochem. Co., Niagara Falls, N. Y., 1934-37; Vice-Pres. and Dir. of Rsch., Chromium Mining and Smelting Co., Sault Ste. Marie, 1937-45; Consulting Engr., Niagara Falls, N. Y., 1945—. Hon. Pos.: Vice-Pres., The Electro Chem. Soc.; Pres., Niagara Falls Section, The Electrochem. Soc. Mem.: Amer. Inst. Mining and Metallurgical Engrs.; The Electrochem. Soc.; Amer. Chem. Soc.; Amer. Inst. Chem. Engrs.; Soc. of Chem. Industry; Tau Beta Pi; Niagara Falls C. of C. Contbr. to: Metals and Alloys; Metal Progress. Gen. Int.: Developed First Commercial Cadmium Plating; Developed First Commercial Chromium Plating; Developed the Exothermic Alloys Making Possible the Use of Low Grade Ores of Chromium in Particular. Special Int.: Inorganic Chem.; Metallurgical and Electric Furnace Smelting; Rsch. and Development.



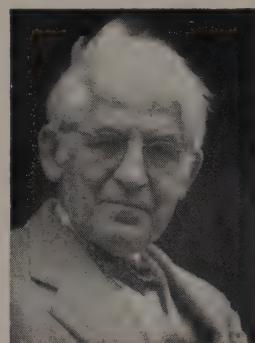
UHLAND, Russell Edward, Rsch. Specialist and Liaison Officer, Rsch. Operations, Soil Conservation Service, U. S. D. A., 5222 S. Agri. Bldg., Washington, D. C. **AGRICULTURE, CHEMISTRY.**

UDY, Murray Cowley, Asst. Supvng. Metallurgist, Battelle Memorial Inst., 252 Kelso Rd., Columbus 2, Ohio. **METALLURGY.**



b. Farmington, Utah, May 26, 1916. s. Marvin J. and Tessa (McMurray) U. Edn.: B.S., Lehigh Univ., 1938; M.S., ibid., 1939; Ph.D., Ohio State Univ., 1941. m. Mary Elizabeth Smith in June, 1939. c.: Anne Kathryn; James Marvin; Richard Louis; Alan Craig; Rebecca Lynne. Exp.: Research Fellow, Battelle Memorial Institute, 1939-41; Rsch. Metallurgist, ibid., 1941-51; Asst. Supvng. Metallurgist, ibid., 1951—. Mem.: Amer. Soc. for Metals; Amer. Inst. of Mining and Metallurgical Engrs.; Amer. Foundrymen's Soc.; Amer. Chem. Soc.; Amer. Inst. of Chem. Engrs.; A.A.A.S.; Sigma Xi; Theta Chi. Contbr. to: Trans., A.S.M.; Trans. A.I.M.E.; Trans. A.F.S.; Metal Progress. Special Int.: Use of Boron in Steel; Production of Sponge Iron; Metallurgy of Beryllium; Metallurgy of Zirconium.

UHLENHUTH, Edward Carl Adolf, Prof. of Anatomy and Hd. Dept., Univ. of Md., Med. Schl., 29 S. Greene St., Baltimore, Md. **ANATOMY.**



b. Wolkersdorf, Austria, July 19, 1885. s. Adolf Franz and Leopoldine Rosalia (Stengel) U. Edn.: Ph.D., Univ. of Vienna, 1911. m. Elisabeth Martha Baier, July 17, 1919. c.: Eberhard Henry. Exp.: Rsch. Asst., Biol., Inst., Vienna, 1911-14; Fellow and later Assoc., Rockefeller Inst. for Med. Rsch., N. Y., N. Y., 1914-24; Guest of Dept. of Anatomy, Med. Schl., Johns Hopkins Univ., 1924-25; Assoc. Prof., later Prof. of Anatomy and Dir. of Dept., Univ. of Md., Med. Schl., Baltimore, Md., 1925—. Hon. Pos.: Vice Chmn., Md. State Bd. of Anatomy. Mem.: Fellow, A.A.A.S.; Soc. Exptl. Biol. and Med.; Harvey Soc.; Soc. for the Study of Growth and Development; Phi Beta Pi. Author: Problems in the Anatomy of the Pelvis, 1953. Contbr. to: Proc. Natl. Acad. Sci.; Jour. General Physiol.; Amer. Naturalists; Endocrinol.; etc. Special Int.: Endocrinol.; Functions and Structure of the Thyroid Gland; Anatomy of the Human Pelvis.

UHLER, Francis M., Patuxent Rsch. Refuge, Laurel, Md. **WILDLIFE BIOLOGICAL RESEARCH.**

UHLIG, H. H. Dept. of Metallurgy, Mass. Inst. of Tech., Cambridge, Mass. **CORROSION AND ELECTROCHEMISTRY.**

ULLYOT, Glenn E., Smith, Kline & French Labs., 1530 Spring Garden St., Philadelphia, Pa. **ORGANIC-MEDICAL CHEMISTRY.**

UHRBROCK, Esther Gatewood, 355 Springfield Pike, Wyoming, Cincinnati, Ohio. **PSYCHOLOGY, NEUROLOGY.**

UHRBROCK, Richard Stephen, Hd. of Rsch. Dept., Indus. Relations Div., The Procter and Gamble Co., M. A. & R. Bldg., Ivorydale 17, Ohio. **INDUSTRIAL PSYCHOLOGY.** b. Aug. 4, 1894, Baltimore, Md. s. George Ernest Christian and Sarah Elizabeth (Redden) U. Edn.: B.S., Carnegie Inst. of Tech., 1920; M.A., ibid., 1921; M.A., Columbia Univ., 1923; Ph.D., ibid., 1928. m. Esther L. Gatewood, Sept. 1, 1927. c.: Margaret Ann and Ellen Elizabeth. Exp.: Tchr., Philadelphia Public Schls., 1917-18; U. S. Army, 1918; Western Union Telegraph Co., N. Y. C., 1921-23; Life Insurance Sales

Rsch. Bureau, Hartford, Conn., 1923-24; Assoc. Prof. of Psychol. and Dir. of Personnel, Univ. of Wyo., 1924-28; Dept. of Hotel Admin., Cornell Univ., Ithaca, N. Y., 1928-30; Hd. of Rsch. Dept., Procter and Gamble Co., Cincinnati, Ohio, 1930—. Mem.: Fellow, A.A.A.S.; Fellow, Amer. Psychol. Assn.; Midwest. Psychol. Assn.; Sigma Xi; Phi Delta Kappa; Phi Kappa Phi; Pi Gamma Mu. Author: Famous Americans (with A. A. Owens), 1921; Job Analysis and the Curriculum (with E. K. Strong, Jr.), 1923; An Analysis of the Downey Will-Temperament Tests, 1928. Contrb. to: Amer. Jour. of Psychol.; Indus. Med.; Jour. of Gen. Psychol.; Personnel Psychol.; Jour. of Applied Psychol. Special Int.: Employee selection; Construction of psychol. tests and rating scales; Exec. development and evaluation.

ULAN, Martin Sylvester, Asst. Prof. and Chmn., Dept. of Pharmacognosy and Pharmacol., Rutgers Univ., Coll. of Pharmacy, 1 Lincoln Ave., Newark, N. J. PHARMACOGNOSY, PHARMACOLOGY.

ULICH, Lynne Herman, Rsch. Chemist, E. I. du Pont Co., Deepwater, N. J. ORGANIC CHEMISTRY. b. Jan. 2, 1892, Creston, Iowa. s. John R. and Hattie (Maurer) U. Edn.: B.S., Grinnell Coll., 1914; M.S., Univ. of Ill., 1918; Ph.D., *ibid.*, 1920. m. Helen Mogensen, June 30, 1920. Exp.: Sci. Tchr., Albia H. S., Albia, Iowa, 1914-15; Instr. Chem., Math., Window Coll., Montevideo, Minn., 1915-16; Asst. in Chem., Univ. of Ill., Urbana, Ill., 1916-18; Rsch. Chem., Newport Co., Carrollville, Wis., 1920-30; Rsch. Chem., E. I. du Pont Co., Deepwater, N. J., 1930—. Mem.: Amer. Chem. Soc. Contrb. to: Amer. Chem. Soc. Jour. Special Int.: Vat and Celanthrene Dye-Subs.; Authranquinone Wood Dyes.

ULLMAN, Robert, Asst. Prof. of Math., Poly. Inst. of Brooklyn, Brooklyn 12, N. Y. THEORETICAL CHEMISTRY. b. Nov. 21, 1920. N. Y. C. s. Samuel R. and Ella (Fischl) U. Edn.: B.S., City Coll., N. C., 1941; M.S., Poly. Inst. of Brooklyn, 1946; Ph.D., *ibid.*, 1950. m. Nelly Szabo, Mar. 20, 1947. c.: Victor. Exp.: Ridbo Labs., Paterson, N. J., 1941-42; Manhattan Engrng. Project, Columbia Univ., 1942-45; Carbide and Carbon Chem., N. Y. C., 1945-46; Asst. in Chem., Poly. Inst. of Brooklyn, N. Y., 1946-47; Instr. Math., *ibid.*, 1947-51; Asst. Prof. of Math., *ibid.*, 1951—. Mem.: Sigma Xi; Amer. Chem. Soc.; Amer. Phys. Soc.; Amer. Inst. of Physics; Amer. Math. Soc. Contrb. to: Jour. of Chem. Physics; Jour. of Amer. Chem. Soc. Special Int.: Viscosity and statistics of macromolecules in solution.

ULLMANN, Harry Maas, Prof. Emer. Chem. and Chem. Engrng., Lehigh Univ., Bethlehem, Pa. CHEMISTRY.

ULREY, Clayton T., North Manchester, Ind. PHYSICS.

ULREY, Dayton, Mgr., Lancaster Engrng. Dept., R. C. A. Victor Div., New Holland Pike, Lancaster, Pa. PHYSICS.

ULRICH, Elmer B., retired, 3717 Taylor Ave., Drexel Hill, Pa. PLANT PHYSIOLOGY.

ULRICH, Floyd Edward, Assoc. Prof. of Math., Rice Inst., Houston, Tex. MATHEMATICS.

UMSTATT, James Greenleaf, Prof. of Edn. and Chmn., Dept. Curriculum and Instruction, Univ. of Tex., Austin, Tex. EDUCATION.

UNDERHILL, Ruth Murray, Supt., Indian Edn., Applied Anthropol., U. S. Indian Office, Washington, D. C. ETHNOLOGY.

UNDERWOOD, Ralph Sylvester, Prof. of Math., Tex. Tech. Coll., Lubbock, Tex. MATHEMATICS. b. Anoka, Minn., Oct. 3, 1891. s. Charles M. and Lettie A. (Barrett) U. Edn.: B.A., Univ. of Minnesota, 1916; M.A., *ibid.*, 1917; Ph.D., Univ. of Chicago, 1930. m. Zelda Wisdom Ray of Lubbock, Tex., Feb. 1, 1930. d. Wm. W. and Effie Jackson Ray. Exp.: Instr. of Math., Purdue Univ., 1919-22; Asst. Prof. of Math., Ala. Poly. Inst., 1922-27; Assoc. Prof. of Math., Tex. Tech. Coll., 1927-31; Prof. of Math., *ibid.*, 1931—.

Mem.: Amer. Math. Assn.; A.A.U.P.; A.A.A.S.; Tex. Acad. of Sci.; Phi Beta Kappa; Sigma Xi; Optimist Club. Author: Jaunts into Space, 1935. Co-author: Living Math., 1940 (revised, 1949). Analytic Geometry, 1947 (both with Dr. F. W. Sparks); Intermediate Algebra, 1947 (with Thomas R. Nelson and S. Selby). Contrb. to: Sci. Monthly; Amer. Math. Monthly; Trans. of the M.S.A.; The Sky; Popular Astronomy, etc. Ph.D. Dissertation: On Universal Quadratic Null Forms in Five Variables. War Record: Pfc., Co. D, 55th Engrs., U. S. Army, 1918-19. Travel: France; U. S.; Canada; Mexico. Hobbies: Writing; Chess. Listed in: A.M.S.; Who's Who in Tex.; Who's Who in Amer.; Monthly Supplement (June, 1948); Who's Who in the Southwest.

UNDERWOOD, Paul Halladay, Prof. of Surveying Cornell Univ., Ithaca, N. Y. GEODESY, SURVEYING.

UNGER, William Byers, Prof. of Zool., Dartmouth Coll., Hanover, N. H. PROTOZOOLOGY.

UPHOLD, William Martin, Assoc. Entomologist, Technical Development Div., Communicable Disease Center, U. S. P. H. S., Box 547, Savannah, Ga. ENTOMOLOGY.

UPJOHN, Lawrence Northcote, Chmn. of Bd., Upjohn Co., 301 Henrietta St., Kalamazoo, Mich. MEDICINE, MANUFACTURING PHARMACY.

UPSON, Walter Lyman, Cons. Engr., Torrington Mfg. Co., Torrington, Conn. ELECTRICAL ENGINEERING.

URBAHNS, Theodore D., County Agri. Commissioner, Sutter Co., Calif., Mission Hall, Yuba City, Calif. ENTOMOLOGY.

URDANG, George, Dir., Amer. Inst. Hist. Pharmacy, 1635 Monroe St., Madison, Wis. PHARMACY, HISTORY AND PHILOSOPHY OF SCIENCE.

UREY, Harold C., Martin A. Ryerson Distinguished Service Prof. of Chem., Inst. for Nuclear Studies, Univ. of Chicago, Chicago 37, Ill. PHYSICAL CHEMISTRY. b. Walkerton, Ind., Apr. 29, 1893. s. Samuel C. Urey and Cora Rebecca (Reinohl) Long. Edn.: B.S., Univ. of Montana, 1917; Ph.D., Univ. of Calif., 1923. Hon. Deg.: D.Sc., Princeton Univ., 1935; D.Sc., Univ. of Montana, 1935; D.Sc., Univ. of Newark, 1939; D.Sc., Columbia Univ., 1946; D.Sc., Oxford Univ., 1946; D.Sc., Wash. and Lee Univ., 1948; D.Sc., Univ. of Athens, Greece, 1951; D.Sc., McMaster Univ., 1951; D.Sc., Yale Univ., 1951; D.Sc., Ind. Univ., 1953. m. Frieda Daum, June 12, 1926. c.: Gertrude Elizabeth; Frieda Rebecca; Mary Alice; John Clayton. Exp.: Rsch. Chemist, Barrett Chem. Co., Baltimore, Md., 1918-19; Instr. in Chem., Univ. of Mont., 1919-21; Assoc. in Chem., Johns Hopkins Univ., 1924-29; Assoc. Prof. of Chem., Columbia Univ., 1929-34; Prof. of Chem., *ibid.*, 1934-45; Exec. Officer, Dept. of Chem., *ibid.*, 1939-42; Editor, Jour. Chem. Physics, 1933-40; Dir. of War Rsch., SAM Labs., (Manhattan Project) Columbia Univ., 1940-45; Distinguished Service Prof. of Chem., Univ. of Chicago, 1945-52; Martin A. Ryerson Distinguished Service Prof. of Chem., *ibid.*, 1952—. Hon. Pos.: Bd. of Dirs. and Vice Pres., Amer. Scandinavian Foundation. Mem.: Amer. Chem. Soc.; Amer. Physical Soc.; Amer. Philos. Soc.; Geol. Soc. Amer.; Amer. Geophys. Union; Amer. Astron. Soc.; Natl. Acad. Sci.; A.A.A.S.; Amer. Acad. Arts and Sci.; Royal Soc. of Arts and Sci. (Göteborg); Franklin Inst. Hon.; Acad. Royale des Sciences, des Lettres et des Beaux Arts de Belgique; French Chem. Soc.; Royal Soc., London Foreign Mem.; Christian Michelsen Inst., Bergen Corresponding mem.; Royal Irish Acad. Hon.; Natl. Inst. of Sci. of India Honorary Fellow; Chem. Soc., London Hon.; Royal Institution, London Hon.; Royal Swedish Acad. Hon. Contrb. to: Jour. Amer. Chem. Soc.; Astrophys. Jour.; Physical Rev.; etc. War Record: Dir. of War Rsch., SAM Labs., Columbia Univ., 1940-45; Awarded Medal for Merit 1946. Gen. Int.: Nobel Prize, 1934; Willard Gibbs Medal, 1934; Davy Medal, 1940; Franklin Medal, 1943; Silliman Lectr., Yale, 1951; Montgomery Lectr., Univ. of Nebr., 1952; Hitchcock Lectr., Univ. of Calif., 1953. Special

Int.: Entropy of Gases; Atomic Structure; Absorption Spectra and Structure of Molecules; Discovery of Deuterium; Properties and Separation of Isotopes; Exchange Reactions; Measurement of Paleotemperatures; Chemical Problems of the Origin of the Earth.

URIE, Frank D., Elgin Natl. Watch Co., Elgin, Ill. ASTRONOMY.

USINGER, Robert Leslie, Asst. Prof. of Entomol., Univ. of Calif., Berkeley, Calif. ENTOMOLOGY.

UTTER, Leonard Gordon, Plant Pathologist, Phelps Dodge Refining Corp., 40 Wall St., N. Y., N. Y. PLANT PATHOLOGY.

UTTERBACK, Clinton Louis, Prof. of Physics, Univ. of Wash., Seattle, Wash. RADIATION.

VAGTBORG, Harold A., Pres., Southwest Rsch. Inst., San Antonio, Tex. **HYDROLOGY, HYDRAULICS, CHEMICAL ENGINEERING.** b. Copenhagen, Denmark, Sept. 17, 1904. s. Christian Peter and Elaine (Jensen) V. Jacobsen. Edn.: B.S., Univ. of Ill., 1926; M.S., Armour Inst. of Tech., Chicago, Ill., 1934. Hon. Deg.: D. Sc., Park Coll., 1947; LL.D., Mo. Valley Coll., 1950. m. Lilla Maurine Jones on June 3, 1926. c.: Harold, Jr.; Phyllis Maurine. Exp.: Civil Engr., Vagtborg Construction Co., Chicago, Ill., 1928-30; Engr., Allen and Vagtborg, Inc., 1930-35; Civil Engr., Armour Inst. of Tech., 1931-37; Dir., Armour Rsch. Foundation, 1937-45; Dir., Midwest Rsch. Inst., Kansas City, Mo., 1945-48; Pres., Southwest Rsch. Inst., Inst. of Inventive Rsch. and Southwest Foundation for Rsch. & Edn., San Antonio, Tex., 1948—. Hon. Pos.: Mem., Scandinavian Rsch. and Indus. Tour sponsored by the Royal Swedish Acad. of Technical Sci., 1946. Mem.: Amer. Chem. Soc.; Amer. Phys. Soc.; Fellow, A.A.A.S.; Amer. Soc. of Civil Engrs.; Soc. of Chem. Indus. of London; The Chem. Soc. of London; Amer. Polar Soc.; Amer. Inst. of Mech. Engrs. Special Int.: Hydrology, Hydraulics, Chem. Engrng., Rsch. Admin.

VAICHULIS, John Anthony, Rsch. Assoc., Univ. of Ill. and Manteno State Hosp., Manteno, Ill. **ENDOCRINOLOGY.**

VAIL, Derrick T., Northwestern Univ. Med. Schl., 303 E. Chicago Ave., Chicago 11, Ill. **OPHTHALMOLOGY.**

VAJK, Raoul, Geophysicist, Box 73, Princeton Junction, N. J. **GEOPHYSICS, PROSPECTING FOR OIL; RESEARCH ON GEOPHYSICS METHODS.** b. Vajdahunyad, Hungary, Dec. 19, 1896.



s. Joseph and Piroška (Malom) V. Edn.: Ph.D., Univ. of Sci., Szeged, Hungary, 1922; Ph.D., Univ. of Sci., Budapest, Hungary, 1932. m. Mary Louise Gillespie, May 14, 1932. c.: Antonia; William; Peter. Exp.: Geophysical Interpreter, Torsion Balance Exploration Co., Houston, Tex., 1928-31; Hd. Geophysicist, Magyar Amerikai Olajipari Rt. (Hungarian Amer. Oil Industrial Co.), Budapest, Hungary, 1933-46; Assoc. Prof. Lecturing on Applied Geophys., Univ. of Sci., Budapest, Hungary, 1939-46; Geophysicist, Standard Oil Co., (N. J.) N. Y., 1946—. Mem.: Soc. of Exploration Geophysicists; Amer. Geophys. Union; Amer. Assn. Petroleum Geologists. Contrb. to: Quarterly of the Colo. Schl. of Mines; Bull. Hungarian Geol. Soc.; Geofisica Pura e Applicata; etc. Special Int.: Rsch. on the Gravity Methods of Applied Geophys.; Oil and Gas in Hungary.

VALASEK, Joseph, Prof. of Physics, Univ. of Minn., Minneapolis, Minn. **OPTICS, X-RAYS.**

VALENTINE, Grant Miller, Geol., Shell Oil Co., Box 57, Elma, Wash. **GEOLOGY.** b. June 14, 1918, Everett, Wash. s. Grant McKinley and Ruth (Spoonster) V. Edn.: B.S., Wash. State Coll., 1941; M.S., ibid., 1943. m. Frances Nelson, 1941. c.: Brent Miller and Annette Merrijo. Exp.: Geol., Washington Div. of Mines and Geol., 1946-50; Geol., Shell Oil Co., Elma, Wash., 1950—. Mem.: Phi Beta Kappa; A.A.P.G.; Amer. Mineral. Soc. War Record: U. S. Army, 1943-46.

VALENTINE, Joseph Manson, Box 155, Highlands, N. C. **ENTOMOLOGY.**

VALLEAU, William Dorney, Plant Pathol., Distinguishing Prof. of Plant Pathol., Univ. of Ky., Ky. Agri. Expt. Station, Lexington, Ky. b. Feb. 17, 1891, Minneapolis, Minn. **PLANT PATHOLOGY.** s. Joseph George and Emma (Armour) V. Edn.: B.S., Univ. of Minn., 1913; Ph.D., ibid., 1917. m. Marion Reed, 1917. c.: Edward Dorney; Marion

Reed; Jeanne Armour; Phyllis Burton and Margaret Douglas. Exp.: Asst. Plant Breeder, Hort., Univ. of Minn., 1915-18; Plant Pathol., Univ. of Ky., Lexington, Ky., 1919—. Mem.: Alpha Zeta; Gamma Alpha; Gamma Sigma Delta; Sigma Xi; Ky. Acad. of Sci.; Amer. Phytopathol. Soc.; A.A.A.S. Contrb. to: Jour. Agril. Rsch.; Phytopathol. Amer. Naturalist. Special Int.: Breeding for disease resistance in tobacco, inheritance of disease resistance transfer of resistance factors from wild species of nicotiana to N. tabacum.

VALLEY, George, Asst. to Dir. of Rsch., Bristol Labs., Inc., Box 657, Syracuse, N. Y. **BACTERIOLOGY.**

VAN ALSTINE, Ernest, Rt. 4, Ithaca, N. Y.

VAN ARNAM, Ralph Newcomb, Asst. Prof. Math. and Astronomy, Lehigh Univ., Bethlehem, Pa. **ASTRONOMY.** b. June 7, 1902, Beaver Falls, N. Y. s. Floyd W. Van Arnham and Ida (Wardell) V. Edn.: E.E., Cornell Univ., 1926; M.S., ibid., 1927. Exp.: Instr., Math. and Astron., Lehigh Univ., 1928-42; Leader of Solar Eclipse Expedition from Yerkes Observatory of Univ. of Chicago to New Eng. in Aug., 1932; Metallurgical Engineer, Bethlehem Steel Co., 1944-46; Asst. Prof. Math. and Astronomy, Lehigh Univ., 1942—. Mem.: Fellow, Amer. Geog. Soc.; Fellow,



A.A.A.S.; Astron. Soc. of Pacific; N. Y. State Hist. Assn.; Math. Assn. of Amer.; Amer. Astron. Soc.; Royal Astron. Soc. of Canada; Societe Astronomique de France; Sigma Xi. Contrb. to: Astronomical Jour.; Astrophysical Jour. Hobbies: Music. Listed in: A.M.S.: Who Knows—and What; Who's Who in East. Special Int.: Orbits of Binary Stars.

VAN BIESBROECK, George A., Prof. Emer., Yerkes Observatory, Williams Bay, Wis. **ASTRONOMY.**

VAN BURKALOW, Anastasia, Asst. Prof. of Geol. and Geography, Hunter Coll., New York 21, N. Y. **GEOMORPHOLOGY.** b. Buchanan, N. Y., Mar. 16, 1911. d. James Turley and Mabel (Ramsay) V. Edn.: A.B., Hunter Coll., 1931; M.A., Columbia Univ., 1933; Ph.D., ibid., 1944. Exp.: Rsch. Asst., Columbia Univ., New York, 1934-37; Kemp Fellow, ibid., 1937-38; Tutor, Geology and Geography, Hunter Coll., New York, N. Y., 1938-41; Instr., ibid., 1941-45; Rsch. Asst. Amer. Geographical Soc., ibid., 1945-48; Instr., Hunter Coll., ibid., 1948-52; Asst. Prof., ibid., 1953—. Mem.: A.A.A.S.; N. Y. Acad. Sci.; Geol. Soc. Amer.; Assn. Amer. Geogr.; Amer. Geophys. Union; Assn. Geol. Tehrs.; Amer. Acad. Pol. & Soc. Sci.; Phi Beta Kappa; Sigma Xi. Contrb. to: Bull. Geol. Soc. Amer.; Geogr. Review; Annals, Assoc. Amer. Geogr. Special Int.: Angle of Repose of Loose Materials; Fluorine in U. S. Water Supplies; Medical Geography of Swimmers' Itch; Statistical Study of Petroleum Utilization.

VAN BUSKIRK, Edgar Flandreau, Prof. of Hygiene and Health Edn., Stephens Coll., Columbia, Mo. **HUMAN PHYSIOLOGY.**

VAN BUSKIRK, Harry C., Prof. Emer. Math., Calif. Inst. of Tech., 390 S. Holliston Ave., Pasadena, Calif. **MATHEMATICS.**

VANCE, Charles Blount, Prof. of Physical Sci., Rio Grande Coll., Rio Grande, Ohio.

VANCE, Elizabeth Glasco, Apt. 305, 5465 S. Everett, Chicago, Ill. **PHARMACOLOGY.**

VANCE, Thomas Franklin, Prof. of Psychol. and Child Development, Iowa State Coll., Ames, Iowa. **PSYCHOLOGY, CHILD DEVELOPMENT.**

VAN CLEAVE, Harley Jones, Prof. of Zool., Univ. of Ill., Urbana, Ill. ZOOLOGY.

VAN CLEEF, Eugene, Prof. of Geography, Ohio State Univ., Columbus, Ohio. GEOGRAPHY.

VAN CLEVE, R. C., Schl. of Fisheries, Univ. of Wash., Seattle, Wash. FISHERIES MANAGEMENT.

VANDECAVEYE, S. C., Prof. of Soil Sci., State Coll. of Wash., Pullman, Wash. AGRICULTURE.

van de KAMP, Peter, Prof. of Astron. and Dir., Sproul Observatory, Swarthmore Coll., Swarthmore, Pa. ASTRONOMY.

VAN DEN AKKER, Johannes Archibald, Rsch. Assoc. and Hd., Dept. of Physics, Inst. Paper Chem., Appleton, Wis. APPLIED PHYSICS, OPTICS.

VANDERKLEED, Charles Edwin, Vice-Pres. and Scientific Dir., McNeil Lab., Inc., Philadelphia, Pa. CHEMISTRY.

van der MERWE, Carel Willem, Prof. of Physics and Chmn. Dept., N. Y. Univ., N. Y., N. Y. NUCLEAR PHYSICS.

VANDER VELDT, Rev. James H., O.F.M., Catholic Univ. of Amer., Washington, D. C. RESEARCH—PSYCHOLOGICAL.

VANDERWILT, John W., Consulting Geologist, Midland Savings Bldg., Denver, Colo. GEOLOGY.

VAN DEVENTER, William Carl, Tchr. of Biol., Stephens Coll., Columbia, Mo. ECOLOGY.

VAN DINE, Delos Lewis, Prin. Entomologist, U. S. Bureau Entomol. and Plant Quarantine, Washington, D. C.

VAN DUSEN, Clarence Raymond, SPEECH AND HEARING.

VAN DYKE, Edwin Cooper, Prof. Emer. Entomol., Univ. of Calif., San Francisco, Calif.; Calif. Acad. Sci., Golden Gate Park, San Francisco, Calif. ENTOMOLOGY.

VAN DYKE, George D., Prof. of Physics, Earlham Coll., Richmond, Ind. X-RAYS.

van DYKE, Harry Benjamin, Hosack Prof. of Pharmacol., Coll. of Physics and Surgeons, Columbia Univ., 630 W. 168th St., N. Y., N. Y. PHARMACOLOGY.

VAN DYKE, Karl Skillman, Prof. of Physics, Wesleyan Univ., Middletown, Conn. PHYSICS.

Van ETTEN, Cecil Herman, Chemist, U. S. Dept. of Agri., Bureau of Agril. and Ind. Chem., N.R.R.L., Peoria, Ill. CHEMISTRY, ANALYTICAL AND BIOCHEMISTRY. b. Hand County, S. Dak., Apr. 18, 1910. s. Glenn D. and Louis May (Hawks) Van E. Edn.: B.S., Univ. of Ill., 1935. m. Freeda Byland, 1934. c.: James; Hans; C. H.; Exp.: Biochem. Technician, Geo. Wash. Univ. Med. Schl., Washington, D. C., 1933-37; Jr. Biochemist, U. S. Dept. of Agri., Bureau of Animal Industry, Beltsville, Md., 1937-41; Analytical Chemist, U. S. Dept. of Agri., Bureau of Agril. and Ind. Chem., N.R.R.L., Peoria, Ill., 1941—. Mem.: Amer. Chem. Soc.; A.A.A.S. Contrb. to: Analytical Chem. Special Int.: Quantitative Organic Micro Analysis Animal Nutrition and Biochem.

VAN EPPS, Clarence, Prof. of Neurol., Univ. of Iowa, Iowa City, Iowa.

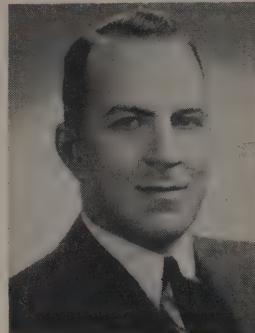
VAN ES, Leunis, Prof. Emer., Univ. of Nebr., 3335 W St., Lincoln, Nebr. ANIMAL PATHOLOGY.

VAN EVERA, Benjamin Douglass, Prof. of Chem., Geo. Washington Univ., Washington, D. C. CHEMISTRY.

van HOOK, Andrew, Coll. of the Holy Cross, Worcester 10, Mass. CHEMISTRY.

VAN HORN, Clarence Eugene, Prof. of Math. and Hd. Dept., Fisk Univ., Nashville, Tenn.

VAN HORN, Kent R., Dir. of Rsch., Aluminum Co. of Amer., Aluminum Rsch. Labs., New Kensington, Pa. METALLURGY.



b. Cleveland, Ohio, July 20, 1905. s. Frank R. and Myra (Van Horn) Van H. Edn.: B.S., Case Inst. of Tech., 1926; M.S., Yale Univ., 1928; Ph.D., ibid., 1929. m. Estelle V. Yost on July 23, 1932. c.: Karl R. and Neil Y. Exp.: Research Metallurgist, Aluminum Co. of Amer., 1929-44; Asst. Chf., Cleveland Rsch. Div., Aluminum Co. of Amer., 1944-45; Chf., ibid., 1945-48; Asst. Dir. of Rsch., ibid., 1948-50; Assoc. Dir., ibid., 1950-52; Dir., ibid., 1952—.

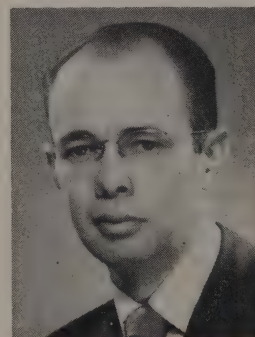
Hon. Pos.: Pres., Amer. Soc. for Metals; Pres., Soc. for Non Destructive Testing. Mem.: Amer. Soc. for Metals; Amer. Inst. of Mining and Metallurgical Engrs.; Amer. Soc. Testing Materials; Soc. of Non Destructive Testing; British Inst. of Metals; Zeta Psi; Tau Beta Pi; Sigma Xi; Theta Tau. Author: Practical Metallurgy, with G. Sachs, 1940; Alloys of Iron and Aluminum, with S. Case, 1952. Special Int.: Metallurgy.

VAN HORNE, Robert L., Instr. in Pharmacy, Coll. of Pharmacy, State Univ. of Iowa, Iowa City, Iowa. PHARMACOLOGY.

van KLEECK, Mary, Dir., Dept. Indus. Studies, Russell Sage Foundation, 130 E. 22nd St., N. Y., N. Y. INDUSTRIAL SOCIOLOGY.

van KLOOSTER, Hendrik S., Prof. of Physical Chem., Rensselaer Poly. Inst., Troy, N. Y. PHYSICAL CHEMISTRY.

VAN LIERE, Donald Wilbur, Assoc. Prof. and Chmn., Dept. of Psychol., Kalamazoo Coll., Kalamazoo, Mich. PSYCHOLOGY.



b. Holland, Mich., Nov. 24, 1915. s. Chris C. and Effie (Ten Have) Van L. Edn.: A.B., Hope Coll., 1939; M.A., Ind. Univ., 1942; Ph.D., ibid., 1950. m. Carma Lee Parkhurst, Sept. 19, 1941. c.: Jean Ellen; Mark Brian; Mary Patricia. Exp.: Clinical Psychologist, Ind. State Prison, 1942-43; U. S. Army, 1943-46; Grad. Asst., Ind. Univ., 1946-48; Tchng. Fellow, Ind. Univ., 1948-49; Assoc. Prof. and Chmn., Dept. of Psychol., Kalamazoo Coll., Kalamazoo, Mich., 1949—. Mem.: A.P.A.; Sigma Xi; A.A.U.P.; A.A.A.S.; Pi Kappa Delta; Blue Key. Contrb. to: Jour. Exptl. Psychol. War Record: U. S. Army, 1943-46. Special Int.: Physiological Correlates of Behavior; Social Factors in Learning and Extinction.

VAN NAME, Ralph Gibbs, Rsch. Assoc. Emer. Chem., Yale Univ., 285 Prospect St., New Haven, Conn. CHEMISTRY.

VAN NAME, Willard Gibbs, Assoc. Curator Emer., Amer. Museum Natural History, N. Y., N. Y. ZOOLOGY.

VAN NIEL, Cornelius Bernardus, Hopkins Marine Station of Stanford Univ., Pacific Grove, Calif. BACTERIOLOGY.

VAN OOSTEN, John, In Chg. Great Lakes Fishery Investigations, U. S. Fish and Wildlife Service, Dept. of Interior, Univ. Museums Bldg., Ann Arbor, Mich. ICHTHYOLOGY.

VAN ORSTRAND, Charles Edwin, retired, Rt. 2, Manito, Ill. GEOPHYSICS.

VAN RIPER, Charles, SPEECH AND HEARING.

VAN RYSELBERGHE, Pierre, Prof. of Chem., Univ. of Ore., Eugene, Ore. **ELECTROCHEMISTRY, CHEMICAL THERMODYNAMICS.** b. May 18, 1905, Brussels, Belgium. s. Francois Van Ryselberghe and Jeanne (Alvin). Edn.: Candidat-Ingenieur, Univ. of Brussels, 1924; Engrng., Univ. of Brussels, 1927; M.A., Chem., Stanford, 1928; Ph.D., Chem., *ibid.*, 1929. m. Lily Chloupek, San Francisco, Calif., 1930. d. Erwin and Grace Chloupek. c.: Jane Frances, Pierre Louis, Jacqueline Grace. Exp.: Fellow, Com. for Relief in Belgium Edn. Foundation, Inc. (C.R.B., now Belgian Amer. Edn. Foundation), Stanford, 1927-29; Instr. in Chem., *ibid.*, 1929-31; Asst. Prof. of Chem., *ibid.*, 1931-41; Asst. Prof. of Chem., Univ. of Ore., Eugene, Ore., 1941-42; Assoc. Prof. of Chem., *ibid.*, 1942-45; Prof. of Chem., *ibid.*, 1945—; Visiting C.R.B. Lectr. to Belgium (Belgian Amer. Edn. Found.), 1935-36; Dir., Rsch. Proj. on "Polarographic Study of Corrosion Phenomena," for Office of Nav. Rsch., 1946—; A.E.C., 1952—; Pres., Com. of Electrochem., Thermodynamics and Kinetics, 1949—; Fulbright Visiting Prof., Italy, 1950-51. Mem.: Amer. Chem. Soc.; A.A.A.S.; Assn. of Engrng. Graduates from the Univ. of Brussels; Alumni of C.R.B.; Electrochem. Soc.; Natl. Assn. of Corrosion Engrs.; Farraday Soc.; History of Sci. Soc.; Société de Chimie Physique; Fellow, Amer. Inst. of Chemists; Assn. Amer. Inst. Phys.; Mem. Electrochem. Comm. of Internatl. Union of Pure and Ap. Chem.; Sigma Xi; Phi Lambda Upsilon; Pi Delta Phi (French Hon. Soc.); Univ. of Ore. Faculty Club. Author: L'Affinité, with Th. De Donder, Paris, 1936; Thermodynamic Theory of Affinity, a Book of Prin. with Th. De Donder, Stanford Univ. Press, 1936. Contrb. to: J.A.C.S.; Jour. Phys. Chem.; Jour. Chem. Edn.; Bulletin of the Belgian Acad. of Sci., etc. Ph.D. Dissertation: The Incompatibility Between Any Theory of Complete Dissociation and Migration Data. Travel: Can.; Belgium; France; England; Germany; Italy; Spain; etc. Lived in Belgium until the age of 22.

VAN SCHOICK, Emily C., N. Y. State Coll. of Ceramics, Alfred, N. Y. **CERAMICS.**

VAN SLYKE, Donald Dexter, Emer. Mem., Rockefeller Inst., Counselor to Lilly Grants for Rsch., Rsch. Dir. of Chem., Div., Med. Dept., Brookhaven Natl. Lab., Upton, N. Y. **BIOCHEMISTRY.** b. Pike, N. Y., Mar. 29, 1883. s. Lucius L. and Lucy (Dexter) Van S. Edn.: A.B., Univ. of Mich., 1905; Ph.D., *ibid.*, 1907. Hon. Deg.: Sc.D., Yale Univ., 1926; Sc.D., Univ. of Mich., 1935; M.D., Oslo Univ., Norway, 1938; Sc.D., Northwestern Univ., 1940; Sc.D., Chicago Univ., 1941; Sc.D., Univ. of London, 1951. m. Else von Bardenfleth, Aug. 28, 1948. c.: Karl Keller; Elsa. Exp.: Rsch. Chemist, Rockefeller Inst. for Med. Rsch., 1907-48; Visiting Prof., Peking Union Med. Coll., China, 1922; Asst. Dir., Brookhaven Natl. Lab., Upton, N. Y., 1948-51; Rsch. Dir., Chem. Div., Med. Dept., *ibid.*, 1951—; Counselor to Eli Lilly Grants for Rsch., 1951—. Hon. Pos.: Pres., Amer. Soc. of Biol. Chemists, 1921-22; Pres., Harvey Soc. of N. Y., 1927-28; Hon. Vice-Pres., First Internatl. Congress of Biochem., Cambridge, England, 1949. Mem.: Natl. Acad. of Arts and Sci.; Philos. Soc. Amer. Chem. Soc.; Amer. Soc. Biol. Chemists; Soc. Exptl. Biol. and Med.; N. Y. Acad. of Med.; Radiation Rsch. Soc.; Beta Theta Pi; Sigma Psi; Hon. Mem. Royal Soc. of Sciences of Upsala, Sweden; Danish Soc. for Internal Med.; Physiol. Soc., British; Renal Assn. of London; Societe de Pathologie Renale; Societa Italiana di Biologia Sperimentale; Societa Lombarda di Medicina; Acad. of Sci. of India; Soc. of Biol. Chemists of India; Amer. Assn. Clinical Chem. Author: Course of Bright's Disease, 1931; Quantitative Clinical Chem., 1931. Contrb. to: Jour. Biol. Chem.; Jour. Clinical Investigation; Amer. Jour. Physiol.; Jour. Exptl. Med. Special Int.: Blood Gases and Electrolytes; Diagnostic Methods in Diabetes and Kidney Diseases; Renal Physiol.; Chem. and Physiol. of the Amino Acids.

van STEENBURGH, William Elgin, Rsch. Advisor, Sci. Service, Dept. of Agri., Ottawa, Ont., Can. **PHYSICS, ENTOMOLOGY.**

VANTERPOOL, Thomas Clifford, Prof. Plant Pathol., Univ. of Saskatchewan, Saskatoon, Sask., Can. **PLANT PATHOLOGY.**

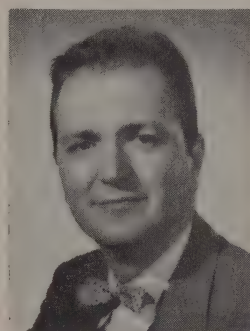
VAN TUYL, Francis Maurice, Hd. and Prof. Dept. of Geol., Colo. Schl. of Mines, Golden, Colo. **PETROLEUM GEOLOGY.**

VAN VALKENBURG, Samuel, Dir. Grad. Schl. of Geography, Clark Univ., Worcester, Mass. **GEOGRAPHY.**

VAN WAGENEN, Marvin James, Assoc. Prof. Ednl. Psychol., Univ. of Minn., Minneapolis, Minn. **EDUCATIONAL PSYCHOLOGY.**

VAN WART, Roy McLean, retired, 10431 Bellagio Rd., Los Angeles, Calif. **NEUROLOGY.**

VAN WAZER, John Robert, Jr., Asst. Rsch. Dir., Phosphate Div., Monsanto Chem. Co., Dayton 7, Ohio. **PHYSICAL CHEMISTRY; GENERAL SCIENCE.** b. Chicago, Ill., Apr. 11, 1918. s. John Robert and Florence (Johnson) Van W. Edn.: B.S., Northwestern Univ., magna cum laude, 1940; M.A., Harvard Univ., 1941; Ph.D., *ibid.*, 1942. m. Betty Ballou, July 15, 1940. c.: Beth. Exp.: Phys. Chemist, Eastman Kodak Co., 1942-44; Rsch. Supvr., Clinton Engr. Works, Oak Ridge, Tenn., 1944-46; Phys. Chemist, Rumford Chem. Works, 1946-49; Hd., Phys.



Rsch., Great Lakes Carbon Corp., 1949-50; Asst. Dir. of Rsch., Phosphate Div., Monsanto Chem. Co., Dayton, Ohio, 1950—. Mem.: Amer. Chem. Soc.; Rheol. Soc.; Amer. Inst. Physics; Amer. Crystallographic Assn.; Phi Beta Kappa; Alpha Chi Sigma; Delta Sigma. Contrb. to: Jour. Amer. Chem. Soc.; Jour. Applied Phys.; Jour. Colloid Sci.; Jour. Phys. and Colloid Chem.; Industrial and Engrng. Chem.; Analytical Chem.; Physics Today. Gen. Int.: Development of general structural theory for all inorganic and organic phosphorus compounds. Special Int.: Rheology; Structure and Properties of Phosphorus; Philosophy of Sci.; Chem. Kinetics; Surface Phys.; Radioactive Tracers.

VAN ZYL, Gerrit, Hd., Dept. of Chem., Hope Coll., Holland, Mich. **PHYSICAL AND ORGANIC CHEMISTRY.** b. Sioux Co., Iowa, July 29, 1894. s. Cornelius and Helena (Van Ess) Van Z. Edn.: A.B., Hope Coll., 1918; M.S., Univ. of Mich., 1921; Ph.D., *ibid.*, 1924. Hon. Deg.: D.Sc., Hamline Univ., 1953. m. Bertha Brower, Aug. 31, 1921. c.: Neil Herman; Allison Lynn; Gail Byron; Verna Ruth. Exp.: Asst., Univ. of Mich., 1919-23; Hd., Dept. of Chem., Hope Coll., Holland, Mich., 1923—. Mem.: Amer. Chem. Soc.; A.A.A.S.; Sigma Xi; Phi Lambda Upsilon; Gamma Alpha. Contrb. to: Jour. Amer. Chem. Soc.



VAN WEEL, Pieter B., Prof. of Zool., Univ. of Hawaii, Honolulu, Hawaii. **HISTOPHYSIOLOGY; COMPARATIVE PHYSIOLOGY.** b. Amboina, Dutch East Indies, Mar. 20, 1910. s. Kornelis and Elizabeth (Tissot van Patot) Van W. Edn.: B.S., State Univ., Utrecht, Holland, 1933; M.S., *ibid.*, 1935; Ph.D., *ibid.*, 1937. m. Emilia E. Van Dijk, Mar. 21, 1941. c.: Kornelis M. Exp.: Asst., Dept. of Zool., Univ. of Utrecht, Holland, 1932-35; Chf. Asst. Dept. Biochem. and Histology, Med. H. S., Batavia, 1939-48; Assoc. Prof. of Histology, Med. Faculty, Univ. of Indonesia, 1948-50; Prof. of Zool., Univ. of Hawaii, Honolulu, Hawaii, 1950—. Mem.: Netherland's Zool. Soc.; A.A.A.S.; Amer. Soc. Zool.; Hawaiian Acad. Sci.; Sigma Xi; A.A.U.P.

Contrb. to: Proc. Royal Acad. Sci., Amsterdam; Physiol. Zool.; etc. War Record: Non Commission Officer, Dutch East Indies Army; Prisoner of War during Japanese occupation of Java. Special Int.: Metabolism of Organs; Physiol. of Digestion; Vital Staining; Histophysiol. of Liver, Thyroids, Pancreas, Duodenum and Digestive Glands in Invertebrates; Smooth Muscle of Holothurians.

VARIAN, Russell Harrison, Rsch. Assoc., Dept. of Physics, Stanford Univ., Palo Alto, Calif.

VARNER, William R., Prof. of Physics, Ore. State Coll., Corvallis, Ore. ELECTRICAL MEASUREMENTS; CORROSION OF UNDERGROUND METALS. b. Wallowa, Ore., Aug. 3, 1889. s. Nelson D. and Clara (Coke) V. Edn.: B.S., Ore. State Coll., 1912; E.E., Westinghouse Grad Schl., 1914; Ph.D., Ore. State Coll., 1934. m. Netta E. Varner, Feb. 2, 1924. c.: Ilda Florence. Exp.: Elec. Engr., Westinghouse, 1912-16; Elec. Engr., Duquesne Steel Co., 1916-18; Prof. of Elec. Engrng., Ore. Inst. of Tech., 1918-29; Dept. of Physics, Ore. State Coll., 1929—. Mem.: Sigma Xi; Eta Kappa Nu; Pi Mu Epsilon; Sigma Pi Sigma; C. of C. Author: The Four Systems of Units. Special Int.: Electrical Measurements; Corrosion.

VARNES, David Joseph, Assoc. Geologist, U. S. Geol. Survey, Federal Center, Denver, Colo. ENGINEERING.

VARNEY, Harry Ross, Assoc. Dean and Assoc. Dir., Expt. Sta. and Extension Service, Univ. of Vt., Burlington, Vt. MARKETING.

VASSAR, Hervey Sackett, Lab. Engr. in Chg. Testing Lab., Public Service Electric and Gas Co., 39 Willard Ave., Bloomfield, N. J. ENGINEERING.

VAUGHAN, Edward Kemp, Plant Pathologist, Div. Fruit and Vegetable Crops, Diseases, Bureau Plant Indus., Soils and Agri. Engrng., Beltsville, Md. PLANT PATHOLOGY.

VAUGHAN, Francis Edward, Gen. Mgr., V. and E. Co., P. O. Box 950, Pasadena, Calif. PETROLEUM GEOLOGY.

VAUGHAN, Stuart L., Asst. Prof. of Med., Univ. of Buffalo, Buffalo, N. Y. INTERNAL MEDICINE.

VAUGHAN, W. Harry, Atlanta Indus. Labs., DeKalb Ave., N. E., Atlanta, Ga. CERAMICS.

VAUGHN, James, Assoc. Prof. of Psychol., Univ. of Cincinnati, Cincinnati, Ohio. PSYCHOLOGY.

VEATCH, Collins, Assoc. Prof. Agron., W. Va. Univ., Morgantown, W. Va. AGRONOMY.

VEBLEN, Oswald, The Inst. for Advanced Study, Princeton, N. J. MATHEMATICS.

VEEDER, Borden Smith, Prof. of Clinical Pediatrics, Schl. of Med., Washington Univ., St. Louis, Mo. PEDIATRICS.

VEIHMEYER, Frank J., Prof. of Irrigation and Irrigation Engr., Div. Irrigation, Univ. of Calif., Davis, Calif. PLANT-SOIL-WATER RELATIONS.

VEITH, Franz S., Rsch. and Development Engr., Radio Corp. of Amer., R. C. A. Victor Div., Lancaster, Pa. MICROWAVE ELECTRONICS.

VENABLE, William Mayo, Consulting Engr., Blaw-Knox Co., 6111 Fifth Ave., Pittsburgh, Pa. ATOMIC STRUCTURE.

VERDOORN, Frans, Managing Editor, Chronica Botanica Co., 79 Sartell Rd., Waltham, Mass. BOTANICAL SCIENCES.

VERDOORN, Johanna G., Assoc. Editor, Chronica Botanica Co., P. O. Box 151, Waltham, Mass. BOTANY.

VERHOEFF, Frederick Herman, Prof. Emer. Ophthalmic Rsch., Harvard Univ., Boston, Mass.; 61 Monmouth St., Brookline, Mass. OPHTHALMOLOGY.

VERNER, Leif, Prof. and Hd., Dept. of Horticulture, Univ. of Idaho, Moscow, Idaho. HORTICULTURE.

VER STEEG, Karl, Prof. of Geol. and Hd. Dept., Coll. of Wooster, Wooster, Ohio. GEOLOGY, GEOGRAPHY.

VERWEIBE, Frank L., Applied Physics Lab., 8621 Georgia Ave., Silver Spring, Md. PHYSICS.

VESTAL, Arthur Gibson, Prof. of Botany, Univ. of Ill., Urbana, Ill. ECOLOGY, PLANT GEOGRAPHY.

VESTAL, Franklin Earl, Geologist, Miss. State Geol. Survey, University, Miss. GENERAL GEOLOGY.

VESTAL, Paul Anthony, Assoc. Prof. and Dir., T. R. Baker Museums Natural History, Rollins Coll., Winter Park, Fla. ETHNOBOTANY.

VESTAL, Wanda M. Pfeiffer, 211 Natural History Bldg., Univ. of Ill., Urbana, Ill. BOTANY.

VESTINE, E. H., 5241 Broad Branch Rd., N. W., Washington 15, D. C. GEOMAGNETISM.

VICARI, Emelia, Staff Mem., Rsch. Assoc., R. B. Jackson Labs., P. O. Box 4, Bar Harbor, Maine. ANATOMY, HISTOLOGY.

VICKERY, Hubert Bradford, Conn. Agril. Expt. Sta., New Haven 4, Conn.

VICKERY, Katherine, Prof. of Psychol., Ala. Coll., 100 Nabors St., Montevallo, Ala. PSYCHOLOGY. b. Dahlonga, Ga., Mar. 5, 1898. d. Elias Benton and Etta (McMullan) V. Edn.: A.B., North Ga. Coll., 1918; M. A., Geo. Peabody Coll. for Tchrs., 1919; Ph.D., ibid., 1929. Hon. Deg.: D.Sc., Ala. Coll., 1947. Exp.: Tch., Millington H. S., Tenn., 1919-22; Asst. Prof. of Psychol., Ala. Coll., 1922-30; Assoc. Prof. of Psychol., ibid., 1930-35; Prof., ibid., 1935—; Hd., Dept. of Psychol., ibid., 1943—. Mem.: Amer. Psychol. Assn.; Ala. Psychol. Assn.; Fellow, A.A.A.S.; Ala. Acad. Sci.; Southern Soc. for Philos. and Psychol.; Internat. Council of Women Psychologists; Kappa Delta Pi; A.A.U.W.; Ala. Mental Health Soc. Contrb. to: Jour. Exptl. Psychol.; Jour. Criminal Law and Criminology; Psychol. Monographs; Jour. Ala. Acad. Sci. Special Int.: Learning and General Psychol.

VIEHOEVER, Arno, Chf., Biochem. Section, Army Med. Center, Washington, D. C. BIOCHEMISTRY.

VIERECK, Peter, Assoc. Prof. of History, Mt. Holyoke Coll., S. Hadley, Mass. HISTORY. b. New York City, N. Y., Aug. 5, 1916. s. George S. and Margaret (Hein) V. Edn.: B.S., summa cum laude, Harvard Univ., 1937; M.A., ibid., 1939; Ph.D., ibid., 1942. m. Anya de Markov, June 26, 1945. c.: Valerie; John Alexis. Exp.: Henry Fellow, Oxford Univ., England, 1937-38; Instr., Harvard Univ., Cambridge, Mass., 1946-47; Asst. Prof., Smith Coll., Northampton, Mass., 1947-48; Assoc. Prof. Mt. Holyoke Coll., S. Hadley, Mass., 1948—; Lectr. (Conference on Amer.

Studies), Oxford Univ., England, 1953. Mem.: Phi Beta Kappa; P.E.N. Club; Amer. Comm. for Cul. Freedom; Amer. Hist. Assoc. War Record: African and Italian campaigns, 1943-45, Psych. Warfare Branch. Author: Metapolitics: From the Romantics to Hitler, 1941; Terror and Decorum: Poems, 1948; Conservatism Revisited: The Revolt against Revolt, 1949; Strike Through The Mask: Lyrical Poems, 1950; The First Morning: New Poems, 1952; Shame and Glory of the Intellectuals: Babbitt Jr. Vs. The Rediscovery of Values, 1953; The Hammer of Thor: From German Romanticism



to the Neo-Nazis, 1954; co-author (with Lewis Mumford and others), *Arts in Renewal*, 1951; co-author, *Midcentury American Poets*, 1950. *Contrib.* to: *Pol. Sci. Quarterly*; *Amer. Hist. Review*; *Jour. of Hist. of Ideas*. *Gen. Int.*: Pulitzer Prize, 1949. *Special Int.*: *Mod. Europe and Russian History*, also *Poetry*.

VIGOR, Stanley Horace, Field Crops Commissioner, Saskatchewan Regina, Sask., Can. **AGRICULTURE, FIELD HUSBANDRY.**

VILBRANDT, Frank Carl, Hd., Dept. of Chem. Engrng., Va. Poly. Inst., Blacksburg, Va. **CHEMICAL ENGINEERING.**

VINAL, George Wood, Prin. Physicist and Chf. Section Electrochem., Natl. Bureau of Standards, Washington, D. C. **PHYSICS AND ELECTRO-CHEMISTRY.**

VINAL, William Gould, Prof. of Nature Edn., Mass. State Coll., Amherst, Mass. **NATURE RECREATION.**

VINCENT, Harvard Burton, Mgr. Product Development Dept., Owens-Illinois Glass Co., Toledo, Ohio. **PHYSICS, ENGINEERING.**

VINCENT, Stella B., retired, 160 S. Los Robles Ave., Pasadena, Calif. **PSYCHOLOGY.**

VINTI, John Pascal, Chf. Interior Ballistic Theory Section and Sr. Physicist Ballistic Rsch. Lab., Aberdeen Proving Ground, Md. **BALLISTICS.**

VIOSCA, Percy, Jr., Consulting Biologist, 517 Decatur St., New Orleans, La. **ECOLOGY, FISH MANAGEMENT.**

VISHER, Stephen Sargent, Prof. of Geography, Ind. Univ., Bloomington, Ind. **REGIONAL GEOGRAPHY, CLIMATIC CONTRASTS AND CLIMATIC INFLUENCES, SOCIAL GEOGRAPHY.** b. Chicago, Ill., Dec. 15, 1887. s. John and Julia (Sargent) V. Edn.: S. B., Univ. of Chicago, 1909; S.M., *ibid.*, 1910; Ph.D., *ibid.*, 1914; M.A., Univ. of S. Dak., 1912. m. Martha Bolks (dec.), 1914. 2nd. m. Halene Hatcher, 1951. c.: Ruth; John; Paul S.; Mary. Exp.: Staff, Univ. of S. Dak., 1910-13; Staff, State Normal, Moorhead, Minn., 1915-18; Land Classifier, U. S. Geol. Survey, 1918; Asst. Prof. to Prof. of Geography, Ind. Univ., 1919—. Hon. Pos.: Pres., Ind. Acad. of Sci., 1950; Vice-Pres., Assn. Amer. Geographers, 1933; Received Distinguished Service to Geography Citation of Natl. Council of Geography Tehrs., 1948; Distinguished Alumnus Citation, Univ. of Chicago, 1943; Hon. Life Mem., Natl. Geography Soc. Mem.: Assn. Amer. Geographers; Geol. Soc. of Amer. Amer. Meteorological Soc.; Ecological Soc. of Amer.; Amer. Geographical Soc.; Phi Beta Kappa; Sigma Xi. Author *Geography of S. Dak.*, 1918; *Climatic Changes, their Nature and Causes* (Co-Author), 1922; *Tropical Cyclones of the Pacific*, 1925; *Climatic Laws*, 1924; *Geography of American Notables*, 1928; *Economic Geography of Europe* (Co-author) 1931; *Climate of Ind.*, 1944; *Scientists Starred 1903-43 in America Men of Science*, 1947; *Ind. Scientists*, 1951; *Climatic Atlas of the U. S.*, 1953. *Contrib.* to: *Annals Assn. Amer. Geogr.*; *Bull. and Proc.*, Geol. Soc. of Amer.; *Bull. Amer. Meteor. Soc.*; *Quarterly Jour.*; *Sci.*; *Royal Meteor. Soc.*; etc. *Special Int.*: *Climate of the U. S.*; *Tropical Cyclones*; *Regional Contrasts in Productivity of Goods and Leaders*.

VISSCHER, Maurice B., Prof. and Hd., Dept. of Physiol., Univ. of Minn., Minneapolis, Minn. **PHYSIOLOGY.**

VITELES, Morris Simon, Prof. of Psychol., Univ. of Pa., Philadelphia, Pa. **PSYCHOLOGY.**

VLIET, Elmer Bennett, Mgr., Control Lab., Abbott Lab., North Chicago, Ill. **CHEMISTRY.**

VOEGTLIN, Carl, retired, Dorset, Vt. **PHARMACOLOGY.**

VOEKS, Virginia Wilna, Asst. Prof. of Psychol. San Diego State Coll., San Diego 15, Calif. **PSYCHOLOGY.** b. Champaign, Ill., May 9, 1921.



d. B. Forrest and Dorothy (Wade) V. Edn.: B.S., Univ. of Wash., 1943; M.S., *ibid.*, 1944; Ph.D., Yale Univ., 1947. Exp.: Child Guidance Clinic, Univ. of Wash., 1940-43; Tehng. Fellow, *ibid.*, 1943-44; Rsch. Fellow, *ibid.*, 1943-44; Rsch. Fellow, Yale Univ., 1944-46; Personnel Rsch. Section, A.G.O. of New York, 1945; Sterling Award of Yale Univ., 1946-47; Asst. Prof., Univ. of Wash., 1944, 1947-49; Asst. Prof., San Diego State Coll., San Diego, Calif., 1949—. Mem.: Phi Beta Kappa; Psi Chi; Sigma Xi; Amer. Psychol. Assn.; Western Psychol. Assn.; A.A.A.S.; A.A.U.P.; Alpha Delta Pi; Amer. Civil Liberties Union. *Contrib.* to: *Psychol. Rev.*; *Jour. Exptl. Psychol.*; *Jour. Psychol.* *Special Int.*: *Learning Theory*; *Exptl. Psychol.*; *Personality and Adjustment Techniques*; *Aptitude Testing*; *Developmental Psychol.*

VOGEL, Orville A., Sr. Agronomist, U. S. Dept. of Agri., 506 Oak St., Pullman, Wash., **WHEAT BREEDING.** b. Pilger, Nebr., 1907. s. William and Emelia (Paegle) V. Edn.: B.S., Univ. of Nebr., 1929; M.S., *ibid.*, 1931; Ph.D., Wash. State Coll., 1939. m. Bertha J. Berkman, July 14, 1931. c.: Evelyn M. and Richard F. Exp.: Agent, Asst. Agron., Assoc. Agron., Agron., and Sr. Agronomist, U. S. Dept. of Agri., Wash. State Coll., Pullman, Wash., 1931—. Mem.: Alpha Zeta; Phi Sigma; Sigma Xi; Farm House. *Contrib.* to: *Amer. Soc. of Agron.*; *Jour.* and *Wash. State Coll. Bull.* *Gen. Int.*: *Designed Several Models of Planters, Threshers and Cleaners for Cereals Used by Many Expt. Stas.*, *Foreign and Domestic. Special Int.*: *Breeding for Bunt Resistance, Lodging Resistance, Short Stiff Straw and High Yielding Wheats*.

VOGT, Charles Clarence, Chf. Organic Rsch., Rsch. Div., Armstrong Cork Co., Lancaster, Pa. **CHEMISTRY.**

VOGT, Harold George, Technical Writer and Lectr., Public Relations Dept., Corning Glass Works, Corning, N. Y. **PHYSICS.**

VOIGHT, Alvin H., Jr., Instr. in Chem. and State Chemist, Univ. of Colo., Boulder, Colo. **CHEMISTRY.**

VOIGHT, John Louis, 1007 N. McCadden Pl., Los Angeles, Calif. **PHARMACY, PHARMACOLOGY.**

VOIGT, Melvin John, Librarian, Carnegie Inst. of Tech., Pittsburgh, Pa. **LIBRARY SCIENCE.**

VOLD, George Bryan, Prof. of Sociol., Univ. of Minn., Minneapolis, Minn. **SOCIOLOGY.**

VOLD, Robert Donald, Assoc. Prof. of Chem., Univ. of Southern Calif., Los Angeles, Calif. **COLLOID CHEMISTRY.**

VOLINI, Italo F., Prof. and Chmn., Dept. of Med., Loyola Univ., Chicago, Ill. **INTERNAL MEDICINE.**

VOLKER, Joseph F., Dean, Tufts Coll. Dental Schl., 416 Huntington Ave., Boston, Mass. **BIOCHEMISTRY, DENTISTRY.**

VOLLERTSEN, John Joseph, Armour and Co., Chicago, Ill. **CHEMISTRY.**

VOLLMAYER, Leo John, Prof. of Physics, Xavier Univ., Cincinnati, Ohio. **PHYSICS.**

VOLLRATH, Richard Ernest, Prof. of Physics and Chmn., Dept., Univ. of Southern Calif., 3551 Univ. Ave., Los Angeles, Calif. **PHYSICS.**

VOLWILER, Ernest Henry, Pres. and Gen. Manager, Abbott Lab., North Chicago, Ill. **CHEMISTRY**. b. Hamilton, Ohio, Aug. 22, 1893. s. Jacob and Charlotte (Tangemann) V. Edn.: B.A., Miami Univ., 1914; M.A., Univ. of Ill., 1916; Ph.D., ibid., 1918. Hon. Degs.: D.Sc., Miami Univ., 1946; D.Sc., Northwestern Univ., 1949; LL.D., Coe Coll., 1953. m. Lillian F. Huggler, Feb. 23, 1920. c.: Doris, Marjorie, Wallace. Exp.: Tchr., Public Schl., Reilly Twp., Butler County, Ohio, 1910-11; Tehng. Asst. in Chem., Miami Univ., 1913-14; Tehng. Asst. ibid., Sum. Schl., 1914; Tehng. Asst., Univ. of Ill., Urbana, Ill., 1914-17; Fellow in Chem., ibid., 1917-18; Chem., Abbott Lab., North Chicago, Ill., 1918-20; Chief Chem., ibid., 1920-30; Dir. of Rsch., ibid., 1930-33; Vice-Pres. in Charge of Rsch. and Dev., ibid., 1933-46; Executive Vice-Pres., ibid., 1946-50; Pres. and Gen. Manager, ibid., 1950—. Mem.: Amer. Chem. Soc.; Amer. Inst. of Chem. Engr.; Amer. Inst. of Chem.; Chicago Chem. Club; Soc. of Chem. Industry; Citizens Bd.; Univ. of Chicago; Cosmos Club; A.A.A.S.; Wash. Acad. of Sci.; Northwestern Univ. Associates; World Med. Assn.; Phi Lambda Upsilon; Alpha Chi Sigma; Beta Gamma Sigma; Gamma Alpha; Phi Lambda Upsilon; Phi Beta Kappa; Phi Kappa Tau; Sigma Xi; Masonic Lodge War Record; W. W. I. Special Int.: Chemistry.

von BONIN, Gerhardt, Prof. of Anatomy Univ. of Ill., Chicago, Ill. **NEUROLOGY**.

von ENGELN, O. D., Prof. and Chmn., Dept. of Geol., Cornell Univ., Ithaca, N. Y. **GEOLOGY**.

von FISCHER, William, Assoc. Prof. of Chem., Case Schl. of Applied Sci., 10900 Euclid Ave., Cleveland, Ohio. **INORGANIC AND ANALYTICAL CHEMISTRY**.

von HIPPEL, Arthur Robert, Assoc. Prof. and Dir. Lab. Insulation Rsch., Mass. Inst. Tech., Cambridge, Mass. **DIELECTRICS**.

Von KARMAN, Thomas, Aerojet-General Corp., Azusa, Calif. **ROCKETRY**.

von KLEINSMID, Rufus Bernhard, Chancellor, Univ. of Southern Calif., Los Angeles, Calif. **GEOLOGY, GEOGRAPHY**.

von MISES, Richard, Gordon McKay Prof. of Aerodynamics and Applied Math., Harvard Univ., Cambridge, Mass. **AERODYNAMICS**.

von NEUMANN, John, Rsch. Prof. of Math., Inst. for Advanced Study, Princeton, N. J. **MATHEMATICS AND MATHEMATICAL PHYSICS**. b. Budapest, Hungary, Dec. 28, 1903. s. Max and Margaret (Kann) von N. Edn.: Engr. of Chem., Fed. Inst. of Tech., Zurich, Switzerland, 1925; Ph.D., Univ. of Budapest, 1926. Hon. Deg.: D.Sc., Princeton Univ., 1947; Univ. of Pa., Harvard Univ., 1949; Case Inst. of Technology, Univ. of Istanbul, 1952. m. Klara Dan, Nov. 15, 1938. c.: Marina. Exp.: Asst. Prof., Univ. of Berlin, Berlin, Germany, 1926-29; Asst. Prof., Univ. of Hamburg, Hamburg, Germany, 1929-30; Visiting Lectr., Princeton Univ., Princeton, N. J., 1930; Visiting Prof., ibid., 1930-33; Rsch. Prof. of Math., Inst. for Advanced Study, Princeton, N. J., 1933—. Hon. Pos.: Gibbs Lectr., Amer. Math. Soc., 1937; Pres., ibid., 1951-53; Vanuxem Lectr., Princeton Univ., 1953; Mem., General Advisory Com., U. S. Atomic Energy Comm., 1952—. Mem.: Academie de Sciences, Lima, Peru; Amer. Acad. of Arts and Sciences; Amer. Math. Soc.; Amer. Philos. Soc.; Amer. Physical Soc.; Econometric Soc.; Hungarian Math. and Physical Soc.; Internatl. Statistical Inst., The Hague, Holland; Natl. Acad. of Sci.; Royal Dutch Acad. of Sci.; Instituto Lombardo di Scienze e Lettere, Milano, Italy; Sigma Xi. Author: Math.

Foundations of Quantum Mechanics, 1932; Theory of Games and Economic Behavior (with O. Morgenstern), 1944. Contbr. to: Annals of Math. Statistics; Annals of Math.; Astrophysical Jour.; Jour. Applied Phys.; etc. Gen. Int.: Rockefeller Fellowship, 1926; Bocher Prize, Amer. Math. Soc., 1937; Distinguished Civilian Service Award, U. S. Navy, 1947; Medal for Merit, U. S. Navy, 1947. Special Int.: Theory of Functional Operators, Numerical Analysis and Its Automatization, Quantum Theory, Math. Economics.

VON OETTINGEN, Wolfgang F., Med. Officer, Toxicol., Natl. Inst. of Health, Inst. of Arthritis and Metabolic Diseases, Bethesda 14, Md. **TOXICOLOGY**. b. Marburg Lahn, Germany, Dec. 3, 1888. s. Wolfgang Felizson and Karoline (Wilmanns) O. Edn.: Ph.D., Gottingen, Germany, 1913; M.D., Heidelberg, 1916. m. Helene Maria, Bauer, Dec. 26, 1916. c.: Elizabeth Leonove; Ursula Marianne. Exp.: Instr., Univ. of Gottingen, 1912; Rsch. Asst., Univ. of Heidelberg, 1915-16; Gen. Internship, ibid., 1916-17; Practice of Med., 1918-25; Inst. in Pharmacol., Western Reserve Univ., 1925-28; Asst. Prof., ibid., 1929-34; Dir. of the Haskell Lab. of Industrial Toxicol., E. I. Dupont de Nemours, Wilmington, Del., 1935-38; Prin. Indus. Toxicologist, Chief Indus. Toxicologist, Medical Officer, 1938—. Mem.: A.A.A.S.; Amer. Soc. for Pharm. and Exptl. Therapeutics; Soc. of Exptl. Biol. and Med.; Wash. Acad. of Sci.; Sigma Xi. Contbr. to: Jour. Pharmacol. Exptl. Therapeutics; Arch. Intern. Pharmacodynamie; Jour. Biol. Chem.; J.A.M.A.; Sci. Special Int.: Indus. and Clinical Toxicol. The Relation Between Chem. Constitution and the Pharmacological Toxicological Action.



VON OHLEN, Floyd William, Prof. of Biol., Parsons Coll., Fairfield, Iowa. **PLANT PHYSIOLOGY**.

von STANLEY, Eugene, 572 Brunswick Ave., Trenton, N. J. **PHARMACY**.

VORHIES, Charles Taylor, Prof. of Zool., Econ. Zoologist, Univ. of Ariz., Tucson, Ariz. **ECONOMIC ZOOLOGY**.

VORIS, Aaron LeRoy, Div. Biol. and Agri., Natl. Rsch. Council, 2101 Constitution Ave., Washington, D. C. **CHEMISTRY**.

VOS, Bert John, Jr., Pharmacologist, Food and Drug Admin., Washington, D. C. **PHARMACOLOGY**.

VOSBURGH, Warren Chase, Prof. of Chem., Duke Univ., Durham, N. C. **CHEMISTRY**.

VOSKUIL, Walter H., Mineral Economist, Ill. State Geol. Survey, Urbana, Ill. **MINERAL ECONOMICS**.

VOSS, John, Prin., Manual Trng. H. S., 200 Dixon Ave., Peoria, Ill. **PLANT ECOLOGY, POLLEN ANALYSIS**.

VOSS, Walter C., Hd., Dept. Bldg. Engrng. and Construction, Mass. Inst. of Tech., Cambridge, Mass. **BUILDING ENGINEERING**.

VOTH, Paul Dirks, Assoc. Prof. of Botany, Univ. of Chicago, Chicago, Ill. **BOTANY**.

VREELAND, Frederick King, Rsch. Engr., Pres., Vreeland Corp., 36 Magee Ave., Mill Valley, Calif. **ELECTRONICS**.

VUILLEUMIER, Ernest Albert, Prof. of Chem. and Dean, Dickinson Coll., Carlisle, Pa. **ELECTRO-DEPOSITION**.

VYSSOTSKY, Alexander N., Prof. of Astron., Univ. of Va., Charlottesville, Va. **ASTRONOMY**.

WABER, James Thomas, Staff Mem., Los Alamos Scientific Lab., Los Alamos, N. Mex. **CORROSION OF METALS**. b. Chicago, Ill., Apr. 8, 1920. s. James Warren and Anna May (Cline) W. Edn.: B.S., Ill. Inst. of Tech., 1941; M.S., ibid., 1943; Ph.D., ibid., 1946. m. Stanton Fotheringham, May 12, 1951. c.: Lauriene. Exp.: Rsch. Asst. Prof. Chem., Ill. Inst. of Tech., Chicago, Ill., 1946-47; Staff Mem., Los Alamos Scientific Lab., Los Alamos, N. Mex., 1947—. Mem.: Amer. Soc. for Metals; Electrochem. Soc.; Faraday Soc.; Natl. Assn. of Corr. Eng.; Sigma Xi; Tau Beta Pi; Phi Lambda Upsilon. Contrb. to: Jour. Electrochem. Soc.; Metal Progress; Trans. Amer. Soc. Metals; Revue de Metallurgie. Special Int.: Corrosion of Metals; Phys. Metallurgy of Certain Transuranic Elements.

WADDELL, Charles Wilkin, Prof. of Edn., Immaculate Heart Coll., 2021 N. Western Ave., Los Angeles, Calif. **EDUCATION, CHILD PSYCHOLOGY**.

WADDELL, James, Dir., Biol. Lab., E. I. du Pont de Nemours and Co., Inc., New Brunswick, N. J. **BIOCHEMISTRY**.

WADE, Frank B., Hd., Chem. Dept., Shortridge H. S., 5241 College Ave., Indianapolis, Ind. **CHEMICAL EDUCATION**.

WADE, Henry Hopkins, Metallurgist, Mines Expt. Sta., Univ. of Minn., Minneapolis, Minn. **ORE DRESSING**.

WADE, Herbert Windsor, Med. Dir., Leonard Wood Memorial, Amer. Leprosy Foundation, Madison Ave., N. Y., N. Y. **LEPROSY (PATHOLOGY, ETC.)**.

WADE, Joseph Sanford, Entomologist, U. S. D. A., Bureau Entomol., Washington, D. C. **ENTOMOLOGY**.

WADE, Otis, Assoc. Prof. Zool., Univ. of Nebr., Lincoln, Nebr. **MAMMALOLOGY, ANATOMY**.

WADLEIGH, Cecil Herbert, Sr. Chemist, U. S. Regional Salinity Lab., Riverside, Calif. **PLANT PHYSIOLOGY**.

WADLEY, Francis Marion, Biometrician, 3215 N. Albemarle St., Arlington, Va. **BIOMETRICS**. b. Utica, Mo., Nov. 17, 1892. s. J. V. and Isabel W. Edn.: B.S., Kans. State Coll., 1916; M.S., ibid., 1922; Ph.D., Minn. Univ., 1928. m. Berta Chandler, 1918. c.: Katherine Hugunin; Roberta and Margaret Ingram. Exp.: U. S. Dept. of Agri. Field Labs., Kans., Iowa, Ohio, N. J., P. R., 1914-28, 1934-36; Statistical Work, Navy Dept., Arlington, Va., 1948—. Mem.: A.A.A.S.; Amer. Assn. Econ. Entomol.; Entomol. Soc. of Amer.; Amer. Statistical Assn.; Biometric Soc.; Entomol. Soc. of Wash.; Sigma Xi; Gamma Sigma Delta; Phi Kappa Phi. Contrb. to: Jour. of Econ. Entomol.; Annals of Entomol. Soc. of Amer.; Sci. Biometrics; Jour. Amer. Statistical Assn. Special Int.: Dosage—Mortality Studies, Insect Population Distributions, Exptl. Design in Biol. and Agri.



WADSWORTH, Augustus Baldwin, retired, Manchester, Vt. **PATHOLOGY**.

WAESCHE, Hugh Henry, Deputy Chf., Frequency Control Branch, Signal Corps Engr. Labs., Ft. Monmouth, N. J. **CRYSTAL GROWTH, GEOLOGY OF QUARTZ CRYSTALS, VOLCANOLOGY, QUARTZ CRYSTAL APPLICATION FOR FREQUENCY CONTROL**. b. Washington, D. C., Sept. 23, 1904. s. Henry Theodore and Lucy (Peyton) W. Edn.: B.S., Va. Poly. Inst., 1929; M.S., ibid., 1934. m. Lynn Landiss Smith, Nov. 7, 1938. c.: William Landiss and Mary Peyton. Exp.: Instr. of

Geol., Va. Poly. Inst., 1929-34; Ranger, Hawaii Natl. Park, Hawaii, T. H., 1934-35; Asst. Geol. in Chg. of Geophys. Investigations, Hawaiian Volcano Observatory, Hawaii Natl. Park, ibid., 1935-41; Asst. Park Naturalist, Grand Canyon Natl. Park, Ariz., 1941-42; Assoc. Tech., Quartz Crystal Section, Office of Chf. Signal Officer, Washington, D. C., 1942-43; Radio Engr. in Chg. of Quartz Crystal Proj., Aircraft Radio Lab., Wright Field, Ohio, 1943-46; Geol. and Deputy Chf., Frequency Control Branch, Signal Corps Engrng. Labs., Ft. Monmouth, N. J., 1946—. Mem.: Fellow, A.A.A.S.; Amer. Geophys. Union; Amer. Inst. of Mining and Metallurgical Engrs.; Seismol. Soc. of Amer.; Fellow, Geol. Soc. of Amer. Contrb. to: Jour. of Geol.; Amer. Jour. of Sci.; Mining and Metallurgy; Mining Engrng.; Bull. of the Hawaiian Volcano Observatory; Nature Notes, Grand Canyon Natl. Park; Crater Lake Natl. Park; Proc. of Hawaiian Acad. of Sci.; Geol. Soc. of Amer. Meeting Guide Book, 1948; Various Tech. Bull. Signal Corps on Quartz Crystals, and Minor Contributions to other Geol. Publications. Special Int.: Hawaiian Volcanol. and Seismol., Natl. Park Service Ednl. Program; Geol. of North Amer. Quartz Crystal Deposits; Crystal Synthesis; Quartz Crystal World Supply and Econ., Application and Prod. of Quartz Crystals and other Piezoelectric Crystals.

WAGAR, John Vernon Knox, Prof. of Forest Recreation and Wildlife Conservation and Head of Dept., Colo. A. and M. Coll., Ft. Collins, Colo. **ECOLOGICAL**. b. Dover, Ohio, Oct. 19, 1898. s. Vernon and Una Ann (Knox) W. Edn.: B.Sc., Univ. of Mich., 1920; M.Sc., ibid., 1923. m. Dorothy McConnell of Wooster, Ohio, Dec. 27, 1924. d. Brady and Viola McConnell. c.: James M. K.; J. Alan Wagar. Exp.: 1919 (summer) Indian Forest Service, Neopit, Wis.; U. S. Forest Service (Ranger), 1920-23, summer, 1924, 1933-34, (supt.); U. S. Natl. Park Serv., summer, 1939; Instr.,



Colo. Coll., 1923-25; Asst. Prof. Forestry and in Chg. Schl. Forests, ibid., 1925-33; Colo. A. and M. Coll., 1934 to date. Hon. Pos.: Chmn., Central Rocky Mtn. Section, Soc. of Amer. Foresters, 1941-42, 1942-43; Chmn., Div. of Forest Recreation, Soc. of Amer. Foresters, 1947-49. Mem.: A.A.A.S.; Beta Beta Beta; Sigma Xi; Xi Sigma Pi; Soc. of Amer. Foresters. Contrb. to: Amer. Forests; Amer. Rifleman; Field and Stream; Jour. Forestry; Jour. Land and Public Utility Economics. Travel: Canada. Hobbies: Exploring and Aiding in Protection of Nationally Designated Wildernesses; Big Game Hunting. Listed in: A.M.S.; Who's Who in Amer.

WAGGONER, Jack Holmes, Tech. Asst. to Gen. Mgr., Fiber Glass Div., Pittsburgh Plate Glass Co., 420 Fort Duquesne Blvd., Pittsburgh 22, Pa. **GLASS**. b. St. Joseph, Mo., Jan. 13, 1895. s. Albert Tenny and Margaret (Price) W. Edn.: B.S., Univ. of Kans., 1920. m. Marion Florena Chutter, Oct. 27, 1923. c.: Jack H., Jr.; Chandler C. and Margaret B. Exp.: Machinest's Helper, Atchison Topeka and Santa Fe Railroad, Topeka, Kans., 1914; Blacksmith's Helper, ibid., 1915; Asst. Custodian of Chem. Supplies and Apparatus, Univ. of Kans., Lawrence, Kans.,



1916; Operator Liquid Air Plant, ibid., 1916; Asst. Analytical Chem., Department of Chem., ibid., 1917; Lecturer Asst. in General Chem., ibid., 1917; Chem., Department of State Chem. Research, ibid.,

1919; Business Mgr., Univ. of Kans. Engrng. Schl., 1920; Instr., Gas Engrng. Analysis, Mass. Inst. of Tech., Cambridge, Mass., 1920; Instr., Proximate Tech. Analysis, *ibid.*, 1920; Lect. Asst. in Chem. of Engrng. Materials, *ibid.*, 1921; Private Rsch. Asst., Dr. Augustus H. Gill, *ibid.*, 1921; Mgr., Exptl. Plant, Standard Oil Co., Sugar Creek, Mo., 1921-22; Chem. Engr., Canadian Libbey-Owens Sheet Glass Co., Hamilton, Ont., Can., 1922-23; Rsch. Chem., Libbey-Owens Sheet Glass Co., Charleston, W. Va., 1923-26; Indus. Fellow, Mellon Inst. of Indus. Rsch., Pittsburgh, Pa., 1926-35; Chem. Engr. and Glass Tech., Pittsburgh, Pa., 1933-37; Rsch. Engr., Owens, Ill. Glass Co., Muncie, Ind., 1937; Gen. Factories Chem., *ibid.*, Toledo, Ohio, 1938; Prod. Control Supvr., Owens-Corning Fiberglass Corp., Newark, Ohio, 1939-43; Gen. Process Control Mgr., *ibid.*, 1944; Tech. Asst. to Exec. Vice-Pres., *ibid.*, 1944-53. Mem.: Sigma Tau; Alpha Chi Sigma; Amer. Chem. Soc.; Amer. Ceramic Soc. Special Int.: Glass in Sheet-Container-Construction Block and Glass Fiber Field.

WAGENER, Willis Westlake, Sr. Pathologist, Div. Forest Pathol., U. S. D. A., 720 Appraisers Bldg., San Francisco, Calif. **FOREST PATHOLOGY.**

WAGGENER, Roy Alfred, Prof. of Zool., Carleton Coll., Northfield, Minn. **HISTOLOGY, EMBRYOLOGY.**

WAGGONER, Raymond Walter, Prof. of Psychiatry, Med. Schl., Univ. of Mich., Ann Arbor, Mich. **NEUROPSYCHIATRY.**

WAGMAN, Nicholas Emory, Assoc. Prof. of Astron., Univ. of Pittsburgh, Pittsburgh, Pa. **PHOTOGRAPHIC ASTROMETRY.**

WAGNER, C. F. Westinghouse Electric and Mfg. Co., E. Pittsburgh, Pa. **ELECTRIC POWER.**

WAGNER, Carl, Mass. Inst. of Tech., Cambridge, Mass., **ELECTROCHEMISTRY AND CORROSION OF METALS.**

WAGNER, Cary Richard, Consultant, Rt. 2, South Lane Farm, Utica, Ohio. **PETROLEUM CHEMISTRY.**

WAGNER, Ernest Carl, Prof. of Chem., Univ. of Pa., Philadelphia, Pa. **CHEMISTRY.**

WAGNER, Eva Bond, Assoc. Prof. of Psychol., Drew Univ., Madison, N. J. **PSYCHOLOGY.** b. Chehalis, Wash., July 15, 1903. d. Elias Bond and Florence (Westover) Bond. Exp.: B.S., Tchrs. Coll., 1926; M.S., Univ. of Ala., 1932; Ph.D., Columbia Univ., 1938. m. Ray J. Wagner, May 21, 1944. Exp.: Prof. of Psychol., William and Mary Coll., Richmond, Va., 1938-42; Lt. Comdr., U.S.N.R., 1942-45; Assoc. Prof. of Psychol., Drew Univ., Madison, N. J., 1945—. Mem.: N. Y. Acad. Sci.; A.A.U.P.; Amer. Psychol. Assn.; Kappa Delta Pi. Author: Reading and Ninth Grade Achievement, 1938; Developmental Reading, 1940; Tchng. the Child to Read, 1950. War Record: Lt. Comdr., U.S.N.R., 1942-45. Special Int.: Psychol. of Reading.

WAGNER, Herman Alexander, Consulting Engr., 8 S. Michigan Ave., Chicago, Ill. **METALLURGY.**

WAGNER, John Garnet 2156 Sunbury Rd., Columbus 11, Ohio, Coll. of Pharmacy, Ohio State Univ., Columbus, Ohio. **PHARMACEUTICAL CHEMISTRY.**

WAGNER, Robert Philip, Assoc. Prof. Zool., Univ. of Tex., Austin 12, Tex. **GENETICS.** b. N. Y., N. Y., May 11, 1918. s. Philip J. and Annette (Pavelka) W. Edn.: B.S., The City Coll. of N. Y., 1940; Ph.D., Univ. of Tex., 1943. m. Margaret Campbell, June 14, 1947. c.: Philip Campbell; James Robert. Exp.: Tchng. Fellow in Zool., Univ. of Tex., Austin, Tex., 1940-43; Instr. in Zool., *ibid.*, 1943; Rsch. Biologist, Natl. Cotton Council, Dallas, Tex., 1944-45; Natl. Rsch. Coun. Fellow, Calif. Inst. of Tech., Pasadena, Calif., 1946-47; Asst. Prof. Zool., Univ. of Tex., Austin, Tex., 1945-50; Assoc. Prof., *ibid.*, 1950—. Mem.: Genetics Soc. of Amer.; Amer. Soc. of Naturalists; Amer. Soc. of Human Genetics; Amer. Chem. Soc.; A.A.A.S.; Sigma

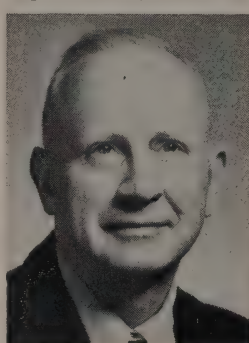
Xi. Contbr. to: Genetics; Arch. of Biochem.; Amer. Naturalist; Jour. of Econ. Entomology; Proc. Natl. Acad. of Sci. Special Int.: Biochem. and Physiol. Genetics.

WAGONER, Kenneth Shrout, Assoc. Prof. of Psychol. and Dir., Exptl. Psychol. Lab., De Pauw Univ., Greencastle, Ind. **EXPERIMENTAL BIOLOGY.**

WAGONER, Lovisa Catherine, Prof. of Child Development, Mills Coll., Oakland, Calif. **PSYCHOLOGY.**

WAHL, Harry Roswell, Dean and Prof. of Pathol., Univ. of Kans. Schl. of Med., Kansas City, Kans. **PATHOLOGY.**

WAHLENBERG, William G., Forester, S. E. Forest Expt. Station, Asheville, N. C. **SILVICULTURE.**



b. Coll. Point, N. Y., June 24, 1894. s. Axel and Florence (Parmelee) W. Edn.: B.S.F., Univ. of Me., 1917; M.F., Yale Univ., 1918. m. Ethel Spinning, Apr. 6, 1922. Exp.: White Pine Blister Rust Control, U. S. Bureau of Plant Industry, U.S.D.A., 1917; U. S. Forest Service, Miles City, Mont., 1919; Rsch., U. S. Forest Service, Missoula, Mont., 1920-26; Rsch., Southern Forest Expt. Station, New Orleans, La., 1927-29; Breeding and Selection of Supvr. Strains of Forest Trees, Inst. of Forest Genetics, Placerville, Calif., 1929-30; Methods of Forecasting Timber Growth, Southern Forest Expt. Station, New Orleans, La., 1931-42; Forester, Crossett, Ark., 1942-46; Silviculture of Appalachian Hardwood Timber, Southeastern Forest Expt. Station, Asheville, N. C., 1946—. Mem.: Phi Kappa Phi; Xi Sigma Pi; Soc. of Amer. Foresters. Contbr. to: Jour. of Agril. Rsch.; Jour. of Forestry; Senate Document. Special Int.: Silviculture; Ecol. and Forest Mgmt.

WAHLIN, Joel G., Rt. 2, Box 751, Camarillo, Calif. **BACTERIOLOGY.**

WAINIO, Walter W., Asst. Prof. of Physiol., Coll. of Dentistry, N. Y. Univ., N. Y., N. Y. **PHYSIOLOGY.**

WAIT, George Ray, Physicist, Carnegie Inst. of Wash., 5241 Broad Branch Rd., Washington, D. C. **PHYSICS.**

WAITE, Frederick C., Prof. Emer., Histology and Embryol., Western Reserve Univ., Cleveland, Ohio; 144 Locust St., Dover, N. H.

WAKEFIELD, Harold Francis, Development Engr., Bakelite Corp., 30 E. 42 St., N. Y., N. Y. **CHEMISTRY.**

WAKEHAM, Glen Raymond, Assoc. Prof. of Chem., Univ. of Colo., Boulder, Colo. **CHEMISTRY.**

WAKELEY, Philip Carman, Silviculturist, U. S. D. A., Southern Forest Expt. Sta., U. S. Forest Service, Rm. 1008, Federal Office Bldg., New Orleans, La. **FORESTRY.**

WAKEMAN, Seth, Prof. of Edn. and Child Study, Smith Coll., Northampton, Mass. **EDUCATION.**

WAKSMAN, Selman A., Prof. of Microbiol. and Dir. of the Inst. of Microbiol., Rutgers Univ., New Brunswick, N. J. **MICROBIOLOGY.** b. Priluka, Ukraine, Russia, July 8, 1888. s. Jacob and Fradia (London) W. Edn.: B.Sc., Rutgers Coll., 1911; M.Sc., *ibid.*, 1916; Ph.D., Univ. of Calif., 1918. m. Deborah B. Mitnik. c.: Byron H. Exp.: Microbiologist at the Expt. Station and as Lectr. in Soil Microbiol., Rutgers Univ.; Made Assoc. Prof., *ibid.*, 1925; Full Prof., *ibid.*, 1930; When the Dept. of Microbiol. was organized in 1940, became Prof. of Microbiol. and Hd. of the Dept.; In 1931, he was

invited to organize a division of Marine Bacteriol. at the Woods Hole Oceanographic Institution and was appointed as Marine Bacteriologist, where he served until 1942, when he was elected as a Trustee. Mem.: Soc. Amer. Bacteriologists; Natl. Acad. Sci.; Amer. Acad. Arts and Sci.; Alpha Zeta; Phi Beta Kappa; Sigma Xi; etc. Author: Enzymes, 1926; Principles of Soil Microbiol., 1927, 1932; Soil and the Microbe, 1932; Soil Microbiol., 1952; The Literature on Streptomycin, 1948, 1952. Gen. Int.: Received the Nitrate of Soda Nitrogen Rsch. Award in 1929, the Passano Foundation Award in 1947, the Emil Christian Hansen Medal and Award from the Carlsberg Labs. in Denmark, 1947, and the Leeuwenhoek Medal from the Netherlands Acad. of Sci., 1950; the N. J. Agril. Soc. Medal, the Albert and Mary Lasker Award by the Amer. Public Health Assn., and the Amory Award by the Amer. Acad. of Arts and Science, all in 1948; the John Scott Award, Page One Award, N. J. State Veterans Award, Amer. Pharmaceutical Manufacturers Award in 1949; the Charles Mickie Fellowship by the Univ. of Toronto for outstanding contribution to medicine during the previous 10 years in 1950, and many others; In 1950 he was made Comdr. of the French Legion of Honor; Recipient of the Nobel Prize in Physiol. and Med. for 1952. Special Int.: The Microbiol. Population of the Soil, Sulfur Oxidation by Bacteria, Microorganisms and Soil Fertility; Decomposition of Plant and Animal Residues, Nature and Origin of Humus; Occurrence of Bacteria in the Sea and Their Role in Marine Processes; Production and Nature of Antibiotic Substances.

WALCOTT, William Welch, Assoc. Prof. of Physiol., Columbia Univ., Coll. of Physicians and Surgeons, 630 West 168th St., N. Y. C., 32. **MAMMALIAN PHYSIOLOGY; PHYSIOLOGY OF THE CIRCULATION.** b. Englewood, N. J., Dec. 5, 1909. s. Frederic Collin and Mary (Guthrie) W. Edn.: A.B., Yale Univ., 1933; Ph.D., Columbia, 1944. m. Martha Blake, Sept. 11, 1937. c.: David; Alexander; Collin. Exp.: Visiting Fellow, Rockefeller Inst., N. Y. C., 1938-39; Instr. in Physiol. Columbia, N. Y., 1941-42; Rsch. Fellow, ibid., 1942-43; Instr., ibid., 1943-47; Asst. Prof., ibid., 1947-52; Assoc. Prof., ibid., 1952—. Mem.: Board of Trustees of the Jane Coffin Childs Memorial Fund for Cancer Rsch.; Amer. Physiological Soc.; Soc. for Exp. Biol. and Med.; Harvey Soc.; N. Y. Acad. Sci.; A.A.A.S.; Alpha Delta Phi; Sigma Xi. Contrb. to: Amer. Jour. Phys.; Proc. Soc. Exp. Biol. and Med. Special Int.: Cardiovascular Physiol.

WALCUTT, Lester O., Jr., Works Engr., The Internatl. Nickel Co., Inc., Huntington Works, Huntington, W. Va. **MECHANICAL ENGINEERING.** b. Brooksville, Miss., Oct. 13, 1914. s. Lester O., Sr. and Harriette (Kibele) W. Edn.: B.M.E., Ohio State Univ., 1936. m. Gertrude Reeves on July 18, 1936. c.: Gertrude Louise; Billie Jeanne. Exp.: Shop Inspector, The N. & W. Rwy. Co., Portsmouth, Ore., 1936-41; Engr., The Internatl. Nickel Co., Huntington, W. Va., 1941-48; Asst. Chf. Mech. Engr., ibid., 1948-52; Works Engr., ibid., 1952—. Mem.: A.S.M.E.; Huntington Engrs. Club; W. Va. Registered Professional Engr.; Natl. Assn. of Foremen. Special Int.: Machine Design; Maintenance.

WALD, George, Prof. of Biol., Biol. Labs., Harvard Univ., Cambridge, Mass. **BIOCHEMISTRY.** b. N. Y., N. Y., Nov. 18, 1906. s. Isaac (dec.) and Ernestine (Rosenmann) W. Edn.: B.S., N. Y. Univ., 1927; A.M., Columbia Univ., 1928; Ph.D., ibid., 1932. m. Frances Kingsley, 1931. c.: Michael; David. Exp.: Asst. Instr., N. Y. Univ., 1927-28; Rsch. Asst., Columbia Univ., 1928-32; Rsch. Fellow, Natl. Rsch. Council, Berlin, Zurich, Heidelberg and Chicago, 1932-34; Staff, Harvard Univ., 1934—. Mem.: Amer. Soc. Biol. Chemists; Amer. Physiol. Soc.; Optical Soc. Amer.; Soc. General Physiologists; A.A.A.S.; Assn. for Rsch. in Ophthalmology; Amer. Acad. Arts and Sci.; Natl. Acad. Sci.; N. Y. Acad. Sci.; Sigma Xi. Co-author General Edn. in a Free Soc., 1945. Contrb. to: Jour. General Physiol.; Jour. Optical Soc., Amer. Gen. Int.: Eli Lilly Rsch. Award for Fundamental Rsch. in Biol. Chem., awarded by Amer. Chem. Soc. in 1939. Special Int.: Physiol. and Biochem. of Vision; Vitamin A; Biochemical Evolution.

WALD, Samuel Stanley, Clin. Prof. of Roentgenol., N. Y. Univ., Coll. of Dentistry, Lecturer in Dental

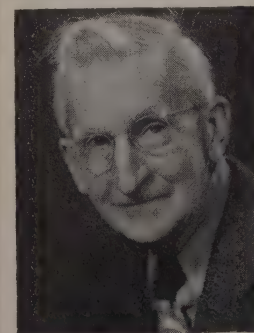


Roentgenology and Diagnosis, N. Y. Univ. Coll. of Med. and Bellevue Med. Center and Post-Grad. Med. Schl., 745 5th Ave., N. Y. 22, N. Y. **ORAL SURGERY; ROENTGENOLOGY; DIAGNOSIS AND ORAL CANCER.** b. N. Y. C., Feb. 5, 1906. s. Bezion and Lena Pearl (Wahler) W. Edn.: Pre-dental Coll. Course, Columbia Univ., 1923-24; D.D.S., N. Y. Univ., Coll. of Dent., 1928; F.A.C.D., Am. Coll. of Dent., 1937. m. Shirley S. Blau of N. Y. City, June 12, 1932. d. Nathan and Regina

Blau. c.: Grover Hartley, Naomi Regina. Exp.: Inst. of Roentgenology, N.Y.U. Coll. of Dent., 1928-34; Asst. Prof. Roentg., 1934-39; Clin. Prof. of Roentg., 1949—. Lectr. in Roentg., N. Y. U., Coll. of med., 1930; Lectr. in Dental Roentg. and Diagnosis, N.Y.U. Bellevue Med. Center and Post-Grad., Med. Schl., 1949—. Lectr. in Roentg. and Hd. of Dept. of Roentgenology and Oral Diagnosis, Guggenheim Dental Clinic and Schl. for Dental Hygienists, 1930-41; Visiting Dental Surg., Nazareth Trade Schl., Farmingdale, L. I., 1928-40; Consultant to the East Coast Inspector of Naval Dental Activities, 1951 to present; Consultant in Chg. of Roentgenology and Oral Diagnosis, Dental Clinics, Community Service Soc. of N. Y., 1930—. Spec. Lectr. in Roentgenology and Oral Diagnosis, U. S. Navy Dental Schl., Natl. Naval Med. Center, Bethesda, Md., 1947—. Consultant in Chg. of Roentgenology, Diagnosis and Oral Cancer, U. S. Naval Hosp., St. Albans, L. I., N. Y., 1948 to present. Mem. Panel on Tumors of Oral Cavity, Natl. Cancer Inst. and Am. Cancer Soc., Natl. Cancer Conf., 1949; Diplomate in Oral Surg., N. Y. State Bd of Oral Surg., 1947—. Am. Dental Assoc. N. Y. State Dental Soc.; First Dist. Dental Soc.; Congressional Liaison Professor for the Amer. Dental Assn., 1951 to present; Omicron Kappa Upsilon, Hon. Soc. of the Dental Prof.; Amer. Assn. of Univ. Profs.; Military Order of World Wars; Assn. of Military Surgeons. Hon. Pos.: Secy., Section of Dentistry and Oral Surgery, Pan Amer. Med. Assn.; Pres., U. S. Naval Reserve Med. and Dental Officers Assn.; Fellow of the N. Y. Acad. of Dentistry; Fellow of the Amer. Coll. of Dentists. Author: Manual of Dental Roentgenology, 1936; Clinical Dental Roentgenology, Technic and Interpretation, 1940; Roentgenodontia Clinica, 1947. War Record: Capt., Dental Corps, U. S. N., Lieut. Commander, 1940, Promoted to Commander, 1942, Promoted to Capt., 1945. Served as: Chief of the Dental Service, U. S. Naval Base Hosp., No. 8, Serving the Pacific Fleet, in the Pacific Area, 1945; Chief of the Dental Service, U. S. Naval Hosp., Brooklyn, N. Y., 1942-45. Listed in: Who's Who in the East; Who's Who in Med. and Surgery; A.M.S.

WALDRON, Lawrence Root, Plant Breeder, N. Dak. Agri. Expt. Sta., State Coll. Sta., Fargo, N. Dak.

BREEDING OF DISEASE RESISTANT COMMON WHEAT. b. Ronald Twp., Mich., Oct. 20, 1875. s. David S. and Louisa A. (Root) W. Edn.: B.S., N. Dak. Agril. Coll., 1899; M.A., Univ. of Mich., 1903; Ph.D., Cornell Univ., 1928. m. Emma Augusta Grafenstein, Aug. 14, 1903. c.: Heber Grafenstein; Frederick Root; Charles Bird; Lois Amelia; Ruth Ann. Exp.: Asst. Prof., Botany and Zool., N. Dak. Agri. Coll.; Plant Breeder, N. Dak. Agri. Expt. Sta. Mem.: Fellow, A.A.A.S.; Fellow, Linean Soc. of London; Amer. Soc. Natural.; Amer. Genetic Assn.; N. D. Acad. Sci.; Sigma Xi; Alpha Zeta; Alpha Gamma Rho; Phi Kappa Phi.



Contrib. to: Amer. Naturalist; Sci.; Jour. Agri. Rsch.; Jour. Amer. Soc. Agron.; etc. Gen. Int.: Common Wheat Varieties Bred Resistant to Stem and Leaf Rust, Ceres, Rival, Premier, and Mida, have increased Farm Income some Hundreds of Millions of Dollars in the Hard Red Spring Wheat Area.

WALDELAND, Conrad Raymond, Prof. of Chem., Wash. and Jefferson Coll., Washington, Pa. ORGANIC CHEMISTRY.

WALDEN, Henry W., Exptl. Rsch. Engr., 74 W. 52nd St., N. Y., N. Y. ENGINEERING

WALDORF, Sigmund Kittner, Sr. Test Engr., Pa. Water and Power Co., Baltimore, Md. ENGINEERING.

WALKER, Anson Robertson, Prof. of Plant Pathol., Univ. of Western Ontario, London, Ont., Can. BOTANICAL SCIENCES.

WALKER, Arthur Meeker, Univ. Club, Washington, D. C. RENAL PHYSIOLOGY.

WALKER, Duard Lee, Assoc. Prof. of Preventive Med. and Med. Microbiol., Med. Schl., Univ. of Wis., Madison, Wis. INFECTIOUS DISEASES. b. Bishop, Calif., June 2, 1921. s. Fred H. and Anna L. (Shumate) W. Edn.: A.B., Univ. of Calif., Berkeley, 1943; M.D., ibid., 1945; M.A., ibid., 1947. m.: Dorothea McHenry, Aug. 11, 1945. c.: Douglas and Donna. Exp.: Tchng. Asst. in Anatomy, Univ. of Calif., Berkeley, Calif., 1946-47; Natl. Rsch. Council Fellow in Virus Diseases, Rockefeller Inst. for Med. Rsch., N. Y. C., 1947-49; U. S. Public Health Service, Rsch. Fellow in Microbiol., George Williams Hooper Foundation, San Francisco, Calif., 1949-50; Asst. Resident in Med., Stanford Univ., Dept. of Medicine, San Francisco Hospital, San Francisco, Calif., 1950-52; Assoc. Prof. of Preventive Med. and Med. Microbiol., Med. Schl., Univ. of Wis., Madison, Wis., 1952—. Mem.: Harvey Soc. of N. Y., A.A.A.S.; Sigma Xi; Phi Beta Kappa; Nu Sigma Nu. Contrib. to: Jour. of Exptl. Med.; Jour. of Immunol.; Jour. of Lab. and Clinical Med. War Record: Lt., M.C., U.S.N.R., 1945-46. Special Int.: Viral and Other Infectious Diseases; Immunol.; Immunity to Plague.

WALKER, Edmund Murton, Prof. Emer. of Zool., Royal Ontario Museum of Zool. and Palaeontology, 100 Queens Park, Toronto, Ont., Can. INVERTEBRATE ZOOLOGY; ENTOMOLOGY. b. Windsor, Ont., Can. Oct. 5, 1877. s. Byron Edmund and Mary (Alexander) W. Edn.: B.A., Univ. of Toronto, 1900; M.B., ibid., 1903. m. Ella Walzel, June 26, 1909 (dec. 1941.) m. 2nd, Norma Ford, Aug. 2, 1943. c.: Cynthia; Edmund Hugo; Elinor E., Mary A. Exp.: Lectr. in Zool., Univ. of Toronto, 1906-13; Asst. Prof., ibid., 1913-17; Assoc. Prof., ibid., 1917-26; Prof. of



Invertebrate Zool., ibid., 1926-48; Hd. Dept. of Biol. (later Zool.) ibid., 1934-48; Prof. Emer., ibid., 1948—. Hon. Pos.: Hon. Ed., Royal Can. Inst., 1924-45; Hon. Curator, Invertebrates, Royal Ont. Mus., 1931-49; etc. Mem.: Entomol. Soc. Ont.; Entomol. Soc. Amer.; Amer. Entomol. Soc.; Fellow, Royal Entomol. Soc.; A.A.A.S.; Fellow, Royal Soc. of Can. Contrib. to: Canadian Entomologist; Jour. Parasitol.; Annals Entomol. Soc. Amer.; Entomol. News; Trans. Royal Soc. of Can.; Canadian Jour. Zool.; Proc. N. S. Inst. of Sci. Special Int.: Taxonomy, Distribution and Life Histories of Odonata; Morphology of Primitive Insects; Taxonomy of Orthoptera; Myiasis of Wohlfahrtia.

WALKER, Egbert Hamilton, Rsch. Botanist and Assoc. Curator, U. S. Natl. Museum, Smithsonian Institution, Washington, D. C. BOTANY.

WALKER, Elda Rema, Assoc. Prof. Emer. Botany, Univ. of Nebr., 1325 N. 38th St., Lincoln, Nebr. BOTANY.

WALKER, George Warren, Pastor, Walden Presbyterian Church, 2065 Bailey Ave., Buffalo, N. Y.

WALKER, Harry Bruce, Prof. of Agri. Engrng. and Agri. Engrng. Expt. Sta., Coll. of Agri., Univ. of Calif., Davis, Calif. AGRICULTURAL ENGINEERING.

WALKER, Harry G., Entomologist and Group Leader, Agri. Chemicals, Whitemarsh Rsch. Labs., Pa. Salt Mfg. Co., Chestnut Hill, P. O. Box 4388, Philadelphia, Pa. ENTOMOLOGY.

WALKER, John Charles, Prof. of Plant Pathol., Univ. of Wis., Madison, Wis. PLANT PATHOLOGY. b. Racine, Wis., July 6, 1893. s. Samuel B. and Alice (Davis) W. Edn.: B.S., Univ. of Wis., 1914; M.S., ibid., 1915; Ph.D., ibid., 1918. m. Edna Dixon, Aug. 11, 1920. c.: John William (dec.). Exp.: Asst. to Prof., Univ. of Wis., Madison, Wis., 1914—; Scientific Asst. to Collaborator, U. S. Dept. of Agri., 1917—; Visiting Prof., Instituto Biologico, Sao Paulo, Brazil, 1952. Hon. Pos.: Natl. Rsch. Council; Governing Bd., Amer. Inst. of Biol. Sciences. Mem.: Natl. Acad. Sci.; Botanical Soc. Amer.; Amer. Phytopathol. Soc.; Amer. Soc. Naturalists; Genetics Soc. Amer.; Alpha Zeta; Sigma Xi; Gamma Alpha; Phi Sigma; Alpha Gamma Rho; Rotary. Author: Plant Pathol., 1950; Diseases of Vegetable Crops, 1952. Contrib. to: Amer. Jour. Botany; Phytopathol.; Soil Sci. Special Int.: Nature of Parasitism and Disease Resistance in Plants.

WALKER, Leva B., Assoc. Prof. Emer. Botany, Univ. of Nebr., 1325 N. 38th, Lincoln, Nebr. MYCOLOGY.

WALKER, Margaret Collyer, Mt. Wilson Observatory, 813 Santa Barbara St., Pasadena, Calif. GEOL-OGY, GEOGRAPHY.

WALKER, Norma Ford, Assoc. Prof. of Human Biol., Univ. of Toronto, Toronto, Ont., Can. ZOOLOGY.

WALKER, Rudger Harper, Dean of Agri. and Dir., Agri. Expt. Sta., Utah State Agril. Coll., Logan, Utah. AGRONOMY.

WALKER, Ruth I., Prof. of Bot., Univ. of Wis., Ext. Center, Milwaukee, Wis. BOTANY. d. F. M. and Mary Jane (Evans) W. b. 1896, Dansville, Mich. Edn.: A.B., Univ. of Mich., 1920; M.S., Univ. of Wis., 1924; Ph.D., ibid., 1926; Tch. H. S. Sci., Mishawaka, Ind., 1920-21; Instr. Biol., N. C. Coll. for Women, Greensboro, N. C., 1921-23; Instr. of Bot., Univ. of Wis., Madison, Wis., 1926-31; Asst. Prof., Bot., Univ. of Wis., Milwaukee Center, 1932-39; Assoc. Prof. Bot., ibid., 1939-46; Prof., 1946—. Mem.: Sigma Delta Epsilon; Sigma Xi; Delta Kappa Gamma; A.A.U.P.; A.A.A.S.; Bot. Soc. Amer.; Wis. Acad. of Sci., Arts and Letters; Alpha Xi Delta; A.A.U.W. Listed in: Who's Who Among Amer. Women; A.M.S. Special Int.: Cytology; Morphology; Embryology of Angiosperms; Chromosome Members.

WALKER, Walter Owen, Dir. of Rsch. and Development, Ansul Chemical Co., Marinette, Wis. CHEMISTRY.

WALL, Clifford Nathan, Assoc. Prof. of Physics, Univ. of Minn., Minneapolis, Minn. PHYSICS.

WALLACE, Atwell Milton, Asst. Prof. of Botany, Ohio Univ., Athens, Ohio. PLANT PHYSIOLOGY.

WALLACE, Donald Albin, Secy., Council Dental Therapeutics and Dir. Bureau Chem., Amer. Dental Assn., 222 E. Superior St., Chicago, Ill. PHARMACEUTICAL CHEMISTRY.

WALLACE, George B., 145 E. 54th St., N. Y., N. Y. PHARMACY.

WALLACE, James Merrill, Assoc. Plant Pathologist, Citrus Expt. Sta., Univ. of Calif., Riverside, Calif. PLANT PATHOLOGY.

WALLACE, Raymond H., Dept. of Botany, Univ. of Conn., Storrs, Conn. BOTANICAL SCIENCES.

WALLACE, Robert J., Cornell Univ., Ithaca, N. Y. MATHEMATICS.

WALLER, Adolph Edward, Ohio State Univ., Columbus, Ohio. BOTANICAL SCIENCES.

WALLIHAN, Ellis Flower, Asst. Prof. of Forestry, Cornell Univ., Ithaca, N. Y. PLANT PHYSIOLOGY.

WALLIN, Ivan Emanuel, Univ. of Colo., 4200 E. Ninth Ave., Denver, Colo. MEDICAL SCIENCES.

WALLINGFORD, Vernon Howard, Dir. of Organic Rsch., Mallinckrodt Chemical Works, 3600 N. Second St., St. Louis 7, Mo. ORGANIC CHEMISTRY.



WALLINGFORD, Vernon Howard, Dir. of Organic Rsch., Mallinckrodt Chemical Works, 3600 N. Second St., St. Louis 7, Mo. ORGANIC CHEMISTRY. b. Auburn, Maine, Sept. 26, 1897. s. John and Emma (Gowell) W. Edn.: B.S., Univ. of Maine, 1919; M.A., Harvard, 1920; Ph.D., *ibid.*, 1922. m. Jessie Prince, July 10, 1922. c.: Harlan P.; David G. Exp.: Rsch. Chemist, Mallinckrodt Chemical Works, 1923—. Mem.: Amer. Chem. Soc.; Fellow, A.A.A.S.; Phi Beta Kappa; Phi Kappa Phi; Tau Beta Pi; Alpha Chi Sigma. Contrb. to: Jour. Amer. Chem. Soc.; Sci.; Jour. Amer. Pharm. Assn.; Org. Syntheses. Gen. Int.: C.R.B. Fellow, Belgium, 1922-23; Recipient of Fifth Award of Chilean Iodine Ednl. Bureau, Inc., 1952. Special Int.: Opium Alkaloids, Reactions of Alkyl Carbonates, Synthetic Medicinals, X-ray Contrast Media.

WALLIS, Everett Stanley, A. Barton Hepburn Prof. of Organic Chem., Frick Chemical Lab., Princeton Univ., Princeton, N. J. CHEMISTRY.

WALLIS, George Carroll, Animal Nutritionist, Agri. Dept., Standard Brands, Inc., 595 Madison Ave., N. Y., N. Y. ANIMAL NUTRITION.

WALLIS, Wilson Allen, Prof. of Statistics and Econ., Schl. of Business, Univ. of Chicago, Chicago, Ill. ECONOMIC THEORY.

WALLIS, Wilson Dallam, Prof. of Anthropology, Univ. of Minn., Minneapolis, Minn. ANTHROPOLOGY.

WALLS, Gordon Lynn, Assoc. Prof. of Physiol. Optics and Optometry, Schl. of Optometry, Univ. of Calif., Berkeley, Calif. PHYSIOLOGICAL OPTICS.

WALSH, Joseph Leonard, Perkins Prof. of Math., 474 Widener Library, Harvard Univ., Cambridge 38, Mass. MATHEMATICS. b. Washington, D. C., Sept. 21, 1895. s. John Leonard and Sallie Elicott (Jones) W. Edn.: B.S., Harvard Univ., 1916; Ph.D., *ibid.*, 1920; M.S., Univ. of Wis., 1917. m. Elizabeth Strahorn, Apr. 2, 1946. c.: Sallie; Betty. Exp.: Asst. in Math., Harvard Univ., Cambridge, Mass., 1915-16; Instr., *ibid.*, 1917, 1919-20; 1921-24; Asst. Prof., *ibid.*, 1924-30; Assoc. Prof., *ibid.*, 1930-35; Prof., *ibid.*, 1935—. Honorary Position: Pres., Amer. Mathematic Soc., 1949-50. Mem.: Amer. Acad. of Arts and Sci.; National Acad. of Sci.; Phi Beta Kappa; Sigma Xi. Author: Interpolation and Approximation, 1935; The Location of Critical Points, 1950. Contrb. to: Trans. and Bull. of Amer. Math. Soc.; Proc. Natl. Acad. of Sci.; Annals of Math.; Amer. Jour. of Math.; Duke Math. Jour. Amer. Math. Monthly. War Record: Capt., U.S.N.R. Special Int.: Conformal Mapping; Approximation; Harmonic Functions; Circle Geometry.

WALSTER, Harlow Leslie, Dean, Schl. of Agri. and Dir., Agri. Expt. Sta., N. Dak. Agri. Coll., State Coll. Sta., Fargo, N. Dak. AGRICULTURE ADMINISTRATION.

WALTER, Elmer Valentine, Entomologist, U. S. Bureau Entomol. and Plant Quarantine, P. O. Box 495, Lafayette, Ind. ENTOMOLOGY.

WALTER, James Munday, Vegetable Crops Lab., Bradenton, Fla. BOTANICAL SCIENCES, AGRICULTURE.

WALTER, Otto Theodore, Prof. of Biol. and Chmn., Sci. Div., Macalester Coll., St. Paul, Minn. ZOOLOGY.

WALTER, Paul Alfred Francis, Vice-Dir., Schl. Amer. Rsch. and Museum N. Mex., Sante Fe, N. Mex. ANTHROPOLOGY.

WALTERS, Raymond, Pres., Univ. of Cincinnati, Cincinnati, Ohio. EDUCATION.

WALTERS, Winston Danae, Prof. of Chemistry, Dept. of Chem., Univ. of Rochester, Rochester, N. Y. CHEMISTRY. b. June 9, 1914, Houston, Tex. s. John H. and Ethel Oma (Pyle) W. Edn.: B.S., Washington Univ. (St. Louis), 1934; Ph.D. in Chemistry, Johns Hopkins Univ., 1937; Wm. R. Warner Fellowship from Johns Hopkins Univ., 1934-38; Same Fellowship for Resch. Work and Study at Univ. of Leipzig, 1937-38. m. Elizabeth Ballard of Baltimore on Aug. 31, 1945. Exp.: Instr. in Chem., Univ. of Rochester, Sept. 1938-Dec. 1941; Tech. Aide, NDRC-OSRD Dec. 1941-Nov. 1944. (On leave from Univ. of Rochester); Apptd. Asst. Prof. of Chem. of Univ. of Rochester Sept., 1942; Asst. Prof. of Chem., Nov. 1944-Sept. 1946; Assoc. Prof. Sept., 1946-51; Prof., *ibid.*, 1951—. Mem.: Sigma Xi; Phi Beta Kappa; A.C.S.; Tau Beta Pi; Gamma Alpha (Sci.); Phi Lambda Upsilon (Chem.). Contrb. to: Jour. of Amer. Chem. Soc. Ph.D. Dissertation: Thermal Decomposition of Organic Compounds. Travel: Europe. Listed in A.M.S. Special Int.: Reaction Kinetics; Vapor-phase Thermal Decompositions; Isotope Exchange Reactions.

WALTON, Arthur Calvin, Prof. of Biol., Knox Coll., Galesburg, Ill. PARASITOLOGY.

WALTON, George Willever, Dean and Prof. of Geol. and Botany, Albright Coll., Reading, Pa. GEOLOGY AND BOTANY.

WALTON, S. F., Exolon Co., Tonawanda, N. Y. CERAMICS.

WAMPLER, Elvin L., Entomologist, Dir. of Agri. Rsch. Lab., Union Oil Co., P. O. Box 630, Anaheim, Calif. ENTOMOLOGY.

WANG, Chi Che, Rsch. Biochemist in Chg. of a Section of Metabolic Lab., V. A. Hosp., Hines, Ill. BIOCHEMISTRY AND NUTRITION. b. Soochow, China, Oct. 30, 1894. d. Z. W. and J. D. (Siah) W. Edn.: B.A., Wellesley Coll., 1914; M.S., Univ. of Chicago, 1916; Ph.D., *ibid.*, 1919. Exp.: Part-time Asst., Univ. of Chicago, 1917-19; Instr., *ibid.*, 1919-20; Hd., Dept. of Chem., Michael Reese Hosp., 1920-30; Asst. Prof. in Biochem., Univ. of Cincinnati and Rsch. Fellow, Children's Rsch. Foundation, 1931-36; Rsch. Biochemist, Dept. of Surgery, Univ. of Cincinnati, 1936-40; Rsch. Biochemist, Northwestern Yeast Co., 1940-43; Asst. Prof. in Physiol., Northwestern Univ. Med. Schl., 1943-46; Rsch. Fellow in Biochem., Mayo Clinic, 1946-47; Rsch. Biochemist, V. A. Hosp., Hines, Ill. and Assoc. Prof. of Biochem., Northwestern Univ. Med. Schl., 1947—. Mem.: Phi Beta Kappa; Sigma Xi; Amer. Chem. Soc.; Fellow, A.A.A.S.; Soc. Exptl. Biol. and Med.; Amer. Soc. Biol. Chemists; Inst. Nutrition; Inst. Med.; Amer. Men in Sci.; Amer. Assn. Scientific Workers; Treas. Amer. Assn. Clinical Chem.; Sigma Delta Epsilon; Iota Sigma Pi; Tau Zeta Epsilon. Co-author: Proc. First Clinical ACTH Conf., 1950. Contrb. to: Jour. Home Econ.; Chem. Bull.; Proc. Inst. Med.; Amer. Jour. Diseases of Children; Jour. A.M.A.; Jour. Nutrition; Jour. Exptl. Med.; Arch. Internal Med. Special Int.: Metabolic Studies with special reference to Energy, Proteins and Electrolytes, made on Undernourished Children and Obese Men and Women; Working on Patients Suffering from Endocrine Disturbance; Biochemical Studies on Blood are also Conducted.

WANG, Chi-Wu, Rsch. Assoc., Harvard Forest, Petersham, Mass. ECOLOGY. b. Tientsin, China, May 4, 1913. s. Lu-Shui and Fu-Yuen (Li) W. Edn.: B.S., Tsing Hua Univ., 1933; M.S., Yale Univ., 1947; Ph.D., Harvard Univ., 1953. Exp.: Botanist, Fan Inst. of Biol., 1933-43; Assoc. Prof., National Kwangsi Univ., 1943-46; Lehman Fellow, Harvard Univ., 1949-50; Rsch. Assoc., Harvard Forest, Harvard Univ., 1951—. Mem.: Gamma Alpha. Author: Vegetation of Yunnan, 1939. Contrb. to: Ch. Jour. Botany; etc. Special Int.: Vegetation Studies; Ecotypic Differentiation of Forest Trees.

WANGENSTEEN, Owen Harding, Prof. and Hd., Dept. of Surgery, Univ. of Minn., Minneapolis, Minn. SURGERY.

WANLESS, Harold Rollin, Prof. of Geol., Univ. of Ill., Urbana, Ill. GEOLOGY.

WANN, Frank Burkett, Prof. of Botany and Plant Physiologist, Utah State Agri. Coll. and Utah Expt. Sta., Logan, Utah. PLANT PHYSIOLOGY.

WANNER, Henry Eckert, Prof. of Chem. and Geol., Drexel Inst., 8 Windsor Ave., Highland Park, Upper Darby, Pa. CHEMISTRY, GEOLOGY.

WARBURTON, Fred William, Prof. of Physics, Univ. of Redlands, Redlands, Calif. PHYSICS.

WARD, H. Lee, Owner and Mgr., Tie Co., Unadilla, N. Y. PHYSICAL CHEMISTRY.

WARD, Harold Bernard, Asst. Prof. of Geography, Northwestern Univ., Evanston, Ill. GEOGRAPHY.

WARD, Henry Peter, Assoc. Prof. of Chem., Catholic Univ. of Amer., Washington, D. C. ORGANIC CHEMISTRY.

WARD, Justus Conrad, Pharmacologist, Insecticide Div., P.M.A., U. S. D. A., Washington, D. C. PHARMACOLOGY.

WARD, Lavilla A., SPEECH AND HEARING.

WARD, Leon Stevens, Prof. and Hd., Dept. of Chem., Colo. Schl. of Mines, Golden, Colo. CHEMISTRY.

WARD, Lewis Edes, Mathematician, Aircraft Fire Control Section, R. D. and T., Naval Ordnance Test Sta., Inyokern, Calif. MATHEMATICS.

WARD, Merle S., Supt. of Public Schl., 117 Eighth Ave., S., Valley City, N. Dak. SOCIAL AND ECONOMIC SCIENCES.

WARD, Wesley Kyle, Jr., Hd., Cotton Fiber Rsch. Div., Southern Regional Rsch. Lab., 2100 Robert E. Lee Blvd., New Orleans, La. ORGANIC AND TEXTILE CHEMISTRY.

WARDELL, Emma L., Toxicologist, Chemical Warfare Service, Edgewood Arsenal, Md. TOXICOLOGY.

WARDEN, Carl John, Assoc. Prof. of Psychol., Columbia Univ., N. Y., N. Y. PSYCHOLOGY.

WARDLE, Harriet Newell, Asst. Curator, Univ. Museum, Univ. of Pa., Philadelphia, Pa. ARCHAEOLOGY AND TECHNOLOGY.

WARE, Arnold, County Hosp., Los Angeles, Calif. CLINICAL CHEMISTRY.

WARE, Lamar Mims, Hd., Dept. of Hort. Ala. Poly. Inst., Auburn, Ala. HORTICULTURAL CROPS. b. Marshallville, Ga., Aug. 10, 1895. s. George Alva and Nettie (Moncrief) W. Edn.: B.S., Ala. Poly. Inst., 1917; M.S., Ala. Poly. Inst., 1926; Grad. Study, Mich. State Coll. m. Mary Hall of Toombsboro, Ga. Sept. 20, 1922. d. W. A. Hall. c.: Lamar Moncrief; Mary Elizabeth; Frances Jenetta. Exp.: Instr., Ala. Poly. Inst., 1923-27; Prof. of Hort., Miss. State Coll., 1928-30; Prof. of Hort., Ala. Poly. Inst., 1930-31; Hd., Dept. of Hort. and Forestry, Ala. Poly. Inst., 1932-47; Hd., Dept. of Hort., 1947—. Hon. Pos.: Chmn., Southern Sect., Amer. Soc. Hort. Sci.; Exec. Com. Amer. Potato Assn.; Exp. Sta. Rep. on State Land-

Use Planning Com. Mem.: Amer. Soc. Hort. Sci.; Amer. Potato Assn.; Amer. Pomological Soc.; Assoc. Mem., Soc. Amer. Foresters; Ala. Acad. of Sci.; Forestry Comm., State C. of C.; Ala. Forestry Coun.; Phi Kappa Phi; Gamma Sigma Delta; Sigma Phi; Sigma Xi; Xi Sigma Pi; Kiwanis. Contrb. to: Prog. Farmer; Amer. Potato Jour.; Market Growers Jour. War Record: Lt. 167th Inf., 42nd Div., Chateau Thierry St. Michiel, Argonne, Sedan. Gen. Int.: Organizing the Ala. State-Wide Forestry Rsch. System; Method of Bleaching Pecans; Method of Dehydration of Sweet Potatoes; Rsch. in Vegetable Fertilizers and Cultural Methods. Spec. Work with Sweet Potatoes and Irish Potatoes; Developed Alayam Products. Listed in: A.M.S.; Who's Who in Amer.; Who Knows—and What; International Blue Book.

WAREHAM, Richard Thurman, Editor Sci. Books, D. C. Heath and Co., 285 Columbus Ave., Boston, Mass. BOTANY.

WARGA, Mary Elizabeth, Assoc. Prof. of Physics and Physicist in Chg. Spectroscopy Lab., Univ. of Pittsburgh, Pittsburgh, Pa. SPECTROSCOPY—PHYSICS.

WARING, James Howard, Prof. and Hd., Dept. of Horticulture, Coll. of Agri., Univ. of Maine, Orono, Maine. POMOLOGY.

WARING, James J., Prof. of Med., Schl. of Med., Univ. of Colo., 4200 E. Ninth Ave., Denver, Colo. INTERNAL MEDICINE.

WARNER, Arthur H., c/o Office of Naval Rsch., E. Green St., Pasadena, Calif. MANAGEMENT OF RESEARCH AND DEVELOPMENT.

WARNER, Edward, Pres., Interim Council, Provisional Internatl. Civil Aviation Organization, 1212 Dominion Sq. Bldg., Montreal, Que., Can.

WARNER, Glen Wones, Prof. of Physics, Chicago City Coll., Wilson Branch, Chicago, Ill. PHYSICS.

WARNER, J. C., Pres., Carnegie Inst. of Tech., Pittsburgh, Pa. ELECTROCHEMISTRY.

WARNER, Selden Richard, Prof. of Botany and Hd., Div. Biol., Sam Houston State Tchrs. Coll., Huntsville, Tex. BOTANY, ECOLOGY.

WARNER, Wellman Joel, Prof. of Sociol., Univ. Coll. and Grad. Schl. of Arts and Sci., N. Y. Univ., 812 Stuart Ave., Mamaroneck, N. Y. SOCIOLOGY. b. Jan. 13, 1897, Lyndonville, Vt. s. Geo. Andrew and Rose Mary (Monahan) W. Edn.: B.A., Geo. Wash. Univ., 1921; B.D., Yale Univ., 1924; Ph.D., London Schl. of Econ. and Polit. Sci., Univ. of London, 1929. m. Miriam Saint of N. Y. City, Nov. 26, 1930. d. Otto R. and Gertrude S. Saint. c.: Wellman J., Jr.; Rosalind. Exp.: U. S. Civil Service Comm., Wash., D. C., 1916-17; Treas. Dept., Wash., D. C., 1919-21; Dir. of Field Work, Yale Divinity Schl., New Haven, Conn., 1922-24; Hooker-Dwight Fellow, Yale Univ., London, England, 1924-26; Prof. of Social Ethics, Ohio Wesleyan Univ., Delaware, Ohio, 1930-38; Prof. of Sociol., Chmn., Div. of Social Sci., Dickinson Coll., Carlisle, Pa., 1938-46; Prof. and Hd., Dept. of Sociol., Grad. Schl. of Arts and Sci. and Univ. Coll., N. Y. Univ., 1946—. Hon. Pos.: Natl. Officer, Omicron Delta Kappa, 1934-36; Trustee, Moreno Inst., N. Y. Mem.: A.A.A.S.; Amer. Sociological Soc.; Sci. Advisory Com., Astor Foundation; Amer. Anthropological Assn.; Omicron Delta Kappa. Author: The Wesleyan Movement in the Industrial Revolution", Longmans, Green, London, 1930; N. Y., 1930. Contrb. to: Encyc. of the Social Sciences. Ph.D. Dissertation: Relig. and the Indus. Revolution in England in the Eighteenth Century. War Record: U. S. Army, Amer. Expeditionary Forces, France, 1917-19. Travel: England; France; Germany. Hobbies: Golf; Fishing. Listed in: W.W.A.; Directory of Amer. Scholars.

WARREN, Andrew Jackson, Assoc. Dir., Internatl. Health Div., Rockefeller Foundation, 49 W. 49th St., N. Y., N. Y. PUBLIC HEALTH.

WARREN, Arthur Emerson, Prof. of Zool. and Hd. Dept., McMaster Univ., Hamilton, Ont., Can. ZOOLOGY, COMPARATIVE ANATOMY.

WARREN, B. E., Dept. of Physics, Mass. Inst. of Tech., Cambridge, Mass. **PHYSICS.**

WARREN, Charles Hyde, Prof. of Mineralogy and Dean Emer., Sheffield Scientific Schl., Yale Univ., New Haven, Conn.; R. F. D. No. 2, Litchfield, Conn. **MINERALOGY.**

WARREN, Don C., Prof. of Poultry Genetics, Kans. State Coll., Manhattan, Kans. **POULTRY GENETICS., PHYSIOLOGY.**

WARREN, Herbert Stetson, Assoc. Prof. of Anatomy, Hahnemann Medical Coll., Philadelphia, Pa. **HUMAN ANATOMY.**

WARREN, Howard Saunders, retired, 18 Brunswick Rd., Montclair, N. J. **Electrical ENGINEERING.**

WARREN, Jean, Asst. Prof. of Home Econ. and Hd. Div., Univ. of Calif., Davis, Calif. **FAMILY ECONOMICS.**

WARREN, Marshall Ray, Pharmacologist, Wm. S. Merrell Co., Cincinnati, Ohio. **PHARMACOLOGY.**

WARREN, Neil D., Assoc. Prof. and Hd., Dept. of Psychol., Univ. of Southern Calif., Los Angeles, Calif. **PSYCHOLOGY.**

WARREN, Paul Alanson, Prof. of Botany and Hd. Dept. of Biol., Tufts Coll., Medford, Mass. **GENETICS.**

WARREN, Percy Holmes; Dean of the Summer Session, Hd., Dept. of Biology, Madison Coll., Harrisonburg, Va. **BIOLOGY.** b. Portsmouth, Va., April 6, 1906. s. John Lloyd and Etta Lena (Minton) W. Edn.: B.S., Wm and Mary, 1930; M.A., Columbia, 1940; Ed.D., *ibid.*, 1952. m. Alberta Marie Parker of Portsmouth, Va., Mar. 10, 1927. d. Mary Ann and Millard Parker. c. Nancy Jane; Mary Virginia; Alberta Moran. Exp.: Instr. in Sci., Cape Charles, Va. H. S., 1930-32; Prin., Independence, Va. H. S., 1933-34; Instr. in Sci., Portsmouth, Va. H. S., 1934-37; Prin. Cape Charles, Va. H. S., 1937-42; Regional Supvr. of H. S., Va. State Dept. of Edn., 1942-44; Hd., Dept. of Biology, Dean of the Summer Session, Madison Coll., 1944. Mem.: A.A.U.P.; Va. Acad. of Sci.; Natl. Assoc. for Resch. in Sci. Tchng.; Natl. Sci. Tchrs. Assn.; N.E.A.; Va. Edn. Assn.; Amer. Assn. of Biol. Tchrs.; Sigma Nu; Rotary; Mason; Shriner; Elk; Kappa Delta Pi; Phi Delta Kappa. Ph.D. Dissertation: The Preparation of Science Tchrs. for the H. Schls. of Va.

WARREN, Shields, Asst. Prof. of Pathol., Harvard Med. Schl., 195 Pilgram Rd., Boston, Mass. **PATHOLOGY.**

WARREN, Stanley W., Prof. of Farm Management, Cornell Univ., Ithaca, N. Y. **AGRICULTURAL ECONOMICS.**

WARREN, William Dwight, Hd. of Chem. Dept., Western Coll., for Women, E. Chestnut St., Oxford, Ohio. **CHEMISTRY.** b. July 9, 1896, Akron, N. Y. s. Orson L. and Fannie (Osborne) W. Edn.: B.S., 1920, M.S., 1926, Ph.D., 1930, Cornell Univ. m. Marjory T. Hastings of Owego, N. Y., July 19, 1924. d. Mr. and Mrs. J. M. Hastings. c.: Dorothy H.; William Dwight, Jr. Exp.: Analyst, Cuban Amer. Sugar Co., Delicias, Cuba, 1920-21; Analyst, Dairymen's League, Inc., Utica, N. Y., 1921-22; Analyst, Wm. S. Murray, Inc., Utica, N. Y., 1922-25; Instr. in Chem. Dept. of W. Coll. for Women, Oxford, Ohio, 1926-29; Hd., Chem. Dept., E. C. S. Coll., Ada, Okla., 1930-44; Hd., Chem. Dept., W. Coll., Oxford, Ohio, 1944—. Mem.: Amer. Chem. Soc.; Phi Delta Kappa. Author: Laboratory Manual, Introductory Chemistry, 1936. Ph.D. Dissertation: Equilibrium in Binary Systems with Ammonia as the Volatile Component. War Record: Com. 2nd Lt., Nov., 1917; Served in France, 1918 with Co. D, 23th Inf., 1st Div., Recvd. Silver Star with Oak Leaf; Wounded in Action, Oct. 9, Meuse-Argonne. Hobbies: Bridge; Mystery Stories; Gardening. Listed in: A.M.S.

WARTERS, Mary, Prof. and Hd., Biol. Dept., Centenary Coll., Shreveport, La. **CYTOGENETICS.**



b. Rome, Ga., Oct. 18, 1902. d. Thomas and Willie (Gholson) W. Edn.: A.B., Shorter Coll., 1923; M.A., Ohio State Univ., 1925; Ph.D., Univ. of Tex., 1943. Exp.: Grad. Asst. in Zool., Ohio State Univ., 1923-25; Instr. in Biol., Winthrop Coll., 1925-27; Instr. of Biol., Centenary Coll., 1927-30; Asst. Prof., *ibid.*, 1930-35; Assoc. Prof., *ibid.*, 1935-45; Prof., *ibid.*, 1945—; Hd. Biol. Dept., *ibid.*, 1947—. Mem.: Genetics Soc. Amer.; A.A.-A.S.; La. Acad. Sci.; Sigma Xi; Pi Gamma Mu. Contbr. to: Jour. Heredity. Special Int.: Chromosome Mapping; Chromosomal Aberrations.

WARWICK, Charles Laurence, Exec. Secy., Amer. Soc. Testing Materials, 1916 Race St., Philadelphia, Pa. **ENGINEERING.**

WASHBURN, Albert Lincoln, Dir., Arctic Inst. of N. Amer., 805 Sherbrooke St., W. Montreal, Que., Can. **GEOMORPHOLOGY, GLACIAL GEOLOGY.**

WASHBURN, Alfred Hamlin, Rsch. Prof. Pediatrics, Schl. of Med., Univ. of Colo., 4200 E. Ninth Ave., Denver, Colo. **PEDIATRICS.**

WASHBURN, Edward Roger, Prof. of Chem., Univ. of Nebr., Lincoln, Nebr. **CHEMISTRY.**

WASHBURN, Lloyd E., Prof. of Animal Nutrition, Colo. A. and M. Coll., Ft. Collins, Colo. **BIOCHEMISTRY, NUTRITION.**

WASHBURN, Ruth W., Consultant in Child Development, Shady Hill Schl., Cambridge, Mass. **CHILD PSYCHOLOGY.**

WASHBURN, Sherwood L., Assoc. Prof. of Anthropol., Univ. of Chicago, Chicago, Ill. **ANTHROPOLOGY.**

WASTENEYS, Hardolph, Prof. of Biochem. and Hd. Dept., Univ. of Toronto, Toronto, Ont., Can. **MEDICINE.**

WATERFALL, Wallace, Dir. of Rsch., Celotex Corp., 120 S. La Salle St., Chicago, Ill. **PHYSICS, ACOUSTICS.**

WATERMAN, Alan Tower, 4616 Sedgwick St., N. W., Washington, D. C. **PHYSICS, EDUCATION.**

WATERMAN, Alma May, Assoc. Pathologist, Div. Forest Pathol., U. S. D. A., 360 Prospect St., New Haven, Conn. **FOREST PATHOLOGY.**

WATERMAN, Frank N., retired, 25 Norwood Ave., Summit, N. J. **ELECTRICAL ENGINEERING.**

WATERMAN, Harriet Cutler, Assoc. Prof., Dept. of Zool., Wellesley Coll., Wellesley, Mass. **ZOOLOGICAL SCIENCES.**

WATERMAN, Leroy, Prof., Univ. of Mich., Ann Arbor, Mich. **HISTORY, PHILOSOPHY OF SCIENCE.**

WATERS, Campbell Easter, retired, 5812 Chevy Chase Parkway, Washington, D. C. **CHEMISTRY.**

WATERS, Charles White, Prof. of Botany and Forestry, Mont. State Univ., Missoula, Mont. **FOREST PATHOLOGY.**

WATERS, Ralph Milton, Prof. of Anesthesiology, Wis. General Hosp., Univ. of Wis., 1800 University Ave., Madison, Wis. **ANESTHESIOLOGY.**

WATKEYS, Charles William, Prof. of Math., Univ. of Rochester, Rochester, N. Y. **MATHEMATICS, PHYSICS.**

WATKINS, Ralph K., Prof. of Edn., Univ. of Mo., Columbia, Mo. **SECONDARY EDUCATION.**

WATKINS, W. Warner, 206 E. Moreland St., Phoenix, Ariz. MEDICAL SCIENCES.

WATSON, Cecil James, Prof. and Hd., Dept. of Med., Univ. of Minn., Minneapolis, Minn. INTERNAL MEDICINE.

WATSON, Charles Hoyt, Pres., Seattle Pacific Coll., Seattle, Wash. EDUCATION, PHYSICS.

WATSON, Earnest C., Prof. of Physics, Dean of Faculty, Calif. Inst. of Tech., Pasadena, Calif. PHYSICS.

WATSON, Fletcher Guard, Asst. Prof. of Edn., Harvard Univ., Cambridge, Mass. ASTRONOMY, EDUCATION.

WATSON, Floyd Rowe, Prof. Emer. Physics, Univ. of Ill., Urbana, Ill.; 1504 Milan Ave., S., Pasadena, Calif. ACOUSTICS.

WATSON, Gladys Hipple, Instr. Psychol. Counsellor, Brooklyn Coll., Bedford Ave. and Ave. H, Brooklyn, N. Y. PSYCHOLOGICAL COUNSELLING.

WATSON, John Wilbur, Prof. of Inorganic Chem. and Hd., Dept., Va. Poly. Inst., Box. 75, Blacksburg, Va. CHEMISTRY. b. June 18, 1888, Chatham, Va. s. Fletcher Bangs and Pattie Booker (Tredway) W. Ancestry: English and Scotch-Irish. Edn.: Student, Va. Poly. Inst., 1905-07; B.A., Univ. of Va., 1910; M.A., *ibid.*, 1910; Ph.D., *ibid.*, 1913. m. Anna Cora Davidson (dec.) of Blacksburg, Va., 1916. d. Robert James and Anna (McBryde) Davidson. c.: John Wilbur, Jr.; Robert James; Marshall Tredway; Charles Neil. m. (2nd) Ida B. Greenlaw, June 23, 1948. d. Edward R. and Alice (Brittain) G. of Miss. Exp.: Asst. in Chem., Univ. of Va., 1909-10; Instr., *ibid.*, 1910-13; Prof., Inorganic Chem., Va. Poly. Inst., 1913—; Hd. of Dept., *ibid.*, 1925—; Dir. of Summer Quarter, *ibid.*, 1923-42. Hon. Pos.: Mem., Sec., Adv. Bd., V.P.I. Y.M.C.A.; Chmn., Bd. of Dirs., Farmers and Merchants Natl. Bank, Blacksburg, Va. Mem.: Amer. Chem. Soc., Councilor, Va. Blue Ridge Sect.; Fellow, A.A.A.S.; A.A.U.P.; Fellow, Amer. Inst. of Chem.; Va. Acad. of Sci.; Phi Beta Kappa; Phi Kappa Phi; Phi Lambda Upsilon. Hon. Mem.: Phi Beta Pi; Ravens, Univ. of Va.; V.P.I. Sci. Club; Lions Club; Univ. Club; Vestryman, Episcopal Ch. Ph.D. Dissertation: The Abstraction of Potassium During Sedimentation. Travel: U. S. Recreations and Hobbies: Tennis; Hiking; Gardening. Listed in: A.M.S.; Who's Who in Amer.; Chem. Who's Who; Hist. of Va. and Va. Biog.

WATSON, K. M., Dir. Rsch. of Pure Oil Co., Crystal Lake, Ill. CHEMICAL ENGINEERING.

WATSON, Norman Allen, Assoc. Prof. of Physics, Univ. of Calif., 405 Hilgard Ave., Los Angeles, Calif. ACOUSTICS.

WATSON, Robert Barden, Asst. Prof. of Physics, Univ. of Tex., Austin, Tex. ACOUSTICS.

WATSON, Robert Fletcher, Assoc. Prof. of Med., Cornell Univ. Med. Coll., N. Y., N. Y. MEDICAL SCIENCES.

WATSON, Robert J., Carter Oil Co., Tulsa, Okla. APPLIED GEOPHYSICS.

WATSON, Sheppard Arthur, Friends Univ., Wichita, Kans. ENTOMOLOGY.

WATSON, William Weldon, Prof. of Physics, and Dir., Sloane Physics Lab., Yale Univ., New Haven, Conn. PHYSICS.

WATT, Lucy Jeannette, Prof. of Biol., Western Coll., Oxford, Ohio. ANATOMY.

WATTERS, Leon Laizier, 1010 Fifth Ave., N. Y., N. Y. CHEMISTRY.

WATTS, Chester Burleigh, Astronomer, Naval Observatory, Washington, D. C. MERIDIAN ASTRONOMY.

WATTS, Lyle Ford, Chf., U. S. Forest Service, 1911 R St., N. W., Washington, D. C. FORESTRY.

WATTS, Otto O., Prof. of Chem. and Chmn., Physical Sci., Hardin-Simmons Univ., Abilene, Tex. COLLOID CHEMISTRY.

WATTS, Ralph L., Emer. Dean, Schl. of Agri., Pa. State Coll., 225 E. Foster Ave., State College, Pa. OLERICULTURE.

WATTS, Ruth Maude, Rsch. Chemist, Pulp Div., Weyerhaeuser Timber Co., 1302 21st Ave., Longview, Wash. CHEMISTRY, ORGANIC.

WAUGH, Albert Edmund, Dean, Coll. of Arts and Sci. and Prof. of Econ., Univ. of Conn., Storrs, Conn. ECONOMIC THEORY.

WAUGH, L. M., retired, 1475 Roosevelt Ave., Pelham Manor, N. Y. ORTHODONTICS.

WAY, Edward Leong, Instr. in Pharmacol., Schl. of Med., Geo. Washington Univ., Washington, D. C. PHARMACOLOGY.

WAY, Harold E., Chmn., Dept. of Physics, Union Coll., Schenectady 8, N. Y. SINGLE CRYSTALS OF ZINC. b. Colchester, Ill., Jan. 31, 1904. s. Clarence O. and Margaret (Gibbs) W. Edn.: B.S., Knox Coll., 1925; M.S., Univ. of Pittsburgh, 1927; Ph.D., Univ. of Iowa, 1937. m. Fern Robbins, 1926. c.: Mary Ann; John H.; Jane E. Exp.: Chmn., Dept. of Physics, Knox Coll., Galesburg, Ill., 1935-48; Asst. to Pres., Knox Coll., 1943-46; Acting Pres., *ibid.*, 1946-47; Chmn., Dept. of Physics, Union Coll., Schenectady, N. Y., 1947—. Mem.: Sigma Xi. Contrb. to: Physical Rev.

WAYNICK, Arthur H., Pa. State Coll., State College, Pa. COMMUNICATIONS.

WEAR, Luther Ewing, Assoc. Prof. of Math., Calif. Inst. of Tech., Pasadena, Calif. GEOMETRY.

WEARN, Joseph Treloar, Dean and Prof. of Med., Med. Schl., Western Reserve Univ., Lakeside Hosp., Cleveland, Ohio. INTERNAL MEDICINE.

WEATHERBY, Charles Alfred, Rsch. Assoc., Gray Herbarium, Harvard Univ., 79 Garden St., Cambridge, Mass. TAXONOMY OF FERNS.

WEATHERBY, Jesse Howell, Assoc. Prof. Rsch. Pharmacol., Med. Coll. of Va., Richmond, Va. PHARMACOLOGY.

WEATHERILL, Philip Francis, Prof. of Chem., Univ. of Mich., Ann Arbor, Mich. PHYSICAL CHEMISTRY.

WEATHERWAX, James Lloyd, Asst. Prof., Univ. of Pa., Philadelphia, Pa. RADIUM-X-RAYS.

WEATHERWAX, Paul, Prof. of Botany, Ind. Univ., Bloomington, Ind. PLANT MORPHOLOGY.

WEAVER, Charles Edwin, Prof. of Paleontology, Univ. of Wash., Seattle, Wash. PALEONTOLOGY, GEOLOGY.

WEAVER, Elmer R., Prin. Chemist, Natl. Bureau of Standards, U. S. Dept. of Commerce, Washington, D. C. GAS CHEMISTRY.

WEAVER, George Arthur, District Geologist, Tex. Pure Oil Co., Tyler, Tex. PETROLEUM GEOLOGY.

WEAVER, Homer Ellsworth, Assoc. Prof. of Psychol., Oberlin Coll., Oberlin, Ohio. PSYCHOLOGY.

WEAVER, John Ernst, Prof. of Plant Ecology, Univ. of Nebr., Lincoln, Nebr. PLANT ECOLOGY.

WEAVER, Palmer Calvin, Prof., Schl. of Edn., Pa. State Coll., State College, Pa. COLLEGE ADMINISTRATION.

WEAVER, Paul, Chf. Geophysicist, Gulf Oil Corp., Box 2100, Houston, Tex. GEOPHYSICS.

WEAVER, R. A., Ferro Corp., 4150 E. 56th St., Cleveland, Ohio. CERAMICS.

WEBB, Byron H., Natl. Dairy Corp. Rsch. Labs., Oakdale, L. I., N. Y. **DAIRY TECHNOLOGY.**

WEBB, Hanor A., Prof. of Chem. and Sci. Edn., Geo. Peabody Coll. for Tchrs., Nashville, Tenn. **CHEMISTRY.** b. Nashville, Tenn., April 1, 1888. s. Alonzo C. and Ellen (Hanor) W. m. Willard Holmes Cummings of Trenton, Tenn., Aug. 11, 1914. c.: John Hanor, Ruth Carolyn, Mary Willard, Martha Katherine. Edn.: A.B., Univ. of Nashville, 1908; M.S., Univ. of Chicago, 1911; Ph.D., Geo. Peabody Coll., 1920. Exp.: Tchr. in Public Schls. and Asst. in Chem. Labs., Univ. of Nashville and Univ. of Chicago, to 1912; Prof. of Psychol. and Edn., W. Tenn. State Norm. Schl., 1912-14; Prof. of Chem. and Biol., 1914-17; Hd. of Dept. of Chem. and Sci. Edn., Geo. Peabody Coll. for Tchrs., Nashville, 1917— Editor: *Current Sci.*, 1927-47; *Keystone Visual Units in Gen. Sci.*; *Staff, Compton's Encyc. Mem. A.A.A.S. (Fellow); N.E.A. (Chmn., Sci. Div., 1925-26); Amer. Chem. Soc. (Secy., Nashville Section, 1930-46; Chmn., 1951); Natl. Sci. Tchrs. Assn. (Sec., 1946-52); Natl. Assn. Rsch. in Sci. Tchng. (Pres., 1937); Phi Delta Kappa; Kappa Delta Pi; Tenn. Acad. of Sci. (Pres., 1946); Sou. Assn. Sci. and Ind. Author: *Quantitative Analysis of Gen. Sci.*, 1921; *Early Steps in Sci.* (with J. J. Didecot), 1924; *The H. S. Sci. Lib.* (annual) 1924-44; *Sci. by Observation and Experiment* (with R. O. Beauchamp), 1935. Ph.D. Dissertation: *Gen. Sci. Instrn. in the Grades.**

WEBB, Harold Worthington, Prof. of Physics, Columbia Univ., N. Y., N. Y. **PHYSICS.**

WEBB, Robert William, Prin. Technologist in Chg. Quality and Standardization Rsch., Production and Marketing Admin., U. S. D. A., Washington, D. C. **COTTON FIBER TECHNOLOGY.**

WEBB, William Snyder, Hd., Dept. of Physics and Anthropol., Univ. of Ky., Lexington, Ky. **PHYSICS, ANTHROPOLOGY.**

WEBBER, John Milton, Cytologist, Div. Cotton and Other Fiber Crops, U. S. D. A., 3960 Lemon St., Riverside, Calif. **CYTOLOGY, TAXONOMY.**

WEBBER, Ray Track, retired, 16 Thorndike St., Beverly, Mass. **ENTOMOLOGY.**

WEBBINK, Paul, Mem. Staff, Social Sci. Rsch. Council, 726 Jackson Pl., N. W., Washington, D. C. **ECONOMICS.**

WEBER, Arthur D., Hd., Dept. Animal Husbandry, Kans. State Coll., Manhattan, Kans. **ANIMAL HUSBANDRY.**

WEBER, Ernst, Prof. and Hd., Elec. Engrng. Dept., Poly. Inst. of Brooklyn, 99 Livingston St., Brooklyn, N. Y. **ELECTROPHYSICS.**

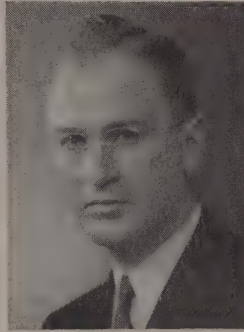
WEBER, Frederick Clarence, Rsch. Consultant, Keratene Co., Winsted, Conn. **CHEMISTRY, MEDICINE.**

WEBER, George Frederick, Prof., Plant Pathol. Dept., Univ. of Fla., Gainesville, Fla.

WEBER, Harold Christian, Prof. of Chem. Engrng., Mass. Inst. of Tech., Cambridge, Mass. **CHEMICAL ENGINEERING.**

WEBER, Neal Albert, Assoc. Prof. of Anatomy, Univ. of N. Dak., University Sta., Grand Forks, N. Dak. **ENTOMOLOGY.**

WEBER, Robert L., Assoc. Prof. of Physics, Pa. State Coll., State Coll., Pa. **PHYSICS: HEAT, ATOMIC AND NUCLEAR PHYSICS, ELECTRON MICROSCOPY.** b. Dayton, Ohio, Mar. 1, 1913. s. William A. and Justina A. (Lemerman) W. Edn.: B.A., Yale Univ., 1934; M.A., *ibid.*, 1936; Ph.D., Pa. State Coll., 1938. m. Marion Fleming, Aug. 19, 1949. c.: Robert Fleming; Karen Louise. Exp.: Asst. in Physics, Pa. State Coll., 1936-38; Instr., *ibid.*, 1938-42; Asst. Prof., *ibid.*, 1942-47; Assoc. Prof., *ibid.*, 1947— Hon. Pos.: Editorial Bd., Rev. Scientific Instruments; Trustee, Westminister Foundation; Visual Aids Com. of A.A.P.T. Mem.: Sigma Xi; Electron Microscope Soc. Amer.; A.A.U.P.; Gamma Alpha. Author: *Temperature Measurement and Control*, 1941; *Heat and Temperature Measurement*, 1950. Co-author: *Coll. Physics*, 1952; *Practical Physics*, 1943. Contrb. to: *Physical Rev.*; *Rev. Scientific Instruments*; *Jour. Optical Soc. Amer.*; *Amer. Jour. Physics*. Special Int.: *Coll. Physics Curriculum Bldg.*; *Temperature Measurement*; *Electron Microscopy*; *Editorial Work and Textbook Writing*; *Instructional Film Techniques.*



WEBSTER, David Locke, Prof. of Physics, Stanford Univ., Stanford, Calif. **PHYSICS.** b. Boston, Mass., Nov. 6, 1888. s. Andrew Gerrish and Lizzie Florence (Briggs) W. Edn.: A.B., Harvard, 1910; Ph.D., *ibid.*, 1913. m. Anna Cutler Woodman, June 12, 1912. 2nd. Olive Durbin Ross, Sept. 18, 1951. c.: Nancy Felsovanyi; Helen Feeley; David L.; Cutler. Exp.: Instr., Harvard Univ., Cambridge, Mass., 1909-12; Asst. in Physics, *ibid.*, 1911-14; Instr. in Physics, *ibid.*, 1915-17; Asst. Prof. of Physics, Univ. of Mich., Ann Arbor, Mich., 1917; Asst. Prof., Mass. Inst. Tech., Cambridge, Mass., 1919-20; Prof. of Physics, Stanford Univ., Stanford, Calif., 1920—; Exec. Hd. of Dept., *ibid.*, 1920-45; Hd. Physicist, Signal Corps, N. S. Army, 1942-43; Chief Physicist, Ordnance Dept., *ibid.*, 1943-45. Hon. Pos.: Chmn., Sec. B., A.A.A.S., 1932; Vice Pres., A.A.P.T., 1933-34; Pres., A.A.P.T., 1935-36. Mem.: Natl. Acad. Sci.; Amer. Philos. Soc.; Amer. Acad. Arts and Sci.; Amer. Physical Soc.; Amer. Assn. Physics Tchrs.; A.A.A.S.; Amer. Geog. Soc.; Fellowship Forum of Palo Alto, Calif.; Commonwealth Club of Calif. Author: *General Physics for Coll.*, with E. R. Drew and H. W. Farwell, 1923. Contrb. to: *Physical Review*; *Amer. Jour. of Physics*. War Record.: First Lt., Air Service, Signal Reserve Corps, 1917; Capt., 1918. Gen. Int.: Researches on X-rays, formulating many of the laws of the production of linespectrum X-rays. Special Int.: *Atomic Structure, Especially in Relation to X-Ray; Electromagnetic Theory.*

WEBSTER, George L., Dept. of Chem., Pharmacy Schl. of Ill., 808 S. Wood St., Chicago 12, Ill. **CHEMISTRY.**

WEBSTER, Hutton, Lectr. Emer. Sociology, Stanford Univ., Calif., 2025 Cowper St., Palo Alto, Calif. **SOCIAL ANTHROPOLOGY.**

WEBSTER, Jerome Pierce, Asst. Prof. Clinical Surgery, Coll. of Physicians and Surgeons, Columbia Univ., N. Y., N. Y. **PLASTIC SURGERY.**

WECHSLER, David, Asst. Prof. of Psychol., N. Y. Univ. Coll. of Med., N. Y., N. Y. **PSYCHOLOGY.**

WECHSLER, Israel Spanier, Clinical Prof. of Neurology, Columbia Univ., N. Y., N. Y. **NEUROLOGY.**

WEDDERBURN, Joseph Henry MacLagan, Prof. Emer. Math., Princeton Univ., Fine Hall, Princeton, N. J. **ALGEBRA.**

WEDEL, Waldo Rudolph, Assoc. Curator, Div. Archaeol., U. S. Natl. Museum, Washington, D. C. **ARCHAEOLOGY.**

WEDUM, Arnold Gerhard, Chf., Safety Div., Camp Detrick, Frederick, Md. **BACTERIOLOGY AND MEDICINE.**

WEED, Alfred Cleveland, retired, Cassadaga, Fla. **ICHTHYOLOGY.**

WEEKS, Dorothy Walcott, Prof. and Hd., Dept. of Physics, Wilson Coll., Chambersburg, Pa. **SPECTROSCOPY.**

WEEKS, Lewis George, Chf. Rsch. Geologist, Standard Oil Co. of N. J., 30 Rockefeller Plaza, N. Y., N. Y. **PETROLEUM GEOLOGY.**

WEEKS, Mary Elvira, Asst. Librarian, Kresge-Hooker Scientific Lib., Wayne Univ., Detroit, Mich. **HISTORY OF SCIENCE.**

WEEKS, Paul Thorne, Chf. Engr., Receiving Tube Div., Raytheon Mfg. Co., 55 Chapel St., Newton, Mass. **PHYSICS.**

WEESE, Asa Orrin, Prof. of Zool., Dept. Zool. Sci., Univ. of Okla., Norman, Okla. **ECOLOGY.**

WEGEL, Raymond Lester, 463 West St., N. Y., N. Y. **PHYSICS.**

WEGLEIN, David Emrich, Supt. Public Instrn., Dept. of Edn., 3 E. 25th St., Baltimore, Md. **EDUCATION.**

WEHMEYER, Lewis Edgar, Assoc. Prof. of Botany, Univ. of Mich., Ann Arbor, Mich. **MYCOLOGY.**

WEHR, E. E., Zool. Div., B.A.L., A.R.C., Beltsville, Md. **VETERINARY PARASITOLOGY—POULTRY PARASITES.**

WEHRLE, Lawrence Paul, Assoc. Prof. of Entomol. and Assoc. Entomologist, Agri. Expt. Sta., Univ. of Ariz., Tucson, Ariz. **ENTOMOLOGY.**

WEICHERT, Charles Kipp, Prof. of Zool., Univ. of Cincinnati, Cincinnati, Ohio. **ENDOCRINOLOGY, EMBRYOLOGY.**

WEIDA, Franck Mark, Prof. and Hd., Dept. of Statistics, Geo. Washington Univ., Washington, D. C. **MATHEMATICAL AND APPLIED STATISTICS.**

WEIDLEIN, Edward Ray, Pres., Mellon Inst. of Indus. Rsch., 4400 Fifth Ave., Pittsburgh 13, Pa. **CHEMISTRY AND CHEMICAL ENGINEERING.** b. Augusta, Kans., July 14, 1887. s. Edward and Nettie (Lemon) W. Edn.: B.A., Univ. of Kans., 1909; M.A., *ibid.*, 1910. Hon. Deg.: D.Sc., Tufts Coll., 1924; LL.D., Univ. of Pittsburgh, 1930; D.Sc., Rutgers Univ., 1937; D.Sc., Waynesburg Coll., 1939; D.Sc., Univ. of Wichita, 1945; LL.D., Wash. and Jefferson Coll., 1947; Dr. of Engrng., Rensselaer Poly. Inst., 1949; D.Sc., Southwestern Coll., 1952; D.Sc., Philadelphia Coll. of Pharm. and Sci., 1952; D.Sc., Univ. of Miami, 1953. m. Hazel Butts, Apr. 24, 1915. c.: Edward R., Jr.; Robert Butts; John David. Exp.: Indus. Fellow, Univ. of Kans., 1909-10; Rsch. on the Ductless Glands, 1910-12; Sr. Fellow of Mellon Inst., 1912-16; Asst. Dir., Mellon Inst., Pittsburgh, Pa., 1916; Assoc. Dir. and Acting Dir., *ibid.*, World War I; On Mar. 12, 1918 was appointed Chem. Expert to the War Industries Bd.; Dir., Mellon Inst., 1921-51; Pres., *ibid.*, 1951—. Mem.: Amer. Inst. Chemists; Soc. Chem. Indus.; Fellow, Royal Soc. Arts; Electrochem. Soc.; Alpha Chi Sigma; Phi Lambda Upsilon; Pi Upsilon; Sigma Xi. Author: Sci. in Action; Glances at Indus. Rsch. Special Int.: Chem. and Chem. Engrng.

WEIGEL, Charles Adolph, Sr. Entomologist, Bureau Entomol. and Plant Quarantine, Agri. Rsch. Center, U. S. D. A., Beltsville, Md. **ENTOMOLOGY.**

WEIL, George Leon, Chf., Reactors Section, Div. Rsch., U. S. Atomic Energy Commn., 1901 Constitution Ave., Washington, D. C. **PHYSICS.**

WEIMER, Bernal Robinson, Dean of the Faculty and Hd. of the Biol. Dept., Bethany Coll., Bethany, W. Va. **ZOOLOGY.** b. Port Royal, Pa., Dec. 4, 1895. s. George M. and Ada W. Edn.: A.B., W. Va. Univ., 1916; A.M., *ibid.*, 1918; Ph.D., Univ. of Chicago, 1927. m. Margaret G. Robinson, Aug. 31, 1918. c.: John R.; G. Alexander; Margaret B. Exp.: Prin., Mifflintown, Pa., 1918-21; Prof. of Biol., Bethany Coll., 1921-37; Prof. of Biol. and Dean of Faculty, *ibid.*, 1937—; Acting Pres., *ibid.*, 1952-53. Hon. Pos.: Pres. and Vice-Pres. of W. Va. Acad. of Sci.; Pres. of W. Va. Assn. of Higher Edn. Mem.: Phi Beta Kappa; Sigma Xi; Amer. Soc. of Zoologists; Fellow, A.A.A.S. Author: Man and the Animal World, 1951; Gen. Biol., with P. D. Strausbaugh, 1952. Contrb. to: Jour. of Exptl. Zool.; Biological Bull.; Physiol. Zool.; Schl. and Soc.; Schl. Sci. and Math. War Record: W.W.I. Med. Div. Special Int.: Gen. Physiol.

WEIMER, Frank Carlin, Assoc. Prof. of Elec. Engrng., Ohio State Univ., Columbus 10, Ohio.



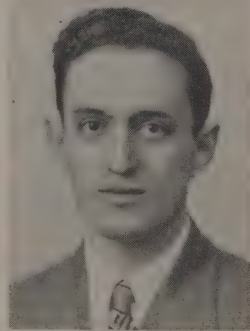
ELECTRICAL ENGINEERING. b. Dayton, Ohio, July 27, 1917. a. Clarence Everett and Hazel Maria (Berry) W. Edn.: B.S., Ohio Univ., 1938; M.Sc., Ohio State Univ., 1939; Ph.D., *ibid.*, 1943. m. Lillian Van Harlingen, Sept. 5, 1944. c.: Ann Elizabeth; Richard Ferdinand; Philip Carlin. Exp.: Grad. Asst. in Elec. Engrng., Ohio State Univ., 1939-41; Test Engr., Delco Products Div., General Motors, 1941; Instr., Elec. Engrng. Dept., Ohio State Univ., Columbus, Ohio, 1941-46; Asst.

Prof., *ibid.*, 1946-49; Assoc. Prof., *ibid.*, 1949—. Mem.: Amer. Inst. of Elec. Engrs.; Inst. of Radio Engrs.; A.A.A.S.; Natl. Soc. of Professional Engrs.; Sigma Xi; Tau Beta Pi; Eta Kappa Nu; Sigma Pi Sigma; Pi Mu Epsilon; Pi Eta Sigma. Contrb. to: Amer. Inst. of Elec. Engrs. Special Int.: Servomechanisms and Automatic Control.

WEIMER, James LeRoy, Sr. Pathologist, U. S. D. A., Hqs. Ga. Agri. Expt. Sta., Experiment, Ga. **PLANT PATHOLOGY.**

WEINBERGER, Bernhard Wolf, 119 W. 57th St., N. Y., N. Y. **ORTHODONTIA.**

WEINER, Louis M., Instr. in Math., DePaul Univ., 3312 W. Eastwood Ave., Chicago 25, Ill. **MATHEMATICS.** b. Chicago, Ill., Nov. 11, 1926. s. Samuel and Lena (Adelman) W. Edn.: S.B., Univ. of Chicago, 1947; S.M., *ibid.*, 1948; Ph.D., *ibid.*, 1951. Exp.: Teaching Asst., Univ. of Chicago, 1948; AEC Pre-doctoral Fellow, *ibid.*, 1948-51; Personnel Examiner, Chicago Civil Service Commn., 1951-52; Instr. in Math., DePaul Univ., Chicago, Ill., 1952—. Mem.: Phi Beta Kappa; Sigma Xi; Amer. Math. Soc.; Math. Assn. Amer.; Federation Amer. Scientists; Natl. Council of Tchrs. of



Math. Contrb. to: Proc. Amer. Math. Soc. Special Int.: Math.—Algebra.

WEINIG, Arthur John, Dir., Exptl. Plant, Colo. Schl. of Mines, Golden, Colo. **METALLURGICAL ENGINEERING.**

WEINLAND, James D., Prof. of Business Psychol., Schl. of Commerce, N. Y. Univ., N. Y., N. Y. **PSYCHOLOGY.**

WEINRICH, Morris Francis, Prof. and Chmn., Dept. of Physics, Brooklyn Coll., Bedford Ave. and Ave. H, Brooklyn, N. Y. **PHYSICS**.

WEINSTEIN, B. B., **STERILITY**.

WEINSTEIN, Louis, Asst. Prof. of Med., Boston Univ. Schl. of Med., Boston, Mass. **INTERNAL MEDICINE**.

WEINTRAUB, Robert Louis, Biochemist, Smithsonian Inst., Washington, D. C. **PLANT PHYSIOLOGY**.

WEIR, Walter Wallace, Drainage Engr., Calif. Agri. Expt. Sta., Univ. of Calif., Berkeley, Calif. **DRAINAGE ENGINEERING**.

WEISER, Harry Boyer, Prof. of Chem. and Dean, Rice Inst., Houston, Tex. **CHEMISTRY**.

WEISKOTTEN, Herman G., Dean, Coll. of Med., Syracuse Univ., Syracuse, N. Y. **PATHOLOGY**.

WEISMAN, Abner I., **STERILITY**.

WEISS, Charles, Dir. of Labs., Jewish Hosp., York and Tabor Rds., Philadelphia, Pa. **BACTERIOLOGY AND CLINICAL PATHOLOGY**.

WEISS, Freeman A., Sr. Pathologist, Div. Mycology and Disease Survey, U. S. D. A., Washington, D. C. **BOTANY**.

WEISS, Harry, 1112 Park Ave., N. Y., N. Y. **INTERNAL MEDICINE**.

WEISS, Harry Bischoff, Chf., Bureau Plant Indus., N. J. Dept. of Agri., State House, Trenton, N. J. **ENTOMOLOGY**.

WEISS, John Morris, Partner, John M. Weiss Co., 50 E. 41st St., N. Y., N. Y. **CHEMISTRY**.

WEISS, Paul Alfred, Dept. of Zool., Univ. of Chicago, Chicago 37, Ill. **EMBRYOLOGY**.

WEISS, Richard Simon, Prof. of Clinical Dermatology, Schl. of Med., Wash. Univ., St. Louis, Mo. **DERMATOLOGY**.

WEISS, Samuel, 146 Central Park West, N. Y., N. Y. **GASTROENTEROLOGY**.

WEISSKOPF, Victor Frederick, Prof. of Physics, Mass. Inst. of Tech., Cambridge 39, Mass. **THEORETICAL PHYSICS**. b. Vienna, Austria, Sept. 19, 1908. s. Emil and Martha (Gus) W. Edn.: Ph.D., Univ. of Göttingen, 1931. m. Ellen of Physics, Univ. of Rochester, 1937-45; Prof. of Physics, Mass. Inst. of Tech., Cambridge, Mass., 1946. Mem.: Amer. Physical Soc.; Natl. Acad. of Arts and Sci., Wash.; Amer. Acad. of Arts and Sci., Boston; Natl. Acad. Sci. Co-author: Theoretical Nuclear Physics, 1952. Contrb. to: Physical Rev.; Science; etc.

WEISSNER, K. W., Purdue Univ., W. Lafayette, Ind. **ATOMIC SPECTRA**.

WEITZMAN, Ellis, Univ. Examiner and Prof. of Psychol. and Measurements, Amer. Univ., Washington, D. C. **PSYCHOLOGY**.

WELCH, Arnold DeMerritt, Prof. and Dir., Dept. of Pharmacol., Schl. of Med., Western Reserve Univ., Cleveland, Ohio. **PHARMACOLOGY**.

WELCH, Donald Stuart, Prof., Dept. of Plant Pathol., Cornell Univ., Ithaca, N. Y. **PLANT PATHOLOGY**.

WELCH, Livingston, Asst. Prof. of Psychol., Hunter Coll., Park Ave. and 68th St., N. Y., N. Y. **PSYCHOLOGY**.

WELCH, Medard William, Pres., W. M. Welch Scientific Co., 1515 Sedgwick St., Chicago, Ill. **BIO-CHEMISTRY**.

WELCH, Paul Smith, Prof. of Zool., Univ. of Mich., Ann Arbor, Mich. **LIMNOLOGY**.

WELCH, Walter Burchard, Chmn. and Assoc. Prof. of Botany, Southern Ill. Normal Univ., Carbondale, Ill. **BOTANY**.

WELCH, Winona Hazel, Prof. of Botany, DePauw Univ., Greencastle, Ind. **BOTANY**.

WELD, Harry Porter, Prof. and Chmn., Dept. of Psychol., Cornell Univ., Ithaca, N. Y. **PSYCHOLOGY**.

WELD, Lewis Hart, 6613 N. Washington Blvd., East Falls Church, Va. **ENTOMOLOGY**.

WELDON, Walter A., 621 Edgewood St., Baltimore 29, Md. **CERAMICS**.

WELLER, Carl V., Dept. of Pathol., Univ. of Mich., Ann Arbor, Mich. **PATHOLOGY AND BACTERIOLOGY**.

WELLHAUSEN, Edwin John, Geneticist, Rockefeller Foundation, Calle Viena 26, Mexico, D. F., Mex. **GENETICS**.

WELLHOUSE, Walter Housley, Prof. of Zool., Iowa State Coll., Ames, Iowa. **ENTOMOLOGY**.

WELLINGTON, Richard, Hd. Pomology Div., N. Y. State Agri. Expt. Sta., Cornell Univ., Geneva, N. Y. **POMOLOGY**.

WELLMAN, Frederick Lovejoy, Prin. Pathologist, Office Foreign Agri. Relations, U. S. D. A., Washington, D. C. **PLANT PATHOLOGY**.

WELLMAN, Richard Harrison, Hd., Biol. Rsch. Div., 1086 N. Broadway, Yonkers, N. Y. **PLANT PATHOLOGY**.

WELLS, A. A., Homer Laughlin China Co., Newell, W. Va. **CERAMICS**.

WELLS, Bertram Whittier, Prof. and Hd. Dept. Botany, N. C. St. Coll., Raleigh, N. C. **PLANT ECOLOGY**.

WELLS, Charlotte G., **SPEECH AND HEARING**.

WELLS, Earl W., **SPEECH AND HEARING**.

WELLS, Edward Lansing, Retired, 3017 N. E. 60th Ave., Portland, Ore. **METEOROLOGY**.

WELLS, Herman B., Pres. Ind. Univ., Bloomington, Ind. **ECONOMICS**.

WELLS, Mary Evelyn, Prof. Math. and Chrmn. Dept., Vassar Coll., Poughkeepsie, N. Y. **MATHEMATICS**.

WELLS, Nicholas Weekes, Instr., New Mexico Coll. Agri., State Coll., N. M. **PHYSICS**.

WELLS, Sidney D., Rsch. Assoc., Inst. Paper Chem., Appleton, Wis. **CHEMICAL ENGINEERING**.

WELLS, Wayne Winfield, Prof. Sci., Southern Oregon, Ashland, Ore. **ZOOLOGY**.

WELO, Lars Alvin, Physicist, Southern Regional Res. Lab., New Orleans, La. **PHYSICS**.

WELSH, John Henry, Assoc. Prof. Zool., Harvard Univ., Divinity Ave., Cambridge, Mass. **INVERTEBRATE PSYCHOLOGY**.

WENDT, George Richard, Prof. and Chrmn., Univ. Rochester, Rochester, N. Y. **PSYCHOLOGY**.

WENIGER, Willibald, Hd. Dept. Physics and Dean Grad. Schl., Ore. St. Coll., Corvallis, Ore. **INFRA-RED**.

WENNER, Frank, Natl. Bureau of Standards, Washington 25, D. C. **BASIC ELECTRICAL MEASUREMENTS**.

WENNER, John Jeremiah, Chf. Pathologist and Dir. of Lab., Allentown General Hosp., 44 N. 13th St., Allentown, Pa. MEDICAL PATHOLOGY. b. Walberts, Pa., Oct. 10, 1885. s. J. Phaon J. and Emma (Stettler) W. Edn.: B.S., Muhlenberg Coll., 1913; M.A., Yale Univ., 1915; Ph.D., ibid., 1918; M.D., Univ. of Pa., 1925. m. Mattie L. Lichtenwalner, 1912. c.: Pauline Kathryn. Exp.: Bacteriologist, Pa. State Dept. of Health, 1918-24; Interne, Bryn Mawr Hosp., Bryn Mawr, Pa., 1925-26; Chf. Pathologist and Dir. of Lab., Allentown Hosp., Allentown, Pa., 1926—; Dir. of Approved Schl. for



Lab. Technicians, ibid., 1926—; Consulting Pathologist, Allentown State Hosp., Allentown, Pa., 1926—; Assoc. on Staff of Cedar Crest Coll. and Moravian Coll. for Women, Bethlehem, Pa., 1926—. Mem.: A.M.A.; Amer. Soc. Clinical Pathol.; Lehig Co. Med. Soc.; Fellow, Coll. Amer. Pathol.; Sigma Xi; Diplomate of Bd. of Pathol., A.M.A.; Rotary. Contrb. to: Phytopathol.; Jour. Immunology; Jour. Bacteriol.; Jour. Allentown Hosp. Special Int.: Blood Transfusions; Clinical Pathol.

WENNER, William Franklin, Asst. Med. Dir., The Upjohn Co., 301 Henrietta St., Kalamazoo, Mich. PHARMACOLOGY. b.



Wilkes-Barre, Pa., Apr. 7, 1901. s. Alfred Jefferson and Katherine (Laudermilch) W. Edn.: B.A., Lebanon Valley Coll., 1923; Ph.D., Yale Univ., 1927; M.D., Wash. Univ., 1933. m. Charlotte Rossi, May 25, 1937. c.: Victoria; Stephanie; Mark. Exp.: Asst., Yale Univ., 1923-26; Iowa, 1926-27; Asst. Prof. of Zool., ibid., 1927-29; Dir. of Rsch., Exptl. Physiol. of Otolaryngol., Schl. of Med., Wash. Univ., 1929-37; Asst. Med. Dir., Upjohn Co., 1937—. Mem.: Hon. Fellow, N. Y. Acad. Sci.; Fellow, A.A.A.S.; Soc.; Zool.; Soc. Exptl. Biol. and Med.; Amer. Trudeau Soc.; A.M.A.; Sigma Xi; Gamma Alpha; Sigma Pi; Alpha Kappa Kappa Special Int.: Endocrine Physiol.; Allergy; Mineral Metabolism; Antibiotics.

WENRICH, Calvin N., Retired, Country Club Drive, Battle Creek, Mich. PHYSICS.

WENSTRUP, Edward Joseph, Hd. Biol. Dept., St. Vincent Coll., Latrobe, Pa. GENETICS.

WENT, Frits Warmolt, Prof. of Plant Physiol., Calif. Inst. of Tech., 485 South Madison Ave., Pasadena, Calif. PLANT PHYSIOLOGY. b. Utrecht, Holland, May 18, 1903. s. Friedrich August Ferdinand Christian and Catharina Jacomina (Tonckens) W. Edn.: Ph.D., Univ. of Utrecht, 1927. m. Catherina Helena van de Koppel. c.: Hans Adriaan; Anna Catherina. Exp.: Dir., Treub Lab., Buitenzorg, Java, 1930-32; Lectr., Med. Coll., Batavia, 1929-30; Prof., Calif. Inst. of Tech., Pasadena, Calif., 1933—; In Chg. of Earhart Plant Rsch. Lab., Pasadena, Calif., 1949—. Mem.: A.A.A.S.; Amer. Soc. of Plant Physiol.; Botanical Soc. of Amer.; Ecol. Soc. of Amer.; Western Soc. of Naturalists; Amer. Soc. of Naturalists; Ned. Bot. Vereniging; Natl. Acad. of Sci.; Royal Neth. Acad. Sci. Contrb. to: De Tropische Natuur; Rec. trav. Bot. Neerl; Jahrb. fur Wiss. Botanik; Plant Physiol., etc.

WENTE, Edward Christopher, Res. Physicist, Bell Telephone Labs., Murray Hill, N. J. PHYSICS.

WENTWORTH, Edward Norris, Dir. Armour's Livestock Bureau, Armour and Co. R. R. 1, Box 64-A, Chesterton, Indiana. ANIMAL HUSBANDRY.

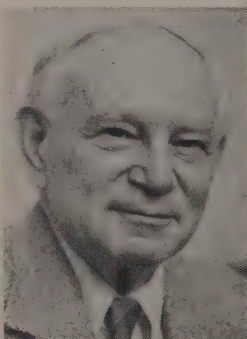
WEPMAN, Joseph M., SPEECH AND HEARING.

WERKMAN, Chester Hamlin, Hd. and Prof., Dept. of Bacteriol., Iowa State Coll., Dept. of Bacteriol., Ames, Iowa. BACTERIOLOGY, CHEMICAL ASPECTS AND PHYSIOLOGY. b. Fort Wayne, Ind., June 17, 1893. s. John Carl and Ada A. (Grove) W. Edn.: B.S., Purdue Univ., 1919; Ph.D., Iowa State Coll., 1923; D.Sc., Purdue Univ., 1944. m. Cecile A., 1913. c.: Robert. Exp.: Bur. of Chemistry, U. S. D. A., Wash., D. C., 1919-20; Asst. Prof., Univ. of Idaho, Moscow, Idaho, 1920-21; Asst. Prof., Mass. State Coll., Amherst, Mass., 1923-24; Asst. Prof., Iowa St. Coll., Ames, Iowa, 1923-28; Assoc. Prof., ibid., 1928-33; Prof., ibid., 1933—; Hd., ibid., 1945—. Mem.: Amer. Chem. Soc.; Natl. Acad. of Sci.; Soc. of Amer. Bacteriologists; Soc. Expt. Biol. and Med.; Biochemical Soc. of Great Britain; Theta Chi; Masons; Kappa Delta Pi; Sigma Xi; Phi Lambda Upsilon; Phi Kappa Phi. Contrb. to: Jour. Bacteriol.; Archives of Biochemistry and Biophysics; Biochemical Jour. Special Int.: Chemical and Physiological Bacteriology.

WERLE, Ernest Emil, Chief Chemist, Van Iderstine Co., Greenpoint and R. R. AVE., Long Island City, N. Y. CHEMISTRY.

WERNER, Harvey Oscar, Prof. Horticulture, Univ. Nebr., Lincoln, Nebr. HORTICULTURE.

WERNER, Heinz, G. Stanley Hall Prof. of Genetic Psychol., Clark Univ., Worcester, Mass. PSYCHOLOGY, ESPECIALLY GENETIC, LANGUAGE, PERCEPTION. b. Vienna, Austria, Feb. 11, 1890. s. Leopold and Emilie (Klauber) W. Edn.: Ph.D., Univ. of Vienna, 1915. m. Erica Gervai, Apr. 21, 1945. Exp.: Asst., Univ. of Munich, 1915-17; Asst. Prof., Univ. of Hamburg, Germany, 1920-25; Assoc. Prof., ibid., 1925-33; Visiting Prof., Univ. of Mich., 1933-36, 1939, 1942; Visiting Prof., Harvard Univ., 1936-37; Sr. Psychologist, Wayne Co. Trng. Schl., 1937-44;



Visiting Prof., Wayne Univ. Med. Schl., Assoc. Prof., Brooklyn Coll., 1945-47; G. Stanley Hall Prof., Chmn., Dept. Psychol., Clark Univ., Worcester, Mass., 1947—; Rsch. Dir. on Language Behavior Project, Rockefeller Foundation, 1951—. Hon. Pos.: Hon. Fellow, German Soc. Psychol. Mem.: Fellow, A.A.A.S.; Amer. Psychol. Assn.; East. Psychol. Assn.; Linguistic Soc. Amer.; Soc. Gen. Semantics; Sigma Xi. Author: Origins of Metaphor, 1919; Origin of Lyrics, 1924; Physiognomics of Language, 1933; Perceptual Behavior of Brain-Injured Children, 1945; Comparative Psychology of Mental Development, 1948; The Acquisition of Word Meanings, 1952, etc. Contrb. to: Amer. Jour. Psychol.; Jour. Genet. Psychol.; Psychol. Rev.; Psychol. Bull.; etc. Special Int.: Child Development, Perception, Language Behavior, Communication, Brain-Injury.

WERNER, Oscar Helmuth, Prof. Principles Edn., Univ. of Nebr., Lincoln, Nebr. 1841 Lake St., Lincoln, Nebr. COMPARATIVE EDUCATION.

WERNHAM, Clifford Charles, Assoc. Prof. Plant Pathol., Pa. St. Coll., St. Coll., Pa. PLANT PATHOLOGY.

WERT, Charles A., 106 Transportation Bldg., Urbana, Ill. PHYSICAL METALLURGY.

WERTHEIM, Edgar, Hd. Dept. Chem., Univ. Ark., Fayetteville, Ark. ORGANIC CHEMISTRY.

WESSELL, Yngve Nils, Dean Men, Dir. Adm. and Assoc. Prof., Tufts Coll., Medford, Mass. CLINICAL PSYCHOLOGY.

WEST, Allen Sherman, Jr., Assoc. Prof., Queen's Univ., Kingston, Ont., Can. ENTOMOLOGY.

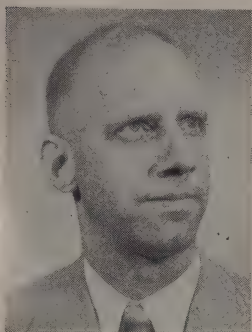
WEST, Clarence Jay, Editor and Res. Assoc., Inst. Paper Chem., Appleton, Wis. BIBLIOGRAPHY.

WEST, Edward Staunton, Prof., Hd. Dept., Univ. of Ore., Portland, Ore. BIOCHEMISTRY.

WEST, Erdman, Botanist and Mycologist Fla. Agr. Exp. Sta., Univ. Fla., Gainesville, Fla. MYCOLOGY AND TAXONOMY.

WEST, Franklin Lorenzo, Comm. Edn., Latter Day Saints Church, Salt Lake City, Utah. PHYSICS, PHYSICAL CHEMISTRY.

WEST, James Robert, Sr. Fellow, Mellon Inst., 4400 Fifth Ave., Pittsburgh 13, Pa. CHEMICAL



ENGINEERING. b. McKeesport, Pa., Dec. 5, 1914. s. Frank and Margaret Susanna (Schlagle) W. Edn.: B.S., Univ. of Pittsburgh, 1937; M.S., ibid., 1941; Ph.D., ibid., 1944. m. Feb. 23, 1941, Louise Kish. Exp.: Rsch. Asst., Mellon Inst., Pittsburgh, Pa., 1937-39; Fellow, ibid., 1939-46; Sr. Fellow, ibid., 1946—. Lectr., Univ. of Pittsburgh, Pittsburgh, Pa., 1942-48. Mem.: Amer. Inst. of Chem. Engrs.; Amer. Chem. Soc.; A.A.A.S.; Soc. of Chem. Indus.; Pa. Chem. Soc.; Phi

Lambda Upsilon. Contrb. to: Indus. and Engrng. Chem.; Chem. Engrng. Prog.; Chem. Engrng.; Jour. of Amer. Chem. Soc.; Jour. of Phys. and Colloid Chem.; Jour. of Chem. Edn. Special Int.: Tech. of Sulfur and Sulfur Recovery Processes; Thermodynamics.

WEST, Luther Shirley, Prof. and Hd. Dept. Biol., Northern Michigan Coll., Marquette, Mich. MEDICAL ENTOMOLOGY, PARASITOLOGY.

WEST, Robert William, SPEECH AND HEARING.

WESTBY, Gerald Holinbeck, Pres. Seismograph Service Corp., P. O. Box 1590, Tulsa, Okla. PETROLEUM GEOPHYSICS.

WESTCOTT, Cynthia, 96 Essex Ave., Glen Ridge, N. J. PLANT PATHOLOGY.

WESTERFELD, W. W., Prof. of Biochem., Coll. of Med., Syracuse Univ., Syracuse, N. Y. BIOCHEMISTRY.

WESTERFIELD, Everett C., Physicist and Hd. Scattering Sect., Navy Electronics Lab., San Diego, Calif. PHYSICS.

WESTERGAARD, Harold M., Harvard Univ., Cambridge, Mass.

WESTERMAN, Beulah Dorothea, Assoc. Prof. Food Econ. and Nutrition, Kans. BIOCHEMISTRY.

WESTERVELT, William Young, Retired, Lamar Life Bldg., Jackson, Miss. MINING ENGINEERING.

WESTFALL, Benton Bosworth, Res. Biochemist, Nat. Cancer Inst., U.S.P.H.S., Bethesda, Md. BIOCHEMISTRY.

WESTFELDT, Martha Gasquet, Little Green House, Arden, N. C. ENGINEERING.

WESTKAEMPER, Remberta, Hd. and Prof. Biol., Coll. St. Benedict, St. Joseph, Minn. BOTANY, TAXONOMY.

WESTLAKE, Harold, SPEECH AND HEARING.

WESTLAND, Anthony James, Hd. Dept. Physics, SEISMOLOGICAL OBSERVATORY, Spring Hill Coll., Spring Hill, Ala.

WESTMAN, A. E. R., Dept. of Chem., Ontario Rsch. Fdn., 43 Queen's Park, Toronto 5, Ont., Can. CERAMICS.

WESTON, Paul Edwin, Prof. and Chief Div. Univ. of Tenn., 718 Union Ave., Memphis, Tenn. DENTISTRY.

WESTON, W. H., Harvard Univ., Cambridge, Mass. MYCOLOGY.

WESTWATER, Waldo, Supvr. Color Films, Eastman Kodak Co., Kodak Park, Rochester, N. Y. CHEMISTRY.

WESWIG, Paul Henry, Assoc. Chemist, Ore. St. Coll., Corvallis, Ore. BIOCHEMISTRY.

WETMORE, Alexander, Smithsonian Institution, Washington 25, D. C. SYSTEMATIC ORNITHOLOGY.

WETMORE, Ralph Hartley, Prof. Botany, Harvard Univ., Cambridge, Mass. DEVELOPMENTAL MORPHOLOGY.

WEVER, Ernest Glen, Princeton Univ., Princeton, N. J.

WEYL, Charles, Prof. Engrn., Moore Schl., 255 Harvey St., Philadelphia, Pa. ENGINEERING.

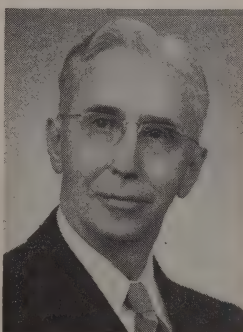
WEYL, Claus Hugo Hermann, Bergstrasse 27, Zurich, Switzerland.

WEYL, Hermann, Prof. Schl. Math., Inst. Advanced Study, Princeton, N. J. MATHEMATICS.

WEYL, Woldemar A., Dept. of Mineral Tech., Pa. State Coll., State Coll., Pa. CERAMICS.

WHALEY, William Gordon, Assoc. Prof. Botany, Univ. Texas, Austin, Texas. BOTANY.

WHEDON, Arthur DeWitt, Rsch. Assoc., Dept. of Physiol. and Nutrition, Yale Univ., Sterling Schl. of Med., 333 Cedar St., New Haven, Conn. b.



Iowa City, Iowa, Mar. 14, 1879. s. David and Adelaide Elizabeth (Holmes) W. Edn.: B. A., Univ. of Iowa, 1907; M.S., ibid., 1912; Ph.D., Univ. of Pa., 1918. m. Minnie M. Watson, 1903. c.: Walter Forest; Rolland Lester; Mary Louise. Exp.: Chmn. of Biol., Mankato Tchrs. Coll., Minn., 1911-15; Prof. of Biol., West Chester State Tchrs. Coll., Pa., 1915-23; Instr. in Zool., Univ. of Pa., 1916-23; Chmn., Zool. and Physiol., N. Dak. State Coll., Fargo, N. Dak., 1923-52; Rsch. Assoc., Physiol. and Nutrition, Yale Univ., New Haven, Conn., 1952—. Hon. Pos.: Pres., N. Dak. Acad. Sci., 1935; Pres., Commons Club, Fargo, N. Dak., 1940. Mem.: Sigma Xi; Phi Kappa Phi; Amer. Soc. Zoologists; Entomol. Soc. Amer.; Amer. Microscopical Soc.; N. Dak. Acad. Sci.; Fellow, A.A.A.S. Author: Lab. Manual of Animal Biol., 1950. Contrb. to: Jour. Morphology; Biol. Bull.; Annals of Entomol. Soc. Amer.; Wilson Bull.; Bird-Lore; etc. Special Int.: Insect Anatomy and Cytology; Vertebrate Embryol.; Histological Effects of Vitamin Deficiencies.

WHEELER, Anna Pell, Prof. and Chmn., Dept. of Math., Bryn Mawr Coll., Bryn Mawr, Pa.

WHEELER, Charles Horatio, III., Hd., Math. Dept., Univ. of Richmond, Richmond, Va. MATHEMATICS.

WHEELER, Edwin Bennett, 1833 Midlothian Drive, Altadena, Calif. PHYSICS.

WHEELER, George Carlos, Prof. and Hd. Dept., Univ. North Dakota, Grand Forks, N. D.

WHEELER, John Archibald, Prof. of Physics, Princeton Univ., Princeton, N. J. **ATOMIC AND NUCLEAR PHYSICS.** b.



Jacksonville, Fla., July 9, 1911. s. Joseph Lewis and Mabel (Archibald) W. Edn.: Ph.D., Johns Hopkins Univ., 1933. m. Janette Latourette Hegner, June 10, 1935. c.: Isabel Letitia; James English; Alison Christie. Exp.: Natl. Rsch. Council Fellow, N. Y. and Copenhagen, 1933-35; Asst. Prof., Univ. of N. C., Chapel Hill, N. C., 1935-38; Asst. Prof., Assoc. Prof. and Prof., Princeton Univ., Princeton, N. J., 1938—; Consultant on Atomic Energy Projects, Chicago,

Ill., 1942-43; *ibid.*, Wilmington, Del., 1943-44; *ibid.*, Hanford, 1944-45; *ibid.*, Los Alamos, N. Mex., 1950-53; Guggenheim Fellow, Paris and Copenhagen, 1949-50. Hon. Pos.: Vice-Pres., Internatl. Union of Physics. Mem.: Amer. Phys. Soc.; Amer. Phil. Soc.; Natl. Acad. Sci.; Sigma Xi; Phi Beta Kappa. Contrb. to: Phys. Rev.; Rev. of Modern Physics. Special Int.: Atomic and Nuclear Physics.

WHEELER, Joseph Lewis, Retired, Benson, Vermont. **LIBRARY ADMINISTRATION.**

WHEELER, Mary W., Assoc. Bacteriologist, Div. Labs. and Records, New York St. Dept. Health, Albany, N. Y. **BACTERIOLOGY.**

WHEELER, Raymond H., Wellesley, Mass. **PSYCHOLOGY.**

WHEETING, Lawrence Clifford, Res. Prof. Soils, St. Coll. Washington, Pullman, Wash. **SOILS SCIENCE.**

WHERRY, Edgar T(heodore), Prof. of Botany, Univ. of Pa., Philadelphia 4, Pa. **PLANTECOLOGY.** b. September 10, 1885, Philadelphia, Pa. s. Albert C. and Elizabeth S. (Doll) W. Edn.: B.S., 1906, Ph.D., 1909, Pa. m. E. Gertrude Smith of Phila., Pa., Jan. 1, 1914. Exp.: Lectr., Wagner Free Inst. of Sci., Phila., Pa., 1908-13; Asst. Dept. of Geol., Univ. of Pa., summer, 1908-09; Instr., Lehigh Univ., 1908-09; Asst. Prof., Lehigh Univ., 1909-13; Asst. Curator, U. S. Natl. Museum, 1913-17; Asst. Crystallographer to Prin. Chem., Bur. of Chem., U. S. Dept. of Agri., 1917-30; Lectr., Dept. of Agri. Grad. Schl.; Assoc. Prof. of Bot., Univ. of Pa., 1930-38; Prof., 1938—; Lectr., Barnes Foundation, Merion, Pa., 1941-50. Mem.: Fellow, A.A.A.S.; A.C.S.; Amer. Fern Soc., Pres., 1934-38; Bot. Soc. of Amer.; Ecol. Soc. of Amer.; Geol. Soc. of Amer.; Fellow; Mineralog. Soc. of Amer., Fellow, Pres., 1923. Author: *Wild Flowers of Mt. Desert Id.*, Me., 1928; *Guide to Eastern Ferns*, 1937, 2nd Ed., 1942; *Wild Flower Guide*, 1948. Ph.D. Dissertation: Contributions to the Mineralogy of the Newark Group in Pa. Travel: Rsch. Student, Heidelberg Univ., Germany, 1910. Gen. Int.: Co-founder and Mg. Ed., Amer. Mineralogist, 1919-21; Asst. Ed., Chem. Abstracts, 1913-38; Ed., Bull., Rock Garden Soc., 1943-47. Hobby: Photography. Listed in: A.M.S.; Who's Who in Amer.

WHIFFEN, Alma Joslyn, Mycologist, Upjohn Co., Kalamazoo, Mich. **MYCOLOGY.**

WHIPPLE, Fred L., Harvard Univ., Cambridge, Mass. **METEORITICS.**

WHIPPLE, George Hoyt, Prof. of Pathol., Dean Emer., Schl. of Med. and Dent., Univ. of Rochester, 260 Crittenden Blvd., Rochester 20, N. Y. **PATHOLOGY.** b. Aug. 28, 1878, Ashland, N. H. s. Ashley Cooper (M.D.) and Frances (Hoyt) W. Edn.: A.B., Yale Univ., 1900; M.D., Johns Hopkins Univ., 1905; Hon. Deg.: D.Sc., Colgate Univ., 1927; M.A., Yale Univ., 1927; LL.D., Univ. of Calif., 1935; LL.D., Tulane Univ., 1935; D.Sc., Wesleyan Univ., 1935; D.Sc., Trinity Coll., 1936; Doctorate, Univ. of Athens, 1937; D.Sc., Western Reserve Univ., Schl. of Med., 1943; LL.D.,

Univ. of Buffalo, 1946; LL.D., Johns Hopkins Univ., 1947; D.Sc., Yale Univ., 1947; LL.D., Univ. of Rochester, 1950; LL.D., Univ. of Glasgow, 1951; D.Sc., Univ. of Chicago, 1952. m. Katharine Ball Waring of Charleston, S. C., June, 1914. c.: Hoyt; Barbara (Mrs. John A. Schilling). Exp.: Asst. in Pathol., Johns Hopkins Med. Schl., 1905-06; Instr., *ibid.*, 1906-07; Pathologist, Ancon Hosp., Panama, 1907-08; Assoc. in Pathol., Johns Hopkins Med. Schl., 1909-11; Assoc. Prof., *ibid.*, 1911-14; Resident Pathologist, Johns Hopkins Hosp., 1910-14; Prof. of Rsch. Med., Univ. of Calif. Med. Schl. and Dir. of the Hooper Foundation for Med. Rsch., Univ. of Calif., 1914-21; Dean, Univ. of Calif. Med. Schl., 1920-21; Bd. of Sci. Dir., 1936—; Bd. of Trustees, 1939—, Rockefeller Inst. for Med. Rsch.; Natl. Acad. of Sci.; Amer. Philos. Soc.; Nobel Prize in Med. (joint award), 1934; Hon. Mem., Pathological Soc. of Great Britain and Ireland. Mem.: Phi Beta Kappa; Sigma Xi; Alpha Omega Alpha. Hobbies: Hunting; Fishing; Outdoor Sports. Listed in: A.M.S.; Who's Who in Amer.

WHIPPLE, Melville Conley, Assoc. Prof. Sanitary Chem., Harvard University, Cambridge, Mass. **SANITARY CHEMISTRY.**

WHITAKER, Douglas M., Acting Dean Schl. Biological Sciences, Stanford Univ., Calif. **EMBRYOLOGY.**

WHITAKER, J. Russell, George Peabody Coll., Nashville, Tenn. **GEOGRAPHY.**

WHITAKER, L. R., Carolina Ceramics, Inc., R. R. 3, Columbia, S. C. **CERAMICS.**

WHITAKER, Martin Dewey, Pres. Lehigh Univ., Coll. Park, Bethlehem, Pa. **PHYSICS.**

WHITAKER, Milton C., Vice-Pres., Amer. Cyanamid Co., 30 Rockefeller Plaza, New York, N. Y. **CHEMICAL ENGINEERING.**

WHITAKER, Thomas Wallace, Geneticist, U. S. D. A., Bureau Plant Industry, Soils and Agr. Engng., Beltsville, Md. **GENETICS.**

WHITCOMB, Lawrence, Assoc. Prof. Geology, Lehigh Univ., Bethlehem, Pa. **GEOLOGY.**

WHITE, Allen Ingolf, Assoc. Prof. Pharmacy, State Coll., Washington, Pullman, Wash. **PHARMACEUTICAL CHEMISTRY.**

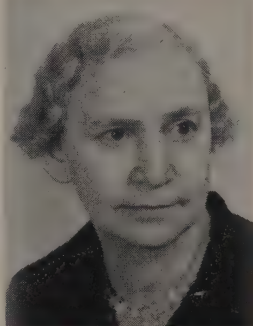
WHITE, Edith Grace, Prof. of Biol., Wilson Coll., Chambersburg, Pa. **ICHTHYOLOGY.** b. Boston, Mass., May 16, 1890.

d. Joseph Adie and Elizabeth (Kelly) W. Edn.: A.B., Mt. Holyoke Coll., 1812; A.M., Columbia Univ., 1913; Ph.D., *ibid.*, 1918. Exp.: Rsch. Asst., Princeton Univ., 1915-16; Instr. and Hd., Dept. of Biol., Heidelberg Univ., Tiffin, Ohio, 1918-20; Prof. of Biol. and Hd. Dept., Shorter Coll., Rome, Ga., 1920-23; Prof. of Biol. and Chmn. Dept., Wilson Coll., Chambersburg, Pa., 1923—. Hon. Pos.: Rsch. Assoc. in Ichthyol., Amer. Museum of Natural History, 19-

33-47. Mem.: Fellow, A.A.A.S.; Phi Beta Kappa; Amer. Soc. Ichthyologists and Herp.; Amer. Genetic Assn.; Eugenics Soc.; A.A.U.W. Author: *Interrelationships of the Elasmobranchs*, 1937; *Principles of Genetics*, 1940; *Textbook of Gen. Biol.*, 3rd ed., 1946; *Lab. Manual of Gen. Biol.*, 3rd ed., 1947. Contrb. to: Amer. Museum Novitates, etc. Special Int.: Rsch. on Elasmobranch Fishes, Luminous Organs of Fishes and some Fields of Genetics; Zool. and Gen. Biol.

WHITE, Edna Noble, Dir., Merrill Palmer Schl., 71 E. Ferry Ave., Detroit, Mich. **EDUCATION.**

WHITE, Frederick Elmer, Prof. Physics, Boston Coll., Chestnut Hill, Mass. **ACOUSTICS.**



WHITE, George Willard, Geologist, 315 W. Avondale St., Champaign, Ill. **GEOLOGY.**

WHITE, Goodrich Cook, Pres. Emory Univ., Ga. **PSYCHOLOGY.**

WHITE, Harold E., R. R. 6, "Windy Knoll", Butler, Pa. **CERAMICS.**

WHITE, Harry James, Dir. Rsch. Corp., Bound Brook, N. J. **PHYSICS.**

WHITE, Henry Ford, Prof. of Econ., Grad. Schl., Bradley Univ., Peoria, Ill. **ECONOMICS; HISTORY; RELATED SOCIAL STUDIES.** b. Gilmer, Tex. s. Robert Franklin and Ada Lee (Jones) W. Edn.: Grad., Sam Houston Nor. Inst., Tex., 1917; B.S., Sam Houston St. Tchrs. Coll., 1920; M.A., Baylor Univ., 1921; Ph.D., Tex., 1931; Post Doctoral Work, Geo. H. Peabody Coll. for Tchrs., summer, 1942; John Brown Univ., 1942—. Exp.: Supt. of Schls., Tex., 1916-24; Tehng. Fellowship, Univ. of Tex., 1922-23; Tehng. Fellowship in Econ., Baylor Univ., summers, 1921-22; Visiting Asst. Prof. of Hist. and Polit. Sci., Univ. of Del., 1927-28; Visiting Instr. of Econ., Milwaukee State Tchrs. Coll., summer, 1928; Visiting Instr., Soc. Sci., Asheville Nor. and Tchrs. Coll., Asheville, N. C.; Visiting Prof. of Econ., and Sociol., E. Tex. State Tchrs. Coll., Commerce, Tex., summers, 1935-36; Hd. and Found. of Dept. of Econ. and Sociol., Ga. State Coll. for Women, 1928-33; Prof. of Econ., Evening Schl., Univ. of Ga., 1933-34; Hd. of Div., Econ. and Sociol. and Asst. Dean, Cox Coll., 1933-34; Hd. of Div. of Econ. and Bus. Admin., Ohio Northern Univ., Ada, Ohio, 1934-35; Hd. of Div. Soc. Sci., John Brown Univ., Siloam Springs, Ark., 1935-37; Hd. of Dept. of Econ. and Sociol., Southeastern State Coll., Durant, Okla., 1937-40; Hd. of Dept. of Econ. and Sociol., Oshkosh State Tchrs. Coll., Wis., 1940-41; Faculty, Soc. Sci., Limestone Coll., Gaffney, S. C., 1941-42; Hd. of Div. of Econ. and Bus. Admin., John Brown Univ., 1942-45; Student Asst. in Hist., Univ. of Tex., 1925-26; Cofounder, Internatl. Rel. Club, Univ. of Tex., and Ga. State Coll. for Women; Fac. Com., Publications, Co-Sponsor Frat., 1944-50. Mem.: Amer. Econ. Assn.; Amer. Soc. Sci.; Southwestern Soc. Sci. Assn.; So. Soc. Sci.; Amer. Hist. Assn.; Miss. Valley Hist. Assn.; S. Econ. Assn.; A.A.U.P.; Phi Delta Kappa (Charter Mem.), Bradley Univ. Chapter; Internatl. Assn. for Labor Leg.; Pi Gamma Mu; Internatl. Rel. Club; Eugene Field Soc.; Fellow, Rsch. Bur. for Postwar Econ.; Inst. for Res. in Biog.; Mason; Amer. Legion; C. of C.; Kiwanis; Red, Red Rose; Schl. mstrs. Author: *Abiding Mother*, 1947; *Genuine Mother*, 1947; *Tributes to Mother*, 1947; *Mother Through the Ages*, 1947; (See Vol. XIII). Ph.D. Dissertation: *The Economic and Social Development of Arkansas Prior to 1836. War Record: Naval Sect., Students A. T. C., Tex., 1918. Travel: N. Amer. Hobby: Hiking. Listed in: Who's Who in Amer.; Who's Who in Pi Gamma Mu; Biog. Encyc. of the World; Book of Authorities; etc.*

WHITE, Jesse Hayes, Retired, 414 N. Park Ave., Bloomington, Ind. **PSYCHOLOGY.**

WHITE, John, Retired, 2235 North 10th St., Terre Haute, Ind. **CHEMISTRY.**

WHITE, John U., Physicist, Perkin Elmer Corp., Groton, Conn. **PHYSICS.**

WHITE, Jonathan Winborne, Jr., Chemist, Eastern Regional Rsch. Lab., Philadelphia, Pa. **AGRICULTURAL CHEMISTRY.**

WHITE, Maynard Pressley, District Geologist, Gypsy Production Div., Gulf Corp., Ardmore, Okla. **MICROPALAEONTOLOGY.**

WHITE, Orland Emile, Dir. Blandy Experimental Farm, Univ. of Va., Charlottesville, Va. **GENETICS.**

WHITE, Paul Dudley, Physician, Mass. Gen. Hosp., Harvard Med. Schl., Boston, Mass. **CARDIOLOGY.**

WHITE, Philip Rodney, Dir. Div. General Physiol., Inst. Cancer Rsch., Girard and Corinthian Aves., Philadelphia, Pa.

WHITE, Raymond Cyrus, Assoc. Prof. of Chem., N. C. State Coll., 1509 Lutz Ave., Raleigh, N. C. **COLLOID, PHYSICAL AND ANALYTICAL CHEMISTRY.** b. Job, W. Va., Oct. 11, 1912. s. Benjamin Yost and Hettie (Teter) W. Edn.: B.S., Davis-Elkins Coll., 1934; M.S., W. Va. Univ., 1935; Ph.D., *ibid.*, 1939. m. Cleta Bennett, Nov. 27, 1936. Exp.: Instr. in Chem., N. C. State Coll., 1940-45; Asst. Prof. of Chem., *ibid.*, 1945-53; Chemist, Bureau of Mines, (on leave of absence from N. C. State Coll.), 1952-53; Assoc. Prof., *ibid.*, 1953—. Honorary Pos.: President, Phi Lambda Upsilon, 1938-39; Treasurer, Sigma Phi Sigma, 1938-39; Vice-President, Chi Beta Phi, 1933-34. Mem.: Amer. Chem. Soc.; N. C. Acad. Sci.; Phi Lambda Upsilon; Sigma Phi Sigma; Chi Beta Phi. Contrb. to: Jour. Econ. Entomol.; Proc. W. Va. Acad. Sci. Special Int.: Determination of Fluorine; Determination of Columbium and Tantalum; pH Determinations; Separation and Identification of Ions in Qualitative Analysis; Carotenoid Pigments; Chromatography.

WHITE, Robert W., 64 Plymouth St., Cambridge 38, Mass. **PSYCHOLOGY.**

WHITE, Virginia Batie, Purdue Univ., Lafayette, Ind.

WHITE, Wendell, Assoc. Prof. Psychology, Univ. Minn., Minneapolis, Minn. **APPLIED PSYCHOLOGY.**

WHITE, William Henry, Entomologist, U. S. D. A., Bureau Entomology and Plant Quarantine, Washington, D. C. **ENTOMOLOGY.**

WHITE, William Lawrence, Mycologist, Tropical Deterioration Rsch. Lab., 937 S. Saint Bernard St., Philadelphia, Pa. **MYCOLOGY.**

WHITEHEAD, Frank Edward, Health Exec., Health Dist., Town Hall, River Edge, N. J. **PUBLIC HEALTH.**

WHITEHEAD, John Boswell, Emer. Prof. of Elec. Engrng., Johns Hopkins Univ., Baltimore 18, Md. **PHYSICS AND ELECTRICAL ENGINEERING.** b. Norfolk, Va., Aug. 18th, 1872. s. Henry C. and Margaret (Taylor) W. Edn.: P.A.E., Johns Hopkins Univ., 1893; A.B., *ibid.*, 1898; Ph.D., *ibid.*, 1902. Hon. Deg.: LL.D., Johns Hopkins Univ., 1951. m. Mary Ellen Colston, Apr. 14, 1903. c.: Margaret; Joan. Exp.: Staff, Westinghouse Elec. and Mfg. Co., 1903-06; Staff, Niagara Falls Power Co., 1906-07; Staff, Johns Hopkins Univ., 1908—. Dir., Schl. of Engrng., *ibid.*, 1933-42. Mem.: Natl. Acad. Sci.; Fellow, Amer. Inst. Elec. Engrs.; Fellow, Amer. Physical Soc. Author: *Lectures on Electrical Insulation*, 1927; *Impregnated Paper Insulation*, 1935; *Electricity and Magnetism*, 1939. Contrb. to: Jour. Applied Physics; Jour. Franklin Inst. War Record: Major, Engrs., U. S. Army, 1916-18. Gen. Int.: Edison Medal, A.I.E.E., 1941. Special Int.: Dielectrics and High Voltage Insulation.

WHITEHEAD, Pearl Claus, Assist. Prof. Zoology, Univ. Wis., Madison, Wis. **CYTOLOGY.**

WHITEHEAD, Richard W., Prof., Schl. of Med., Univ. of Colo., Denver, Colo. **PHARMACOLOGY.**

WHITEHEAD, Walter L., Mass. Inst. Tech., Cambridge, Mass. **GEOLOGY.**

WHITEHORN, John Clare, Prof. Psychiatry and Psychiatrist-in-Chief, Johns Hopkins Hosp., Baltimore, Md. **PSYCHIATRY.**

WHITELY, Paul LeRoy, Prof. Psychol., Franklin and Marshall Coll., Lancaster, Pa. **PSYCHOLOGY.**

WHITENTON, Robert Oscar, Prof. and Hd., Zool. Dept., Okla. A. and M. Coll., Stillwater, Okla. **EMBRYOLOGY.**

WHITESIDE-HAWEL, Beatrice, Voluntary Res. Worker, Univ. Geneva, Permanent Guaranty Trust Co., 140 Broadway, New York, N. Y. **HISTOLOGY.**

WHITFORD, William G., Box 38, Olympia Fields, Ill. **CERAMICS.**

WHITING, Anna Rachel, Guest Investigator, Dept. Zool., Univ. of Pa., Philadelphia, Pa. **GENETICS.**

WHITING, Albert L., Co-owner, Mgr., Urbana Labs., 406 N. Lincoln Ave., Urbana, Ill. **SOILS, CROPS.**

WHITING, Bertine Arthur, Tehr. of Physics, Chem., and Math., Sr. H. S., Two Harbors, Minn.; 620 Liberty St., Ripon, Wis. **METEOROLOGICAL PHYSICIST.**

WHITING, Phineas Wescott, Prof. of Zool., Univ. of Pa., Philadelphia, Pa. **GENETICS.**

WHITLEY, Mary Theodora, retired, 68 Franklin Ave., Yonkers, N. Y. **ADULT EDUCATION.**

WHITMAN, Edwin A., Assoc. Prof. of Math., Carnegie Institute of Technology, 521 Locust Street, Pittsburgh 18, Pa. **MATHEMATICS.** b. October 1, 1887, Venice, Caruga Co., New York. s. Aaron C. and May (Alley) W. Edn.: B.A., Yale Univ., 1910; M.A., Univ. of Pittsburgh, 1915. m. Elsie M. Van Duyn of Moravia, N. Y., Dec. 30, 1914. J. Geo. Martin and Sarah (Giles) Van Duyn. c.: Philip Martin; Robert Van Duyn. Exp.: Wincheschl., Pittsburgh, Pa., 1910-12; H. S., Rockville, Conn., 1912-18; H. S., Wilkensburg, Pa., 1913-18; H. S., Pittsburgh, Pa., 1918-19; Carnegie Inst. of Tech., Pittsburgh, Pa., 1919—. Mem.: A.A.A.S.; A.M.S.; A.M.A.; Phi Beta Kappa; Sigma Xi; Phi Delta Kappa; Pi Mu Epsilon; Wilkensburg Lodge 683 F. and A.M. Author: Plane Trig., 1929; Coll. Algebra, 1938, 1939, 1949; Essentials of Coll. Algebra, 1950; Plane and Spherical Trig., 1937; Math. Tables, 1937; Essentials of Plane Trig., 1950; Intermediate Algebra for Colls., 1951; Slide Films on Integral Calculus. Contrb. to: Amer. Math. Monthly. Listed in: Who's Who in Pa.; Who's Who in the East; A.M.S.; Who Knows—and What.

WHITMAN, Walter George, retired, 10 Naples Rd., Salem, Mass. **PHYSICAL SCIENCES.**

WHITMAN, Warren C., Assoc. Botanist, N. Dak. Agri. Expt. Sta., Fargo, N. Dak. **ECOLOGY.**

WHITMORE, Eugene Randolph, Hd., Div. Tropical Diseases, Doctors Hosp., and Dir. of Pathol. Lab., Casualty Hosp., 2139 Wyoming Ave., Washington, D. C.

WHITMORE, Harry Gregory, Assoc. Prof. of Chem., Tex. State Coll. for Women, Box 2896, Denton, Tex. **CHEMISTRY.**

WHITMOYER, Clarence Walter, Pres. and Gen. Mgr., Whitmoyer Labs., Inc., Myerstown, Pa. **CHEMISTRY.**

WHITNER, Thomas Cobb, Consulting Chemist, 22 Plane St., Newark, N. J. **CHEMISTRY.**

WHITNEY, David Day, Chmn. and Prof., Dept. of Zool., Univ. of Nebr., Lincoln, Nebr. **HUMAN HEREDITY.**

WHITNEY, David Victory, Jr., Rt. 2, Box 257, Liberty, Mo. **PHARMACY, CHEMISTRY.**

WHITNEY, Francie Luther, Prof. of Geol., Univ. of Tex., Austin, Tex. **PALEONTOLOGY.**

WHITNEY, Harvey Allan Kim, Ortho Rsch. Foundation, 35 E. Elizabeth Ave., Linden, N. J. **PHARMACEUTICAL CHEMISTRY.**

WHITNEY, Hassler, Inst. for Advanced Study, Princeton, N. J.

WHITNEY, John Durrell, Prof. of Physical Sci., Harris Tehrs. Coll., 1517 S. Theresa St., St. Louis, Mo. **PHYSICS.**

WHITNEY, Paul Clinton, Hydrographic and Geodetic Engr., U. S. Coast and Geodetic Survey, 418 U. S. Post Office Bldg., Norfolk, Va. **HYDROGRAPHIC ENGINEERING.**

WHITNEY, Robert B., Prof. of Chem., Amherst Coll., Amherst, Mass. **ORGANIC CHEMISTRY.**

WHITNEY, Marion Isabelle, Hd. Dept. of Geology, Ark. Poly. Inst., Russellville, Ark. **GEOLOGY.** b. Austin, Tex., April 23, 1911. d. F. L. and Grace (Pellet) W. Edn.: B.A., Univ. of Tex., 1930; M.A., ibid., 1931; Ph.D., ibid., 1937. Exp.: Tehr. Public Schl., Austin, Tex., 1933-36; Asst. Prof., Kans. State Tehr. Coll., Pittsburg, Kans., 1937-42; Tehr., Kilgore Coll., Kilgore, Tex., 1942-46; Asst. Prof. Tex. Christian Univ., Ft. Worth, Tex., 1946-51; Assoc. Prof., Sul Ross Coll., Alpine, Tex., 1951-52; Prof. Coll. of Arts and Industrials, Kingsville, Tex., 1951-52; Hd. Dept. of Geology, Ark. Poly. Inst., Russellville, Ark., 1952—.



Mem.: Phi Beta Kappa; Sigma Xi; Chi Upsilon; Pi Lambda Theta; Delta Kappa Gamma. Author: Juan of Paricutin, 1953. Contrb. to: Jour. of Paleontol. Special Int.: Paleontol., Lower Cretaceous of Tex.

WHITNEY, Willis Rodney, Hon. Vice-Pres., Rsch. Lab., General Electric Co., Schenectady, N. Y. **CHEMISTRY.**

WHITTAKER, Colin W., Chemist, Div. Soils, Fertilizers and Irrigation, Bureau Plant Indus., Soils and Agri. Engrng., U. S. D. A., Beltsville, Md. **RESEARCH IN FERTILIZERS.**

WHITTAKER, Gerald Comstock, Time Service Astronomer, Naval Observatory, 7 Westwood Dr., Washington, D. C. **ASTRONOMY.**

WHITTAKER, Harold A., Natl. Rsch. Council, 2101 Constitution Ave., Washington, D. C. **PUBLIC HEALTH ENGINEERING.**

WHITEMORE, J. W., Va. Poly. Inst., Blacksburg, Va. **CERAMICS.**

WHITTEN, John H., Owner and Resident Mgr., Whitten Farm, R. F. D. 1, Hwy. 62 E., Malden, Mo. **PLANT PHYSIOLOGY.** b. Near Bradford, Ill., Oct. 3, 1873. s. William H. and Ellen (Schuyler) W. Edn.: A.B., Univ. of Ill., 1911; A.M., ibid., 1912; Ph.D., ibid., 1914. m. Lillian Catterlin, Aug. 18 1903. Exp.: Country Schl., Camp Grove, Ill. 1892-94; Supt. of Schls. Golconda, Ill., 1899-1901; Supt. of Schls. St. Anne, Ill., 1901-03. Supt. of Schls., Onarga, Ill., 1903-10; Tchng Scholarship in Botany Univ. of Ill., 1910-14. Tehr. of Biol., Chicago, Tehrs. Coll., 1914-38.



Retired, 1938; Farm Mgr., Whitten Farm, Malden, Mo., 1938—. Mem.: A.A.A.S.; Sigma Xi. Contrb. to: Chicago Schls Jour.; Bull. Ill. State Lab. of Natural Hist. Special Int.: Science in the Elem. Schl.; Farm Mgt.

WHITTLESEY, Derwent Stainthorpe, Prof. of Geography, Harvard Univ., Cambridge, Mass. **HUMAN GEOGRAPHY.**

WHORTON, Carl, Vice-Pres. and Mgr., Whorton Pharmacal Co., Gadsden, Ala. **PHARMACY.**

WHYBURN, Gordon Thomas, Schl. of Math., Univ. of Va., Charlottesville, Va. **MATHEMATICS.**

WHYBURN, William Marvin, Pres., Tex. Technol. Coll., Lubbock, Tex. **MATHEMATICS.**

WIANT, James Stewart, Plant Pathologist, U. S. D. A., rm. 1022, 641 Washington St., N. Y., N. Y. **PLANT PATHOLOGY.**

WICHTERMAN, Ralph, Prof. of Biol., Temple Univ., Philadelphia 22, Pa. **PROTOZOOLOGY.** b. Philadelphia, Pa., Sept. 8, 1907. s. John George and Selma (Zimmerman) W. Edn.: B.S., Temple Univ., 1930; M.A., Univ. of Pa., 1932; Ph.D., *ibid.*, 1936. m. Bessie Swift, Aug. 28, 1933. c.: Robert John W.; June Susan. Exp.: Instr., Temple Univ., Philadelphia 22, Pa., 1930-37; Asst. Prof., *ibid.*, 1937-44; Assoc. Prof., *ibid.*, 1945-49; Prof., *ibid.*, 1950—. Hon. Pos.: Guest Investigator, Dry Tortugas Lab.; Mem. of Corporation, Marine Biol. Lab. Mem.: Amer. Micro Soc.; A.A.A.S., (Fellow); Pa. Acad. Sci.; Amer. Soc. Zoologists; Amer. Soc. Parasitologists; Amer. Soc. Protozoology; Sigma Xi; Kappa Phi Kappa. Author: The Biology of Paramecium, 1953. Contrb. to: Biological Bull.; Jour. Morphol.; Jour. Parasitology; Proc. Pa. Acad. Sci.; Nature; Trans. Amer. Micro. Soc.; Sci.; Parasitology; et al. Special Int.: The Protozoa Both Free-Living and Parasitic; Cytology and Nuclear Phenomena; Biological Effects of X-Rays on Protozoa.

WICKES, Dean Rockwell, Rsch. Analyst, U. S. Bd. Geographical Names, Washington, D. C. **GEOGRAPHY OF CHINA.**

WICKLIFF, Edward L., Chf., Section Fish Mgt., Ohio Div. Conservation and Natural Resources, Ohio State Museum, Columbus, Ohio. **FISH MANAGEMENT.**

WIDMAIER, William, Vacuum Tube Engr., Federal Telephone and Radio, Clinton, N. J. **PHYSICS.**

WIDTSON, John Andreas, Mem. Council, Latter Day Saints Church, 1425 Sigsbee Ave., Salt Lake City, Utah. **CHEMISTRY.**

WIEBE, Abraham Hiebert, Chf. Biol. Readjustment, Dept. of Forestry Relations, Tenn. Valley Authority, Box 493, Norris, Tenn. **LIMNOLOGY.**

WIEBE, Gustav A., Prin. Agronomist in Chg., Arley Investigations, U. S. D. A., Plant Indus. Sta., Pottsville, Md. **AGRONOMY.**

WIEGAND, Ernest Herman, Hd., Dept. of Food Tech., Ore. State Coll., Corvallis, Ore. **FOOD TECHNOLOGY.**

WIENER Alexander S., Clin. Pathol., Wiener Labs., 25 N. Y. **MEDICINE.**
at Rutland Rd., Brooklyn **HEMATOLOGY; CLINICAL PATHOLOGY; IMMUNOLOGY; BLOOD GROUPING AND GENETICS.** b. Brooklyn, N. Y., Mar. 16, 1907. s. George and Mollie (Zuckerman) W. Edn.: A.B., Cornell Univ., 1926; M.D., State Univ. of N. Y., Coll. of Med., 1930. m. Gertrude Rhoda Rodman, 1932. c.: Jane Helen and Barbara Rae. Exp.: Hd. of Blood Transfusion Div., Jewish Hosp., Brooklyn, N. Y., 1932—; Bacteriol. (Serology) Office of Chf. Med. Examiner of N. Y. C., 1938—. Mem. of



Faculty, Dept. of Forensic Med., N. Y. Univ., Postgrad. Med. Schl., N. Y. C., 1938—; Adelphi Hosp., N. Y. C., 1940—; Sr. Bacteriol., (Serology), Office of Chf. Med. Examiner of N. Y. C., 1949—; Asst. Prof., N. Y. Univ., Postgrad. Med. Schl., N. Y. C., 1949—; Owner and Dir., Wiener Labs., Brooklyn, N. Y., 1935—. Fellow: Amer. Coll. Phys.; Coll. Amer. Path.; N. Y. Acad. Med.; N. Y. Acad. Sci.; Amer. Soc. Clin. Path.; Internatl. Soc. Hematol.; Amer. Assn. Adv. Sci. Mem.: Amer. Assn. of Immunol.; Amer. Bd. of Pathol.; Genet. Soc. of Amer.; Amer. Soc. Hum. Genet.; Amer. Acad. of Forensic Sci.; Rsch. Soc. of Amer.; Soc. for Study of Blood; Soc. of Med. Jurisprud.; Amer. Assn. Phys. Anthropol.; Phi Delta Epsilon; Phi Beta Kappa; Phi Beta Kappa Assocs.; Alpha Omega Alpha. Author: Blood Groups and Transfusion, 1943. Contrb. to: Num-

erous Scientific Articles to Tech. Jours. Gen. Int.; Pioneer Co-Discoverer with Dr. Karl Landsteiner, of Rh Factor, 1937-40; Discovered Role of Rh in Blood Transfusion Reactions; Discovered Rh-Hr Types and Mechanism of Their Heredity; Devised New Method of Treatment of Erythroblastosis Fetalis by Exchange Transfusion; Discovered Rh Blocking Antibodies and Devised Blocking and Conglutination Tests to Demonstrate Rh Antibodies; Medicolegal Application of Rh-Hr Tests in Disputed Paternity; Nomenclature of Rh-Hr Types; Pathogenesis of Physiologic Icterus; Sponsored Bills Giving Courts Power to Order Blood Grouping Tests in Medicolegal Cases in N. Y. State; Classification of Human Races by Distribution of Rh-Hr Types; Proposed Theory of Inheritance of Allergic Diseases; Devised Method of Measuring Linkage in Human Genetics; Founder of Wiener Labs.; Recipient, Phi Delta Epsilon Prize, 1931; Silver Medal, Amer. Soc. of Clin. Pathol., 1941; Alvarenga Prize, Coll. of Phys., Philadelphia, Pa., 1945; Lasker Award, Amer. Public Health Assn., 1947; Ward Burdick Award, Amer. Soc. of Clin. Pathol., 1946; Army-Navy Certificate of Appreciation, 1948; Oscar Awarded by Youth United, 1951; Passano Foundation Award, 1951. Special Int.: Blood Groups, Rh Factor, Human Genetics, Biometrics, Immunol., Hematol., Blood Transfusion, Clin. Pathol., General Med., Bacteriol., Anthropol., and Forensic Med. (Blood Tests.)

WIENER, Norbert, Mass. Inst. of Tech., Cambridge-Mass. **MATHEMATICS.**

WIENS, Jacob Henry, Owner, Wiens Electronics Labs., 130 Crest Rd., Woodside, Calif. **PHYSICS, ELECTRONICS AND EDUCATION (NUCLEAR PHYSICS, SPECTROSCOPY, TELEVISION, FREQUENCY MODULATION).** b. Bradshaw, Nebr., Dec. 3, 1910. s. Henry J. and Elizabeth (Harder) W. Edn.: A.B., Univ. of Calif., 1937; M.A., *ibid.*, 1943; Ph.D., *ibid.*, 1944. m. Betty Goertzen, Nov. 28, 1943. c.: Harriet Elaine; Gilbert Leland. Exp.: Exptl. Radio, U. S. Park Service, 1932; Techn. Fellow, Univ. of Calif., 1937-39; In Chg., Radio and Electronics, San Mateo Jr. Coll., 1939—. Hd., U. S. Army Signal Corps Schl., San Mateo, Calif., 1941-42; Manhattan Project, 1942-44; U. S. Navy Rsch. Program, 1944-45; Owner of Wiens Electronics Labs., 1945—; Consulting Electronics Engr., 1948—. Mem.: Pi Mu Epsilon; Sigma Xi. Contrb. to: Physical Rev. Gen. Int.: First Production of the Isotope of Mercury of mass 198 for a Primary Standard of Wavelength; First mass production of a man made element by use of neutrons from the UC Cyclotron. Special Int.: Nuclear Physics; Spectroscopy; Television; Color Television; Electronics.

WIESCHHOFF, Heinrich Albert, Chf. Rsch. Section, Dept. Trusteeship, United Nations, Lake Success, N. Y. **ANTHROPOLOGY.**

WIESNER, Jerome B., Prof. of Electrical Engrng. and Dir. of Rsch. Lab. of Electronics, Mass. Inst. of Tech., Cambridge, Mass. **ELECTRICAL COMMUNICATIONS ENGINEERING.**

WIGGERS, Carl John, Prof. Emeritus of Physiol., Western Reserve Univ. Schl. of Med., Cleveland, Ohio. **HEART AND CIRCULATION.** b. Davenport, Iowa, May 28, 1883. s. George and Margaret (Kuendel) W. Edn.: M.D., Univ. of Mich., 1906. Hon. Deg.: D.Sc., Univ. of Mich., 1941. m. Minnie Berry, Aug. 17, 1907. c.: Harold Carl; Raymond Paul. Exp.: Instr. of Physiol., Univ. of Mich., 1906-11; Instr. of Physiol., Cornell Univ. Med. Schl., N. Y., N. Y., 1911-13; Asst. Prof. of Physiol., *ibid.*, 1913-18; Prof. of Physiol. and Dir. of Dept., Schl. of Med., Western Reserve Univ., Cleveland, Ohio, 1918-53. Hon. Pos.: Vice-Pres., Section on Med. Sci., A.A.A.S., 1939-40; Chmn., Section on Pathol. and Physiol., A.M.A., 1940-41; Chmn., Advisory Com. on Electrocardiographs, Council on Physical Med. and Rehabilitation, A.M.A., 1940-53; Vice-Pres., Amer. Heart Assn., 1947-48; Treas., Amer. Physiol. Soc., 1940-41; Secy., *ibid.*, 1941-42; Pres., *ibid.*, 1949-50; Program Dir., Trng. Course for Cardiovascular Investigators (sponsored by U. S. Public Health Service and Amer. Heart Assn.), 1949-52; Editor, Circulation Rsch., A Jour. of the Amer. Heart Assn., 1952—. Mem.: Natl. Acad. Sci.; Amer. Physiol. Soc.; Fed. Societies Exptl. Biol. and Med.; Internatl. Physiol. Congress; Soc. for Pharmacol. and Exptl. Therapeutics; Amer. Heart Assn.; A.M.A.; Amer. Coll. Physicians; Harvey Soc.

of N. Y.; Cleveland Med. Library Assn.; A.A.A.S.; Interamerican Cardiol. Congress; Hon. Mem., Academia Nacional de Medicina, Buenos Aires; Hon. Mem., Sociedade Argentina de Biologia; Hon. Mem., Sociedade Brasileira de Cardiologia; Hon. Mem., Sociedad Cubana de Cardiologia; Hon. Mem., Sociedad Mexicana de Cardiologia; Hon. Mem., Sociedad Argentina de Cardiologia; Hon. Mem., N. Y. Cardiol. Soc.; Hon. Mem., Acad. of Med., Cleveland, Ohio; Hon. Mem., Amer. Coll. of Cardiol.; Hon. Mem., Sociedad Chilena de Cardiologia; Hon. Mem., Sociedad Medica de Santiago; Hon. Mem., Sociedad de Biologia de Santiago, Chile; Hon. Mem., Physiol. Soc., England. Author: Brief Text of Physiol., 1911; Circulation in Health and Disease, 1915, 2nd Ed., 1923; Pressure Pulses in the Cardiovascular System, 1928; Principles and Practice of Electrocardiography, 1929; Physiology in Health and Disease, 5th Ed., 1949; Physiol. of Shock, 1950; Circulatory Dynamics, 1952; etc. Special Int.: Heart and Circulation.

WIGNER, Eugene Paul, 8 Ober Rd., Princeton, N. J. THEORETICAL PHYSICS.

WILBER, D. T., Rsch. Chemist, Allen B. DuMont Labs., 2 Main Ave., Passaic, N. J. CHEMISTRY.

WILCOX, Ethelwyn B., Prof. of Nutrition, Utah State Agricultural Coll., Logan, Utah. NUTRITION. b. March 19, 1906, Wyoming, Iowa. d. Edwin and Mary (Cameron) W. Edn.: B.S., Iowa State Coll., 1931; M.S., *ibid.*, 1937; Ph.D., *ibid.*, 1942. Exp.: Research Asst., 1937-42, Iowa State Coll.; Asst. Home Economist, Expt. Station, State Coll. of Wash., 1942-43; Asst. Prof. of Nutrition, Schl. of Home Econ., Utah State Agri. Coll., 1943-44; Assoc. Prof. Nutrition, *ibid.*, 1944-48; Prof. Nutrition, *ibid.*, 1948—. Mem.: Sigma Xi; Phi Kappa Phi; Omicron Nu; Iota Sigma Pi; Sigma Delta Upsilon; A.A.A.S.; A.C.S.; A.A.U.P.; Amer. Home Econ. Assn.; Amer. Diet. Assn.; Food Tech. Ph.D. Dissertation: Distribution and Partition of Fats in Certain Tissues of Rats Fed a Diet Containing Dried Autoclaved Pork Muscle. Listed in: A.M.S.

WILCOX, Hugh Brown, Prof. of Mechanics, Univ. of Minn., Minneapolis, Minn. MECHANICS.

WILCOX, Lloyd Vernon, Agronomist in Chg., Rubidoux Lab., U. S. D. A., 5218 Brockton Ave., Riverside, Calif. CHEMISTRY, AGRICULTURE.

WILDER, Russell M., Dir., Natl. Inst. of Arthritis and Metabolic Diseases, Natl. Inst. of Health, Bethesda 14, Md. INTERNAL MEDICINE, METABOLISM, NUTRITION. b. Cincinnati, Ohio, Nov. 24, 1885. s. William Hamlin and Ella (Taylor) W. Edn.: B.S., Univ. of Chicago, 1907; Ph.D., *ibid.*, 1912; M.D., Rush Med. Coll., 1912. m. Lucy Elizabeth Beeler, Mar. 18, 1911. c.: Russell Morse, Thomas Carroll. Exp.: Instr. in Anatomy and Pathology, Univ. of Chicago, Chicago, Ill., 1909-10; Res. at Presbyterian Hosp., Chicago, 1915-17; Instr. in Med., Rush Coll., 1915-17; Asst. Prof. Med. Mayo Foundation, Univ. of Minn., Minneapolis, Minn., 1919-22; Assoc. Prof., *ibid.*, 1922-29; Prof. Med. and Chmn., Dept. of Med., Univ. of Chicago, Chicago, Ill., 1929-31; Prof. Med. and Head, Dept. of Med., Mayo Foundation, Mayo Clinic, Rochester, Minn., 1931-50; Dir., Natl. Inst. of Arthritis and Metabolic Diseases, U. S. Public Health Service, Bethesda, Md., 1951—. Hon. Pos.: Comm. of Med., Natl. Rsch. Council, 1940-46; Chmn., *ibid.*, 1940; Distinguished Service Medal, Univ. of Chicago, 1941; Certificate of Merit, Univ. of Minn., 1951. Fellow: A.M.A.; Amer. Coll. of Physicians; Amer. Public Health Assn. Mem.: Assn. of Physicians; Amer. Soc. for Clin. Invest.; Amer. Physiological Soc.; Institute of Nutrition; Minn. Soc. of Internal Med.; Amer. Diabetes Assn. (Pres., 1947); Chicago Institute of Med.; Acad. of Med. of Washington, D. C.; Central Interurban Clin. Club; Eclat Club, Sigma Xi; Alpha Omega Alpha; Nu Sigma Nu; Delta Kappa Epsilon; University; Cosmos. Author: Clinical Diabetes Mellitus and Hyperinsulinism, 1940; A. Primer for Diabetic Patients, 1950. Contbr. to: Over 200 articles, principally on nutrition and diseases of metabolism. Special Int.: Internal Med., Metabolism, Nutrition.

WILDES, Karl Leland, Assoc. Prof. of Elec. Engrng., Mass. Inst. of Tech., Cambridge, Mass. MATHEMATICAL PHYSICS. b. September 25,

1895, Belmont, N. H. s. George Redfield Wildes and Belle Maroi (Amidon) W. Edn.: B.S. in Elec. Engrng., Univ. of N. H., 1920; S.M. in Math., M. I. T., 1922. m. Christine Belle (Adams) (dec.), Belmont, N. H., June 14, 1928. d. Herbert C. Adams and Florentina A. Moulton. Exp.: Instr. in Math., M. I. T., 1920-23; Instr. in Elec. Engrng., M. I. T., 1923-28; Asst. Prof. in Elec. Engrng., 1928-35; Assoc. Prof. in Elec. Engrng., 1935—; Visiting Prof. of Elec. Engrng., Natl. Tsing Hua Univ., Peiping, China, 1937. Mem.: A.I.E.E.; I.R.E.; A.S.E.E.; A.A.A.S.; Eta Kappa Nu; Sigma Alpha Epsilon. Author: Elec. Power System Analysis, Pub. at Natl. Tsing Hua Univ., Peiping, China, June, 1937. Contbr. to: Elec. Engrng.; Jour. of A.S.E.E. War Record: Five Mos. Serv. in U. S. Naval Res., 1918. Travel: France; Germany; Poland; U.S.S.R.; Manchuria; China; Japan, 1937. Listed in: Who's Who in Mass.; A.M.S.; Who's Who in Engrng.; Who's Who in the East.

WILDISH, James Elmer, Chmn., Dept. of Chem., Jr. Coll. of Kansas City, 3845 McGee St., Kansas City, Mo. CHEMISTRY, RADIOACTIVITY.

WILDMAN, Ernest Atkins, Prof. of Chem., Earlham Coll., Richmond, Ind. CHEMISTRY.

WILDMAN, S., VIROLOGIST.

WILFORD, Bill Howard, Entomologist, Bureau Entomol. and Plant Quarantine, Div. Forest Insect Investigation, U. D. A. A., Hilltop Rd., Mendham, N. J. FOREST ENTOMOLOGY.

WILHELM, R. H., Princeton Univ., Princeton, N. J. CHEMICAL ENGINEERING.

WILHELM, Werner Fred, Pres., Amer. Poly. Rsch. and Development Lab., 1020 W. 94th St., Chicago, Ill. RESEARCH AND PRODUCT DEVELOPMENT.

WILKENING, Eugene Arthur, Assoc. Prof. of Rural Sociol., Univ. of Wis., Madison 6, Wis. RURAL SOCIOLOGY AND SOCIAL PSYCHOLOGY. b. Oak Ridge, Mo., July 7, 1916. s. Theodore C. and Myrtle (Lang) W. Edn.: B.S., Univ. of Mo., 1937; M.A., *ibid.*, 1939; Ph.D., Univ. of Chicago, 1949. m. Helena Emerson, Oct 17, 1947. c.: Kenneth; Dean. Exp.: Rural Rehabilitation Supvr., Farm Security Admin., 1938-40; Personnel Officer, U. S. Army, 1942-46; Instr. in Rural Sociol., N. C. State Coll. of Agri. and Engrng., 1946-51; Soc. Science Rsch. Council Fellow, 1948-49; Asst. Prof. of Rural Sociol., Univ. of Wis., Madison, Wis., 1951—. Mem.: Rural Sociol. Soc.; Amer. Sociol. Soc.; Soc. Applied Anthropol.; A.A.A.S.; Alpha Zeta. Contbr. to: Rural Sociol. Special Int.: Acceptance of Farm Technology and Communication of Ideas and Information.

WILKERSON, Albert S., Asst. Prof. of Geol., Rutgers Univ., New Brunswick, N. J. GEOLOGY, MINERALOGY.

WILKES, Alfred, Agri. Scientist, Dominion Parasite Lab., Dept. of Agri., Belleville, Ont., Can. ENTOMOLOGY, BIOLOGICAL CONTROL.

WILKES, Gordon Ball, Prof. of Heat Engrng., Mass. Inst. of Tech., Cambridge, Mass. HEAT TRANSFER.

WILKINS, Ernest Hatch, Pres. Emer., Oberlin Coll., Oberlin, Ohio; 177 Homer St., Newton Centre, Mass. ITALIAN LITERATURE.

WILKINS, Lawson, Johns Hopkins Hosp., Baltimore, Md. ENDOCRINOLOGY—CLINICAL RESEARCH.

WILKS, Samuel Stanley, Prof. of Math. Statistics, Princeton Univ., Princeton, N. J. MATHEMATICAL STATISTICS.

WILLARD, Arthur Cutts, Univ. of Ill., Urbana, Ill. AIR CONDITIONING AND VENTILATION.

WILLARD, Bradford, Hd., Dept. of Geol., Lehigh Univ., Bethlehem, Pa. INVERTEBRATE PALEONTOLOGY.

WILLARD, Charles Julius, Prof. of Agron., Ohio State Univ., Columbus, Ohio. FORAGE CROPS, WEED CONTROL.

WILLARD, Hobart Hurd, Prof. of Chem., Univ. of Mich., Ann Arbor, Mich. **CHEMISTRY.**

WILLARD, Mary Louisa, Assoc. Prof. of Microchem., Pa. State Coll., State College, Pa. **CHEMICAL MICROSCOPY.**

WILLARD, Max Emery, Asst. Prof. of Geol., Mount Holyoke Coll., South Hadley, Mass. **GEOLOGY.**

WILLCOX, Walter F., Cornell Univ., Ithaca, N. Y. **DEMOGRAPHY.**

WILLETS, William R., Asst. Dir., Technical Service Lab. in Charge of Paper Section, Titanium Pigment Corp., 99 Hudson St., N. Y. 13, N. Y. **PAPER PIGMENT.** Montclair, N. J., April 20, 1905. s. John J. and Emily (Pupke) W. Edn.: B.S., N. Y. State Coll. of Forestry, 1926. m. Lorain Atkinson, Jan. 25, 1933. Exp.: Rsch. Chemist, Oxford Paper Co., 1926-29; Chemical Engr., Western Elec. Co., 1929-33; Consultant on Pulp and Paper and Printing and Publishing to Conservation Division, (\$1-a-year) War Production Bd., 1942-44; Titanium Pigment Corp., 1933—. Hon. Pos.: Chmn. Comm. D-6 ASTM; Numerous Comm. Assignments, ASTM and Tappi. Mem.: Amer. Soc. for Testing Materials; Amer. Chem. Soc.; Amer. Inst. of Chem. (Fellow); Soc. of Rheology; Technical Assn. of the Pulp and Paper Industry; Alpha Chi Sigma; Alpha Xi Sigma. Contr. to: Tappi; Technical Assn. Papers, The Paper Mill; Paper Industry, Paper Trade Jour.; ASTM Bull.; etc. Special Int.: Loading and Coating of Paper. Specifications and Test Methods for Pigments and Paper.

WILLETT, Hurd C., Prof. of Meteorology, Mass. Inst. of Tech., Cambridge, Mass. **SYNOPTIC METEOROLOGY.**

WILLEY, Charles Herbert, Assoc. Prof. of Biol., N. Y. Univ., N. Y., N. Y. **CYTOLOGY, PARASITOLOGY.**

WILLEY, Malcolm, M., Vice-Pres., Academic Admin., Univ. of Minn., Minneapolis, Minn. **SOCIOLOGY.**

WILLHAM, Oliver Siraivo, Vice-Dean of Agri. and Prof. of Animal Husbandry, Okla. A. and M. Coll., Stillwater, Okla. **GENETICS AND ANIMAL BREEDING.**

WILLIAMS, Annal Wessels, P. O. Box 615, Woodlawn Lake, N. J. **MEDICAL SCIENCES.**

WILLIAMS, Arthur Sease, Consulting Chemist, Locust St., Roselle Park, N. J. **CHEMISTRY.**

WILLIAMS, Benjamin H., Technical Analyst and Instr., Indus. Coll., Armed Forces, Washington, D. C. **ECONOMICS, POLITICAL SCIENCE.**

WILLIAMS, Carlos Frost, Rsch. Assoc. Prof. Horticulture, N. C. Agri. Expt. Sta., Raleigh, N. C. **PLANT BREEDING.**

WILLIAMS, Clyde, Battelle Memorial Inst., 505 King Ave., Columbus 1, Ohio. **CERAMICS.**

WILLIAMS, David Willard, Vice Chancellor for Agri., Tex. A. and M. Coll., Coll. Station Tex. **ANIMAL HUSBANDRY.** b. Venedocia, Ohio, Aug. 20, 1892. s. David W. and Elizabeth J. (Morgan) W. Edn.: B.S., Ohio State Univ., 1915; M.S., Univ. of Ill., 1916. m. Maldaleen Rees, Aug. 18, 1921. c.: Margaret Ann; Ruth Elizabeth; David Willard, Jr. Expt.: Farm Mgt., Ohio; Extension Animal Husbandman, U.S.D.A., Clemson Coll., Clemson, S. C.; Assoc. Prof., Prof., Hd. of Dept. Animal Husbandry, Vice Pres. for Agri., A. and M. Coll. of Tex.; Vice Chancellor for Agri.,

Tex. A. and M. Coll. System. Hon. Pos.: Vice-Pres., Tex. State Fair; Chmn., Advisory Com. S. W. Expo. and Fla. Stock Show. Mem.: Natl. Block and Bridle Club; Amer. Soc. of Animal Production; Fellow, Tex. Acad. of Sci.; Fellow, A.A.A.S.; Tex. Agri. Workers Assn.; Alpha Gamma Rho; Sigma Delta Chi. Author: Beef Cattle in the South, 1941. War Record: W.W.II. Special Int.: Econ. of Livestock Indus.; Beef Cattle Production; Range Livestock Indus.

WILLIAMS, Dorothy E., Assoc. Nutritionist, Schl. of Home Econ., Univ. of Tenn., Knoxville, Tenn. **NUTRITION.**

WILLIAMS, E. H., 702 Pennsylvania Ave., Urbana, Ill.

WILLIAMS, Edward Irwin Franklin, Prof. of Edn., Heidelberg Coll., 277 E. Perry St., Tiffin 4, Ohio.



EDUCATION. b. Wooster, Ohio, June 22, 1886. s. E. Garver and Mary Ellen. Edn.: Ph.B., summa cum laude, Heidelberg Coll., 1914; A.M., Columbia Univ., 1920; Ph.D., ibid., 1940. Hon. Deg.: Litt. D., Heidelberg Coll., 1948. Exp.: Instr. in Edn., Heidelberg Coll., 1915-20; Prof. and Hd. of Dept., ibid., 1920—; Registrar, ibid., 1938—. Hon. Pos.: Horace Mann Comm. of N. E.; Exec. Sec., Kappa Delta Pi; UNESCO Seminar. Mem.: Fellow, A.A.A.S.; Natl. Soc. for the Study of Edn.; NEA; Phi Delta Kappa; Kappa Delta Pi; Pi Kappa Delta; Pi Gamma Mu. Author: Horace Mann; Ednl. Statesman, 1937; Off-Campus and On Campus Lab. Schl., 1941; Heidelberg Democratic Christian Coll., 1952. Contr. to: Ednl. Forum; Ednl. Administration and Supvn.; Jour. of Edn. War Record: W.W.I. Gen. Int. Award Silver Beaver, Boy Scout of Amer. Special Int.: Tchr. Edn., Lab. Schl. and Horace Mann.

WILLIAMS, Francis Jesse, Dir., Rsch. and Dev. Labs., Baroid Sales Div., Natl. Lead Co., Box 1675, Houston 1, Texas.



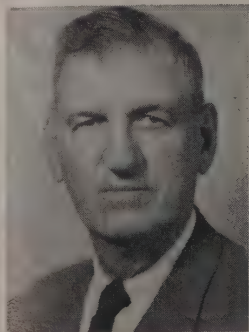
CERAMICS, CLAYS, DRILLING FLUIDS. b. Wellsburg, N. Y., May 15, 1907. s. Francis Jesse and Jessie Irene (Marsh) W. Edn.: B.S., Alfred Univ., 1928; Ph.D., Ohio State Univ., 1932. m. Elsie Jean Cavanaugh, July 7, 1931. c.: Barbara Ann; Betty Jean; Frances; Francis III; Richard. Exp.: Res. Asst. Pa. State Coll., State Coll., Pa., 1932-34; Asst. Prof., ibid., 1934-35; Fellow, Mellon Inst., Pittsburgh, Pa., 1935-39; Dept. Head, Natl. Lead

Co., Res. Lab., Brooklyn 1, N. Y., 1939-48; Tech. Dir., ibid., 1948-50; Rsch. and Dev. Labs., Baroid Sales Div., Natl. Lead Co., Dir., ibid., 1950—. Mem.: Amer. Chem. Soc.; Amer. Ceramic Soc.; A.A.A.S.; Soc. of Rheology; Amer. Pet. Inst.; Masons; Sigma Xi; Alpha Chi Sigma; Phi Lambda Upsilon; Lambda Chi Alpha. Gen. Int.: Bd. Ed. Port Washington, N. Y. Special Int.: Glass, Barium Chem., Lead Pigments and Chemicals, Clays, Organic Clay Compounds, Oil Well Drilling Fluids.

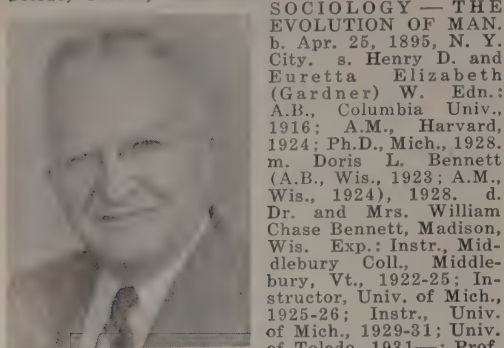
WILLIAMS, George D., Veterans Admin. Hosp. North Little Rock, Ark. **ANTHROPOLOGY.**

WILLIAMS, Gertha, Prof. of Psychol., Coll. of Edn., Wayne Univ., Detroit, Mich. **PSYCHOLOGY.**

WILLIAMS, Harold Henderson, Prof., Dept. of Biochem., Cornell Univ., Ithaca, N. Y. **BIOCHEMISTRY.**



WILLIAMS, Gardner, Prof. of Philos., Univ. of Toledo, Toledo, Ohio. **BIOLOGY, PSYCHOLOGY, SOCIOLOGY—THE EVOLUTION OF MAN.** b. Apr. 25, 1895, N. Y. City. s. Henry D. and Euretta Elizabeth (Gardner) W. Edn.: A.B., Columbia Univ., 1916; A.M., Harvard, 1924; Ph.D., Mich., 1928. m. Doris L. Bennett (A.B., Wis., 1923; A.M., Wis., 1924), 1928. d. Dr. and Mrs. William Chase Bennett, Madison, Wis. Exp.: Instr., Middlebury Coll., Middlebury, Vt., 1922-25; Instructor, Univ. of Mich., 1925-26; Instr., Univ. of Mich., 1929-31; Univ. of Toledo, 1931—; Prof.



Philos. and Chmn. of the Dept. of Philos. Hon. Pres., Toledo Chapter, Amer. Humanist Assn. Amer. Philos. Assn.; A.A.U.P.; Ohio Coll. Assn.; Philos. Sect.; A.A.A.S.; Phi Beta Kappa; Toledo Naturalists Assn., Past Pres. Author: 'The Human Perspective, 1930, printed by Ed. Kramer, Wis.; Co-author: Relig. Liberals Reply. Cont. Jour. of Philos.; Jour. of Social Philos.; Rev.; Jour. of Liberal Relig.; Unity (Chicago); Ethics. Ph.D. Dissertation: The Role of Pleasure in the Theory of Value, Published Under Title "The Human Perspective." War Record: Enlisted U. S. Army, Dec., 1917. Discharged as 2nd Lt. Res. in Air Corps with Rank of Pilot. Travel: Europe. Achievements of Gen. Int.: Elected Fellow of A.A.A.S. in Dec., 1940. Listed in: Who's Who in Philos.; Amer. Scholars.

WILLIAMS, Harry Leverne, Rsch. Chemist, Rsch. and Development Div., Polymer Corp., Ltd., Sarnia, Can. **RUBBER CHEMISTRY.**

WILLIAMS, Harry M., Vice-Pres., Engrng. and Rsch., Natl. Cash Register Co., Main and K Sts., Dayton 9, Ohio. **CHEMISTRY AND METALLURGICAL ENGINEERING.** b. Westerville, Ohio, Oct. 13, 1884. s. John R. and Lucy M. (Hooper) W. Edn.: B.S., Otterbein Coll., 1905; M.S., ibid., 1908; B.S., Ohio State Univ., 1908; Chemical Engr., ibid., 1941. m. Blanche E. Yager, 1908. c.: Frank H.; Ned B. Exp.: Engr. of Tests, The Natl. Cash Register Co., 1908-17; Engr. of Tests, Remington Arms, Bridgeport, Conn., 1917-19; Hd. of Chem. and Metallurgical Section, General Motors Rsch. Corp., 1919-25; Mgr. of Rsch., Frigidaire Div., General Motors Corp., 1925-32; Mgr. of Commercial Engrng., ibid., 1932-35; Mgr. of Standards Div., ibid., 1935-38; Dir. of Rsch., The National Cash Register Co., 1938-40; Vice-Pres. of Engrng. and Rsch., ibid., 1940—. Mem.: Ohio Soc. of Professional Engrs.; Amer. Chem. Soc.; Amer. Soc. of Testing Materials; British Inst. of Metals; Newcomen Soc.; Industrial Rsch. Inst.; Delta Upsilon; Sigma Xi; C. of C. Awards: 1940—Modern Pioneer Award, Natl. Assn. Manufacturers; 1944—Lamme Medal, Ohio State Univ. Contrb. to: Metal Industry; Trans. Amer. Electrochem. Soc.; Trans. Amer. Mining and Met. Engrs.; Metal Progress; Amer. Soc. for Metals. Special Int.: Refrigeration; Powdered Metal.

WILLIAMS, Herbert D., Supt., N. Y. State Trng. Schl. for Boys, Orange Co., N. Y. **PSYCHOLOGY.**

WILLIAMS, Horatio Burt, Prof. of Physiol., Columbia Univ., N. Y., N. Y. **MEDICAL SCIENCES, PHYSICS.**

WILLIAMS, Howel, Univ. of Calif., Berkeley 4, Calif.

WILLIAMS, J. Harold, Prof. of Edn. and Dir. Summer Sessions, Univ. of Calif., Los Angeles, Calif. **EDUCATIONAL PSYCHOLOGY.**

WILLIAMS, James Steele, Sr. Geologist, U. S. Geol. Survey, 3356 Runnymede Pl., N. W., Washington, D. C. **GEOLOGY.**

WILLIAMS, John Warren, Univ. of Wis., Madison, Wis.

WILLIAMS, Kenneth Powers, Instr. in Sci., Chicago Vocational Schl., 836 E. 53rd St., Chicago, Ill. **BIOPHYSICS.**

WILLIAMS, Leon Franklin, Prof. of Organic Chem., N. C. State Coll. Agri. and Engrng., Raleigh, N. C. **ORGANIC CHEMISTRY.**

WILLIAMS, Louis Laval, Jr., Med. Dir., U. S. P. H. S., Dept. of State, Washington, D. C. **MALARIOLOGY.**

WILLIAMS, Marjorie, Assoc. Prof. of Astron., Smith Coll., Northampton, Mass. **PRACTICAL ASTRONOMY.**

WILLIAMS, Merton Yarwood, Prof. and Hd., Dept. of Geol. and Geography, Univ. of B. C., Vancouver, B. C., Can. **STRATIGRAPHIC GEOLOGY.**

WILLIAMS, Ned B., 4001 Spruce St., Philadelphia, Pa. **BACTERIOLOGY.**

WILLIAMS, Oscar Brown, Prof. of Bacteriol., Univ. of Tex., Austin, Tex. **BACTERIOLOGY.**

WILLIAMS, Robert R., 297 Summit Ave., Summit, N. J.

WILLIAMS, Roger, Jr., 9 Sniffen Ct., 152 E. 36th St., N. Y., N. Y. **CHEMICAL ECONOMICS.**

WILLIAMS, Roger John, Biochem. Inst., Univ. of Tex., Austin 12, Tex. **BIOCHEMISTRY.**

WILLIAMS, Samuel Robinson, Prof. of Physics, Amherst Coll., Amherst, Mass. **PHYSICS.**

WILLIAMS, Stephen Culver, Asst. Prof. of Anatomy, Med. Schl., Univ. of Pa., Philadelphia, Pa. **EMBRYOLOGY.**

WILLIAMS, Stephen Riggs, Prof. Emer. Zool., Miami Univ., 300 E. Church St., Oxford, Ohio. **ZOOLOGY.**

WILLIAMS, Walter Jefferson, Prof. of Math., Baylor Univ., Waco, Tex. **ASTRONOMY, MATHEMATICS.**

WILLIAMS, Walter W., **STERILITY.**

WILLIAMSON, Charles Owen, Dept. of Math., Coll. of Wooster, Wooster, Ohio. **MATHEMATICS AND ASTRONOMY.**

WILLIAMSON, Martin B., Assoc. Prof., Loyola Univ., Schl. of Med., Chicago 12, Ill. **BIOCHEMISTRY.** b. N. Y., N. Y., Nov. 26, 1914. s. M. Nason and Rose (Wall) W. Edn.: B.S., Brooklyn Coll., 1938; A.M., Univ. of Mo., 1940; Ph.D., ibid., 1942. m. Marian Fickas, Oct. 2, 1942. c.: Arthur; David. Exp.: Rsch. Biochemist, Wyeth Inst., Philadelphia, Pa., 1942-46; Instr., Harvard Univ., Schl. of Med., 1946-48; Asst. Prof., Loyola Univ., Schl. of Med., 1948-50; Assoc. Prof., ibid., 1950—. Mem.: Amer. Chem. Soc.; A.A.A.S.; Soc. for Exptl. Biol. and Med.; Sigma Xi. Contrb. to: Jour. Biol. Chem.; Arch. Biochem. Biophys.; Proc. Soc. Exptl. Biol. and Med.; Jour. Amer. Chem. Soc.; Jour. Colloid Sci. Special Int.: Protein Metabolism and Structure.

WILLIAMSON, Paul Bernard, Consulting Rsch. Engr. and Geologist, 5201 Danneel St., New Orleans, La. **PETROLEUM.**

WILLIAMSON, Robert Crozier, Hd. Prof. of Physics, Univ. of Fla., Gainesville, Fla. **PHYSICS.**

WILLIER, Benjamin Harrison, Henry Walters Prof. of Zool. and Chmn. of Dept. of Biol., Johns Hopkins Univ., Baltimore 18, Md. **VERTEBRATE EMBRYOLOGY.** b. Weston, Ohio, Nov. 2, 1890. s. David and Mary Alice (Rickard) W. Edn.: B.S., Coll. of Wooster, 1915; Ph.D., Univ. of Chicago, 1920. Hon. Deg.: Sc.D., Coll. of Wooster, 1941. m. Helen Beatrice Shipman, Sept. 11, 1919. c.: Helen Kathryn and Louise. Exp.: Instr. in Biol., Coll. of Wooster, 1915-16; Assoc. in Zool., Univ. of Chicago, Chicago, Ill., 1919-20; Instr. in Zool., ibid., 1920-24; Asst. Prof. of Zool., ibid., 1924-27; Assoc. Prof. of Zool., ibid., 1927-31; Prof. of Zool., ibid., 1931-

33; Prof. and Hd. Dept. and Chmn. Div. of Biol. Sci., Univ. of Rochester, N. Y., 1933-40; Henry Walters Prof. of Zool. and Chmn. Dept. of Biol., Johns Hopkins Univ., Baltimore, Md., 1940—; Mem.: Natl. Acad. of Sci.; Amer. Soc. of Zool.; Fellow, A.A.A.S.; Amer. Assn. of Anatomists; Amer. Microscopical Soc.; Assn. for Study Internal Secretions; Soc. for Exptl. Biol. and Med.; Amer. Soc. of Naturalists; Soc. for Growth and Dev.; Genetics Soc.; Institut Internatl. d'Embryologie; Soc. of Cell Biol.; Gamma Alpha; Phi Beta Kappa; Sigma Xi. Co-author. *The Biol. of Melanomas*, 1948; *La Différenciation Sexuelle chez les Vertébrés*, 1951; *The Chick Embryo in Biol. Rsch.*, 1952. Special Int.: Hormones in Embryonic Development; Cellular Differentiation and Growth; Mechanisms of Color-Pattern Production in Plumage.

WILLING, Matthew H., Prof. and Chmn., Dept. of Edn., Univ. of Wis., Madison, Wis. EDUCATION.

WILLIS, Clodius Harris, Arthur Legrand Doty Prof. of Elec. Engrng., Princeton Univ., Princeton, N. J. ELECTRICAL ENGINEERING.

WILLISTON, Arthur L., retired, 986 High St., Dedham, Mass. TECHNICAL EDUCATION.

WILLS, Doris Margaret, Project Engr., Brown Instrument Co., Wayne and Roberts, Philadelphia, Pa. PHYSICS.

WILLS, James Henry, Acting Chf., Pharmacol. Section, Med. Div., Army Chemical Center, Md. PHARMACOLOGY.

WILSIE, Carroll Paton, Rsch. Assoc. Prof., Dept. of Agron., Iowa State Coll., Ames, Iowa. AGRONOMY, PLANT BREEDING.

WILSON, Charlie W., 15 Stanley Rd., Burlingame, Calif. ZOOLOGICAL SCIENCES.

WILSON, Clarence Paret, Dir. Office of Products Rsch., Calif. Fruit Growers Exchange, P. O. Box 5080, Los Angeles, Calif. CHEMISTRY.

WILSON, David Bruce, Regional Dir., Africa-Asia Minor Internatl. Health Div., Rockefeller Foundation, 49 W. 49th St., N. Y., N. Y. PUBLIC HEALTH.

WILSON, David Wright, Benjamin Rush Prof. of Physiol. Chem., Med. Schl., Univ. of Pa., Philadelphia, Pa. PHYSIOLOGICAL CHEMISTRY.

WILSON, Donald Grey, Prof. and Chmn., Dept. of Electrical Engineering, Univ. of Kans., Lawrence, Kans. ENGINEERING. b. Bridgeport, Conn., September 20, 1917. s. William G. and Jeanette Gardner (Kerr) W. Edn.: B.E.E., Rensselaer Poly. Inst., 1938; S.M., Harvard, 1939; Ph.D., Eng. Sci., ibid., 1947; Ph.D., ibid., 1948. m. Elizabeth Jean Lanning of Herkimer, N. Y., Apr. 14, 1943. d. Dr. Charles W. Lanning. c.: Kirk Lanning; Craig Gardner. Exp.: 1939-40, Mgr., Auto Fire Alarm Div., Sealord Corp.; 1940-42, Instr., Dept. of Elec. Engrng., Rensselaer Poly. Inst.; 1942-45, Staff Mem., Radiation Lab., M. I. T.; 1947-50, Assoc. Prof., Univ. of Kan.; 1950—, Prof., ibid.; 1948—, Chmn., Dept. of Elec. Engrng., ibid. Mem.: Sigma Xi; Tau Beta Pi; A.A.U.P.; A.I.E.E.; I.R.E.; A.S.E.E.; Sigma Phi Epsilon; Kappa Eta Kappa; Eta Kappa Nu; C. of C.; Kiwanis. Ph.D. Dissertation: Measurement of Antenna Impedance Using a Receiving Antenna. Hobbies: Private Pilot; Amateur Radio.

WILSON, Edgar Bright, Jr., Theodore William Richards Prof. of Chem., Harvard Univ., 12 Oxford St., Cambridge 38, Mass. PHYSICAL CHEMISTRY. b. Gallatin, Tenn., Dec. 18, 1908. s. E. Bright and Alma (Lackey) W. Edn.: B.S., Princeton Univ., 1930; M.A., ibid., 1931; Ph.D., Calif. Inst. of Tech., 1933. m. Emily Buckingham, June 15, 1935. c.: Kenneth; David; Nina. Exp.: Tehng. Fellow, Calif. Inst. of Tech., Pasadena, Calif., 1931-33; Rsch. Fellow, ibid., 1933-34; Jr. Fellow, Soc. Fellows, Harvard, Cambridge, Mass., 1934-36; Asst. Prof. of Chem., ibid., 1936-39; Assoc. Prof., Prof. and Theodore W. Richards Prof., ibid., 1939—; Rsch. Dir., Underwater Explosives Rsch. Lab., Oceanographic Inst., Woods Hole, Mass., 1942-44;

Chf., Div. 2, N.D.R.C., 1944-46; Rsch. Dir. and Deputy Dir., Weapons Systems Evaluation Group, 1952-53. Mem.: Amer. Acad. of Arts and Sci.; Natl. Acad. of Sci.; Amer. Phil. Soc.; Amer. Chem. Soc.; Amer. Phys. Soc.; Phi Beta Kappa. Author: Intro. to Quantum Mechanics, 1935; Intro. to Scientific Rsch., 1952. Contrb. to: Jour. Amer. Chem. Soc.; Jour. Chem. Physics; Phys. Rev.; Jour. Phys. Chem.; Chem. Revs. Gen. Int.: Amer. Chem. Soc. Award, 1937; Medal for Merit, 1948; Guggenheim Fellow and Fulbright Grantee, Oxford, England, 1949-50. Special Int.: Quantum Mechanics; Molecular Dynamics; Infrared and Microwave Spectroscopy; Physics of Explosives; Operations Analysis.

WILSON, Edwin Bidwell, Harvard Schl. of Public Health, 695 Huntington Ave., Boston 15, Mass.

WILSON, Ellwood, Consulting Forestry Engr. and Div. Chf., Bureau Information, Dept. Lands and Forests, Box 43, Knowlton, Que., Can. FORESTRY.

WILSON, Frank Norman, Prof. of Med., Univ. of Mich. Med. Schl., Ann Arbor, Mich. INTERNAL MEDICINE.

WILSON, Harley Frost, 4619 Oakwood Ave., La Canada, Calif. ENTOMOLOGY.

WILSON, Harold Albert, Prof. of Physics and Hd. Dept., Rice Inst., Houston, Tex. PHYSICS.

WILSON, Harold Kirby, Vice-Dean and Dir., Resident Instr. and Hd. Dept. of Agron., Pa. State Coll., State College, Pa. CROP PHYSIOLOGY.

WILSON, Hewitt, Supvng. Engr., Electrotechnical Lab., U. S. Bureau of Mines, P. O. Box 74, Norris, Tenn. CERAMICS.

WILSON, Irl Donaker, Hd., Dept. of Biol., Va. Poly. Inst., Blacksburg, Va. ZOOLOGY, VETERINARY MEDICINE.

WILSON, Ivan Franklin, Amer. Embassy, Paseo de la Reforma 64, Mexico, D. F., Mex. GEOLOGY.

WILSON, J. F., Wool Dept., Univ. of Calif., Davis, Calif. WOOL SCIENCE.

WILSON, James Raymond, Dir., Electronic Apparatus Development, Bell Telephone Labs., 463 West St., N. Y., N. Y. ELECTRONICS.

WILSON, James Walter, Frank L. Day Prof. of Biol., Brown Univ., Providence, R. I. CYTOLOGY, EMBRYOLOGY.

WILSON, John Gordon, Emer. Prof., Northwestern Med. Schl., Chicago, Ill.; Catamount Lane, Old Bennington, Vt. OTOLARYNGOLOGY.

WILSON, Kary Miller, Prof. of Obstetrics and Gynecology, Schl. of Med., Univ. of Rochester, Rochester, N. Y. OBSTETRICS AND GYNECOLOGY.

WILSON, Katherine Woods, Asst. Prof. of Chem., George Pepperdine Coll., Los Angeles, Calif. CHEMISTRY. b. Los Angeles, Calif., Feb. 8, 1923. d. Harry L. and Sallie (Woods) W. Edn.: B.S., Univ. of Calif., 1944; M.S., ibid., 1945; Ph.D., Univ. of Calif. at Los Angeles, 1948. Exp.: Asst. Prof. Chem., W. Va. Univ., Morgantown, W. Va., 1948-53; Asst. Prof. Chem., George Pepperdine Coll., Los Angeles, Calif., 1953—. Mem.: Phi Beta Kappa; Sigma Xi; Iota Sigma Pi; Amer. Chem. Soc. Contrb. to: Jour. Amer. Chem. Soc.; Analytical Chem.; Jour. Chem. Edn. Special Int.: Organometallic Compounds; Organic Analytical Methods.

WILSON, Leonard Seltzer, Prof. of Geography, Carleton Coll., Northfield, Minn. MAP INTELLIGENCE.

WILSON, Louise Palmer, Assoc. Prof., Wellesley Coll., Wellesley, Mass. PHYSIOLOGY.

WILSON, Lucy, Prof. of Physics and Dean of Students, Wellesley Coll., Wellesley, Mass. METEOROLOGY.

WILSON, Levi Thomas, Prof. of Phys., Jacksonville State Tchrs. Coll., 421 N. Pelham Road, Jacksonville, Ala. **MATHEMATICS; PHYSICS.** b. Dec. 24, 1885, Jonesboro, Ark. s. Geo. W. and Sarah (Stroud) W. Edn.: A.B., Wash. and Lee Univ., 1909; M.A., *ibid.*, 1910; M.A., Columbia Univ., 1913; Ph.D., Harvard Univ., 1915. m. 1st, Barbara Belle (Smohl) (dec.). m. 2nd, Hazel (Schoonmaker) of Westfield, Mass., July 14, 1938. d. Dr. and Mrs. Arthur T. Schoonmaker. c.: Martha Sarah (Mrs. Carl W. Burrows, Jr.); Thomas George. Exp.: Instr. of Math., Wash. and Lee Univ., 1909-10; Instr. of Math., Univ. of Va., 1910-11; Instr. and Asst., Math., Columbia Univ., 1911-13; Instr. of Math., Harvard Univ., 1913-15; Instr. of Math., Univ. of Ill., 1915-17; U. S. Naval Acad., Instr., 1917-20; Asst. Prof., 1920-25; Assoc. Prof., 1925-35; Prof., 1935-42; Sr. Prof. and Dean of Dept. of Math., 1942-51; Prof. Emer., U. S. Naval Acad.; Prof. of Math. and Phys., and Hd., Dept. of Phys., Ala. State Tchrs. Coll., Jacksonville, Ala., 1951—. Mem.: Amer. Math. Society; A.S.E.E.; Acad. of Polit. Sci.; Phi Beta Kappa; Raven Soc. Author: Analytical and Applied Mechanics, 3rd Ed., 1950, Clements and Wilson; Manual of Math. and Mech., 2nd Ed., 1947, Clements and Wilson. Ph.D. Dissertation: Conformal Transformation of Curvilinear Angles. Listed in: Who's Who in the East; Who's Who in Md.; A.M.S.; Who Knows—and What. Special Int.: Math., Phys. (Administration).



WILSON, Milbourne Otto, Chmn. and Prof. of Psychol., Univ. of Okla., Norman, Okla. **PSYCHOLOGY.**

WILSON, Morley Evans, Geologist, Geol. Survey of Can., Ottawa, Ont., Can. **GEOLOGY, GEOGRAPHY.**

WILSON, Orville Turner, Assoc. Prof. of Botany, Univ. of Cincinnati, Cincinnati, Ohio. **BOTANY.**

WILSON, Perry William, Prof. of Agri. Bacteriol., Univ. of Wis., Madison, Wis. **BACTERIOLOGY.**

WILSON, Ralph Elmer, 605 Acacia Ave., Corona del Mar, Calif.

WILSON, Raymond Hiram, Jr., Asst. Prof., Dept. of Math., Temple Univ., Philadelphia, Pa. **ASTRONOMY, MATHEMATICS, PHYSICS.**

WILSON, Robert E., Chmn. of Bd. and Chf. Exec. Officer, Standard Oil Co. of Ind., 910 S. Michigan Ave., Chicago 80, Ill. **PETROLEUM REFINING, CRACKING, CORROSION.** b. Beaver Falls, Pa., Mar. 19, 1893. s. William Hyatt and Madge (Cunningham) W. Edn.: Ph.B., magna cum laude, Coll. of Wooster, 1914; B.S., Mass. Inst. Tech., 1916. Hon. Deg.: Sc.D., Coll. of Wooster, 1931; Dr. Eng., Brooklyn Poly. Inst., 1940; LL.D., Colby Coll., 1941; LL.D., Northwestern Univ., 1947; L.H.D., Univ. of Tulsa, 1948; LL.D., Lake Forest Coll., 1952; LL.D., William Jewell Coll., 1953. m. Pearl M. Rockfellow, December 22, 1916. c.: Doris Mildred (Mrs. Louis O. Blanchard, Jr.); Lois Marian (Mrs. Daniel J. Miles); Janice Marjorie (Mrs. William E. George). Exp.: Rsch. Asst., Rsch. Lab., Gen. Elec. Co., Schenectady, N. Y., 1916; Rsch. Assoc., Rsch. Lab. Applied Chem., Mass. Inst. of Tech., Cambridge, Mass., 1916-17; Cons. Chem. Engr., Bur. of Mines, Wash-



ington, D. C., 1917-18; Capt. and Maj. C.W.S., 1918-19; Dir., Rsch. Lab. of Applied Chemistry, and Assoc. Prof. of Chem. Engrng., Mass. Inst. of Tech., Cambridge, Mass., 1919-22; Asst. Dir. Rsch., Standard Oil Co. of Ind., 1922-28; Asst. to Vice-Pres. in Chg. Mfg., *ibid.*, 1929-30; Dir. and Vice-Pres. in Chg. Rsch. and Dev., *ibid.*, 1931-34; Chmn. of Bd. and Chf. Exec. Officer, *ibid.*, 1945—; Vice-Chmn., Pan Amer. Petroleum Transport Co., 1935-37; Pres., *ibid.*, 1937-44; Chmn. of Bd. and Dir., *ibid.*, 1945—. Life Mem. Corp., Mass. Inst. of Tech.; Trustee, Coll. of Wooster (Ohio); Univ. of Chicago; Museum of Sci. and Indus. (Chicago); Dir., Chase Natl. Bank of N. Y., First Natl. Bank of Chicago; Natl. Indus. Conf. Bd.; Director-at-Large, Natl. Assn. of Mfgs. Mem.: Natl. Petroleum Coun.; Amer. Chem. Soc.; Amer. Inst. Chem. Engrs.; Soc. Automotive Engrs.; Amer. Petroleum Inst.; Amer. Soc. Testing Materials; Inst. of Petroleum Tech.; 25 Yr. Club of Petroleum Industry; Newcomen Soc. of England; Natl. Acad. of Sci.; Ind. Soc. of Chicago; Phi Beta Kappa; Alpha Chi Sigma; Delta Sigma Rho. Clubs: Chicago, Chemists, Economic, Commercial, Scarsdale Golf, Glen View, Old Elm, The Links, M.I.T. Club of Chicago. Contrb. to: 85 articles to Prof. Jours. Over 90 Patents; Chem. Indus. Medal, 1939; Perkin Medal, 1943; Cadman Mem. Medal, 1951; Northwestern Univ. Centennial Award, 1951.

WILSON, Robert Hugh, Pharmacologist, Western Regional Rsch. Lab., U. S. D. A., Albany, Calif. **PHARMACOLOGY.**

WILSON, Robert North, Prof. of Chem., Duke Univ., Durham, N. C. **BIOCHEMISTRY.**

WILSON, Wilbur M., Rsch. Prof. Structural Engrng., 119 Talbot Lab., Univ. of Ill., Urbana, Ill. **STRUCTURAL ENGINEERING RESEARCH.**

WILSON, William Solomon, Assoc. Dir. of the Geophysical Inst., Prof. of Chem. and Hd. Dept., Univ. of Alaska, Box 13, College, Alaska. **CHEMISTRY; PHYSICS.** b. Reynoldsburg, Ohio, Aug. 9, 1908. s. Luda and Lena (Metzger) W. Edn.: B.S., Brown Univ., 1931; M.S., *ibid.*, 1934; Ph.D., Yale Univ., 1936. Exp.: Chemist, Shell Development Co., 1937-38; Instr. in Chem. and Math., Blue Ridge Coll., New Windsor, Md., 1939-40; Asst. Prof. of Physics, Assoc. Prof. of Physical Sci., Hd. Dept. of Physical Sci., Georgetown Coll., Georgetown, Ky., 1940-47; Asst. Prof. of Chem., Univ. of Wyo., Laramie, Wyo., 1948-49; Prof. of Chem. and Hd. Dept. of Chem., Univ. of Alaska, College, Alaska, 1947-48, 1949—; Acting Dir., Geophysical Inst., *ibid.*, 1950-52; Assoc. Dir., *ibid.*, 1952—. Hon. Pos.: Exec. Com., Alaska Div., A.A.A.S., 1951-52. Mem.: Amer. Chem. Soc.; Amer. Physical Soc.; Amer. Meteorol. Soc.; A.A.A.S.; Amer. Geophysical Union; Franklin Inst.; Amer. Physica Tchrs.; Natl. Sci. Tchrs. Assn.; Ky. Acad. Sci.; Natl. Geographical Soc.; Arctic Inst. of North Amer.; N. Y. Acad. of Sci.; Lambda Chi Alpha; Sigma Xi; Phi Delta Kappa; Gamma Sigma Epsilon; Kiwanis. Contrb. to: Physical Rev.; Trans. Amer. Geophys. Union; Proc. Alaska Sci. Conf. Special Int.: Physical Chem.; Wave Mechanics; Theoretical Organic Chem.; Geophysics; Edn.



WINANS, J. G., Univ. of Wis., Madison, Wis. **SPECTROSCOPY.**

WINCH, Ralph Philip, Prof. of Physics, Thompson Physical Lab., Williams Coll., Williamstown, Mass. **PHYSICS.**

WINCHESTER, George, Hd., Dept. of Physics, Rutgers Univ., New Brunswick, N. J. **PHYSICS.**

WINEGARDEN, Howard Merlin, Vice-Pres. of Rsch. and Mfg., Cutter Labs., Berkeley, Calif. **CHEMISTRY, MEDICAL SCIENCES.**

WINCHELL, Alexander Newton, Prof. Emeritus of Geol., Univ. of Wis., 88 Vineyard Rd., Whitewater 17, Conn. **MINERALOGY**. b. Minneapolis, Minn., Mar. 2, 1874. s.



Newton Horace and Charlotte Sophia (Imus) W. Edn.: B.S., Univ. of Minn., 1896; M.S., ibid., 1897; D.Sc., Univ. of Paris, 1900. m. Edith Clare Christello (dec.), May 29, 1898. m. 2nd, Florence Mabel Sylvester, May 31, 1934. c.: Vira Frances; Ima Charlotte; Alexander Vaughn; Clare Bernice and Horace. Exp.: Prof. of Geol. and Mineralogy, Mont. Schl. of Mines, Butte, Mont., 1900-07; Asst. Prof. of Geol., Univ. of Wis., Madison, Wis., 1907-08; Prof. of Geol., ibid., 1908-44; Chmn., Dept. of Geol., ibid., 1934-40; Resident Consultant, Amer. Cyanamid Co., Stamford, Conn., 1945-48; Visiting Prof., Univ. of Va., Charlottesville, Va., 1948-49; Visiting Prof., Columbia Univ., N. Y. C., 1949-50. Hon. Pos.: Pres., Mineralogical Soc. of Amer., 1932; Vice-Pres., Geol. Soc. of Amer., 1932. Mem.: Geol. Soc. of Amer.; Mineral. Soc. of Amer.; Amer. Inst. Mining Engrs.; Amer. Cryst. Assn.; A.A.A.S.; Soc. Econ. Geol.; Wis. Acad. of Sci.; Wis. Hist. Soc.; Phi Gamma Delta; Phi Beta Kappa; Sigma Xi. Author: Elements of Optical Mineralogy, 1909; Optical Characters of Artificial Minerals, 1927; Elements of Mineralogy, 1942; Optic Properties of Organic Compounds, 1948. Contbr. to: Minn. Hist. Soc.; Geol. Soc. Amer.; Trans. Amer. Inst. of Mining Engrs.; Min. Rsch. U. S. Geol. Survey; Econ. Geol.; Ill. Geol. Soc. of Amer.; Jour. Geol.; Jour. Geography; Sci., Bull., U. S. Geol. Survey; Amer. Jour. Sci.; Jour. Agri. Rsch.; Amer. Mineral.; Bull. Geol. Assn. Petrol. Geol. Special Int.; Mineralogy; Variations in Composition in Single Minerals; Relations Between Variations in Composition and Variations in Phys. Properties of Minerals.

WINESTOCK, Otto Charles, retired, The Galt, 2903 Monument Ave., Richmond, Va. **INDUSTRIAL RESEARCH**.

WING, Elizabeth May, Assoc. Prof. of Chem., Colo. State Coll., Fort Collins, Colo. **CHEMISTRY**.

WINGARD, Samuel Andrew, Plant Pathologist, Va. Agric. Expt. Sta., Blacksburg, Va. **PLANT PATHOLOGY**.

WINKLER, Albert Julius, Prof. of Viticulture and Viteulturist, Expt. Sta., Univ. of Calif., Davis, Cal. **VITICULTURE**.

WINKLER, Joseph Homer, Asst. Supvr., Graphic Arts Rsch. Div., Battelle Memorial Inst., 505 King Ave., Columbus, Ohio. **ELECTROCHEMISTRY**.

WINNE, Charles Knickerbacker, Jr., Assoc. Prof. of Med., Albany Med. Coll., Union Univ., Albany, N. Y. **MEDICINE**.

WINSLOW, Charles Nelson, Asst. Prof., Brooklyn Coll., Brooklyn, N. Y. **PSYCHOLOGY**.

WINSOR, Andrew Leon, Dir., Schl. of Edn., Cornell Univ., Ithaca, N. Y. **PERSONNEL MANAGEMENT**.

WINSTEIN, Saul, Dept. of Chem., Univ. of Calif., at Los Angeles, Los Angeles 24, Calif. **PHYSICAL ORGANIC CHEMISTRY**.

WINSTON, James Henry Curry, Hampden-Sydney Coll., Hampden-Sydney, Va. **ORGANIC CHEMISTRY**.

WINSTON, John Robinson, Sr. Horticulturist, U. S. D. A., 415 N. Parramore St., Orlando, Fla. **PLANT PATHOLOGY**.

WINTER, Alden Raymond, Prof. of Poultry Husbandry, Ohio State Univ., Columbus, Ohio. **BACTERIOLOGY**.

WINTER, Charles Ernest, Asst. Prof., Bacteriology, P. O. Box 23, Loma Linda, Calif. **BACTERIOLOGY**. b. Colorado Springs, Colo., Sept. 9, 1914. s. Ernest E. and Christina (Senning) W. Edn.: B.A., Colo. Coll., 1936; M.A., ibid., 1938; M.S., Univ. of Md., 1945; Ph.D., ibid., 1947. m. Betty Louise, June 15, 1937. c.: Robin Louise; Christie Ann. Exp.: Asst. Prof., Southern Jr. Coll., Collegedale, Tenn., 1942-43; Assoc. Prof., Wash. Missionary Coll., Wash. D. C., 1943-45; Bacteriologists, U. S. Fish and Wildlife Service, Washington, D. C., 1945-47; Prof. Biological Sci., China Training Inst., Chiao Tou Tseng, Kiangsu, China, 1947-50; Prof., Wash. Missionary Coll., Wash., D. C., 1950-51; Asst. Prof., Coll. of Med. Evangelists, Loma Linda, Calif., 1951—. Mem.: Soc. of Amer. Bacteriologists; Amer. Public Health Assn.; Electron Microscope Soc. of Amer.; Amer. Genetic Assn.; A.A.A.S.; Delta Epsilon; Sigma Xi. Special Int.: Enterococci in Sanitary Bacteriology; Medical Bacteriology; Electron Microscopy.

WINTER, Floyd Leslie, Dir. of Breeding and Rsch., Mem. Bd. of Dirs., Assoc. Seed Growers, Inc., 484 Whitney Ave., New Haven, Conn. **PLANT BREEDING**.

WINTERKORN, Hans Friedrich, Dir. of Soil Physics Lab., Dept. of Civil Engrng., Princeton Univ., Princeton, N. J. **PHYSICAL CHEMISTRY OF SOILS AND CONSTRUCTION MATERIALS**. b. Mannheim, Baden, Germany, Nov. 24, 1905. s. Valentin de Guenome and Elisabeth Christina (de Gedde) W. Edn.: Volkshochschule Ludwigshafen a/Rh. Germany, 1912-15; Royal Bavarian Humanistic Gymnasium Ludwigshafen a/Rh. Bavaria, 1915-24; Ruperto-Carola Univ., Heidelberg, Germany, 1924-31; Dr. of Natural Philosophy in Physical Chem., Heidelberg, Germany, 1931. m. Hazel Katharine zum Walldt, Oct. 13, 1940. c.: Hans F. zum Walldt, III; Erik Guinemer de Gedde. Exp.: Hd., Div. of Chem., Schl. of Adult Edn., Mannheim, Baden, Germany, 1929-31; Rsch. Chemist and Engr., Mo. State Highway Dept., 1931-32; Rsch. Consultant, ibid., 1932-42; Visiting Asst. Prof. of Chem., Univ. of Mo., 1932-33; Rsch. Assoc. in Soils, ibid., 1933-40; Rsch. Assoc. Prof. of Soil Mechanics, Schl. of Engrng., ibid., 1940-42; Rsch. Consultant of Validad Nacional de Argentina, 1937-40; Assoc. Prof. of Civil Engrng., Univ. of Mo., 1942-43; Consultant and Dir. of Rsch. Contract for Airport Development Section of the Civil Aeronautics Admin., 1942-46; Chmn., Soil Tech. Section of Soil Sci. Soc. of Amer., 1943-45; Dir. of Soil Physics Lab. and Assoc. Prof. of Civil Engrng., Princeton Univ., Princeton, N. J., 1943—; Consultant, Turkish Highway Engrng. Mission to U. S. A., 1945; Consultant to Private Road-Improvement Interests in Argentina, 1946; Consultant to Bureau of Yards and Docks, U. S. Navy Dept., 1947-52; Consultant to Pan-Amer. Div. of the A.R.B.A., 1948—. Mem.: Fellow, Amer. Inst. of Chemists; Fellow, Amer. Geographic Soc.; Fellow, A.A.A.S.; Amer. Chem. Soc.; Geophysical Union; Soc. for Engrng. Edn.; Acad. Political Science; A.A.U.P.; Assn. of Asphalt Paving Technologists; Amer. Road Builders Assn.; Amer. Soc. Civil Engrs.; Highway Rsch. Bd.; N. Y. Acad. Sci.; German Road Rsch. Soc.; Hon. Chf. "Eagle-Bear" of the Black Foot Tribe; Tau Beta Pi; Gamma Alpha; Alpha Chi Sigma; Sigma Xi. Contbr. to: Annalen der Physik, Germany; Soil Sci.; Indus. and Engrng. Chem.; Proc. Soil Sci. Soc. Amer.; Proc. Highway Rsch. Bd.; etc. War Record: Development of Waterproofing Methods for Fighter Fields for Air Force, and for Landing Beach Stabilization for Navy. Gen. Int.: Dr. Winterkorn is Internationally Regarded as the Father of the Sci. of Soil Stabilization. Special



Int.: Specialist on Properties of Water in Colloidal Systems especially as Revealed by Electro-Osmosis and Thermo-osmosis; Discoverer of the Electric Effect in Thermo-Osmosis.

WINTERNITZ, Milton Charles, Anthony N. Bardy Prof. of Pathol., Yale Univ. Schl. of Med., New Haven, Conn. PATHOLOGY.

WINTERS, Jet Corine, Prof. of Home Econ., Univ. of Tex., Austin, Tex. NUTRITION.

WINTERS, Laurence Merriam, Prof. in Chg. Animal Breeding, Univ. Farm, St. Paul, Minn. ANIMAL BREEDING.

WINTON, Kate Barber, retired, Ridgefield Rd., Wilton, Conn. VEGETABLE HISTOLOGY.

WINTON, Will McClain, Prof. of Biol. and Geol., Tex. Christian Univ., Fort Worth, Tex. GEOLOGY, GEOGRAPHY.

WINTROBE, Maxwell, Univ. of Utah, Salt Lake City, Utah. HEMATOLOGY.

WIRTH, Herbert Paul, City Coll., N. Y., N. Y. MATHEMATICS.

WISE, George Herman, Assoc. Prof. Dairy Husbandry, Dept. of Animal Husbandry, Iowa State Coll., Ames, Iowa. DAIRY PRODUCTION RESEARCH.

WISE, Louis Elsberg, Prof. Emer., N. Y. State Coll. Forestry, Syracuse, N. Y.; 108 N. Green Bay St., Appleton, Wis. ORGANIC CHEMISTRY.

WISELOGLE, I. Y., Squibb Inst. for Rsch., New Brunswick, N. J. ORGANIC PHARMACEUTICAL CHEMISTRY.

WISLOCKI, George Bernays, Harvard Med. Schl., 25 Shattuck St., Boston 15, Mass.

WISS, J. E., 1339 Lincoln Rd., Columbus 12, Ohio. CERAMICS.

WISSINK, Gerrit Martin, Prof. of Physics, State Tchrs. Coll., Mankato, Minn. PHYSICS.

WISSLER, Benjamin F., Prof. of Physics, Middlebury Coll., Middlebury, Vt. PHYSICS.

WISSLER, Stanley G., Chf. Paleontologist, Union Oil Co., Union Oil Bldg., Los Angeles, Calif. PETROLEUM GEOLOGY.

WITHERIDGE, William Nemitz, Manufacturing Engr., Gen. Motors Corp., Detroit. Res., 3815 West Maple Rd., Birmingham, Mich. AIR POLLUTION RESEARCH, TECHNOLOGY, ENGINEERING CONTROL; SCIENCE AND TECHNOLOGY OF ODOR PERCEPTION AND ODOR CONTROL. b. Saginaw, Mich., March 10, 1910. s. William Allen and Edith S. (Nemitz) W. Edn.: B.S., Mich. State Coll., 1935; S.M., Harvard Univ., 1936; M.S., Univ. of Mich., 1946; Ph.D., *ibid.*, 1951. m. Anne Lucile Allen, Aug. 26, 1936. c.: Virginia Anne; William Allen. Exp.: Machine Designer, General Motors Corp., Saginaw and Lansing, Mich., 1927-36; Inst. in Industrial Ventilation, Harvard Schl. of Public Health, Boston, Mass., 1936-37; Chief Engr., Bur. of Industrial Hygiene, Detroit Dept. of Health, Detroit, Mich., 1937-41; Dir., *ibid.*, 1941-46; Instr. part-time, Air Sanitation and Industrial Ventilation, Univ. of Mich., Ann Arbor, Mich., 1941-45; Ventilation Consultant, Gen. Motors Corp., 1946-52; Mfg. Engr., Gen. Motors Corp., Detroit, Mich., 1953—. Hon. Pos.: Chmn., Guide Publication Comm., Amer. Soc. of Heating and Ventilating Engineers. Pres., Mich. Industrial Hygiene Soc., 1947-48. Mem.: A.A.A.S.; Life Mem., Harvard Engr. Soc.; Air Pollution Control Assn.; Amer. Inst. of Industrial Engrs.; Amer. Indust. Hygiene Assn.; Delta Omega; Detroit Civic Affairs Comm. Contrb. to: Transactions, Amer. Soc. of Heating and Ventilating Engineers; Jour. Amer. Med. Assn.; Jour. of Industrial Hygiene and Toxicol. Special Int.: Air Pollution; Air Cleaning; Gas Cleaning; Dust, Smoke, and Fume Control; Odor Control; Air Sanitation; Air Bacteria Control.

WITMER, Lightner, P. O. Box 186, Devon, Pa. PSYCHOLOGY.

WITSCHI, Emil, Prof. of Zool., State Univ. of Iowa, Iowa City, Iowa. ZOOLOGY, EMBRYOLOGY.

WITT, Joshua Chitwood, Tech. Dir., Marquette Cement Mfg. Co., 140 S. Dearborn St., Chicago, Ill. ENGINEERING.

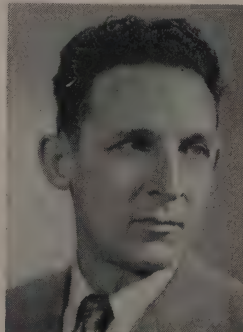
WITTENBORN, John Richard, Rsch. Assoc. and Assoc. Prof. in Psychol., Yale Univ., 333 Cedar St., New Haven, Conn. PSYCHOLOGY. b. Fort Gage, Ill., May 22, 1915. s. R. E. and Mable (Mulholland) W. Edn.: Ph.D., Univ. of Ill., 1942. m. Sarah Alwood, Apr. 29, 1937. c.: Sarah Elizabeth; Gretchen Ann; John Richard, Jr.; Christopher Dirk. Exp.: Asst. in Instruction and Res. Asst., Univ. of Ill., 1939-42; Instr., Asst. Prof., Rsch. Assoc. and Assoc. Prof., Dept. of Psychol., Yale Univ., New Haven, Conn., 1942—; Dir., Adoptive Child Rsch. Project, 1950—. Mem.: Amer. Psychol. Assn.; Amer. Statistical Assn.; Biometric Soc.; Psychometric Soc.; Inst. of Math. Statistics; A.A.A.S. Contrb. to: Jour. Consulting Psychol.; Jour. Clinical Psychol.; Jour. Abnormal and Social Psychol.; Jour. Applied Psychol.; Jour. Ednl. Psychol.; Ednl. and Psychological Measurements; etc. Special Int.: Clinical, Statistics, Child Development (special applications of psychology to problems in industry and edn.)

WITTIG, Carl O. G., Prof. and Head of Mechanical Engrng. Department, 1211 Falcon Drive, Louisville, Ky. ENGINEERING. b. Hoboken, Belgium on December 28, 1901. s. Gustav and Marie (Verbeck) W. Edn.: M.E., Stevens Inst. of Tech., 1926. m. Roselle Kane of Fullerton, Pa., Aug. 29, 1929. d. Patrick and Mazie Kane. c.: Carl James G.; Ina Marie; Theodore Kane. Exp.: Mack Motors, Allentown, Pa., 1926-27; Babcock and Wilcox Co., Engr., Fullerton, Pa., 1927-29; Instr. of Mech. Engrng., Colo. Schl. of Mines, Golden, Colo., 1929-35; Asst. Prof., Mech. Engrng., Colo. Schl. of Mines, Golden, Colo., 1935-39; Assoc. Prof. and Hd. of Mech. Engrng. Dept., Cath. Univ. of Amer., Wash., D. C., 1939-46; Chief Capital and Producer Products Br., W.A.A. and Spec. Asst. to the Admin. of W.A.A., Wash., D. C., 1946-47; Chief Process and Mech. Engr., H. K. Ferguson Co., N. Y. City, 1947-48; Prof. and Hd. of Mech. Engrng., Speed Scientific Schl., Univ. of Louisville, Ky., 1948—; Consulting Engr., Colo., Md., D. C., Ky., 1929—; Vice-Pres. and Chief Engr., Red Comet, Inc., Littleton, Colo., 1931-34; Chief Engrng. Consultant, War Productions Bd., Wash., D. C., 1943. Mem.: Amer. Soc. of Mech. Engrs.; Amer. Soc. of Engrng. Edn.; Army Ordnance Assn.; Ky. Acad. of Sci.; Scabbard and Blade; Sigma Pi Sigma; Sigma Nu. Hobbies: Model Railroad; Regular Railroad Activity. Listed in: A.M.S.; Who's Who in the World; Who's Who in Engrng.

WITTLINGER, Bertha M., Tchr. of Biol., Andrew Jackson H. S., St. Albans, Queens, L. I., N. Y.; 155-01 90th Ave., Jamaica, N. Y. NATURAL SCIENCE EDUCATION.

WITTROCK, Gustave Ludwig, Custodian Herbarium, N. Y. Botanical Garden, N. Y., N. Y. TAXONOMY, BOTANY.

WITTWER, Sylvan Harold, Prof. of Horticulture, Mich. State Coll., East Lansing, Mich. HORTICULTURE AND PLANT PHYSIOLOGY. b. Hurricane, Utah, Jan. 17, 1917. s. Joseph and Mary Ellen (Stucki) W. Edn.: B.S., Utah Agril. Coll., 1939; Ph.D., Univ. of Mo., 1943. m. Maurine Cottle, July 27, 1938. c.: LaRee; Alice; Arthur. Exp.: Grad. Rsch. Asst. in Horticulture, Univ. of Mo., 1940-43; Instr. in Horticulture, *ibid.*, 1943-46; Asst. Prof. of Horticulture, Mich. State Coll., East Lansing, Mich., 1946-48; Assoc. Prof. of Horticulture, *ibid.*, 1948-51; Prof. of Horticulture, *ibid.*, 1951—. Mem.: A.A.A.S.; Amer. Soc.



ture, *ibid.*, 1951—. Mem.: A.A.A.S.; Amer. Soc.

for Horticultural Sci.; Amer. Soc. of Plant Physiol.; Botanical Soc. Amer.; Amer. Soc. Agron.; Soc. for the Study of Development and Growth; Phi Kappa Phi; Gamma Sigma Delta; Alpha Zeta; Sigma Xi. Contbr. to: Proc. Amer. Soc. for Horticultural Sci.; Plant Physiol.; Agron. Jour.; Soil Sci.; Jour. Econ. Entomol.; etc. Special Int.: Plant Growth Regulators; Mineral Nutrition; Radioactive Isotopes; Physiol. of Reproduction in Plants.

WITTY, Paul A., Prof. of Edn. and Dir. Psychol. Ednl. Clinic, Northwestern Univ., Evanston, Ill. PSYCHOLOGY, EDUCATION.

WODEHOUSE, Roger Philip, Assoc. Dir. of Rsch., Federle Labs., Pearl River, N. Y. BOTANY.

WODSEDALEK, Jerry Edward, Prof. of Zool., Univ. of Minn., Minneapolis, Minn. CYTOLOGY.

WOGLUM, Russell Sage, Chf. Entomologist, Dept. Pest Control, Calif. Fruit Growers Exchange, P. O. Box 5030, Los Angeles, Calif. ENTOMOLOGY.

WOGLOM, William Henry, Prof. Emer. Cancer Rsch., Columbia Univ., N. Y., N. Y.; 621 Tilden Ave., Teaneck, N. J. MEDICINE.

WOHLLEBEN, William J., Hd., Dept. of Chem. and Prof., Univ. of Dayton, Dayton, Ohio. ORGANIC CHEMISTRY.

WOKE, Paul Alfred, Med. Entomologist in Chg. Rodent and Ectoparasite Control Investigations, Div. Tropical Diseases, U. S. P. H. S., Bethesda, Md. MEDICAL ENTOMOLOGY.

WOLBACH, Simeon Burt, Dept. of Pathol., Children's Hosp., 300 Longwood Ave., Boston 15, Mass.

WOLCOTT, Edson Ray, Owner, Wolcott Rsch. Lab., 317 Crenshaw Blvd., Los Angeles, Calif. RESEARCH ENGINEERING.

WOLDMAN, Norman E., Consulting Metallurgical Engr., Norman E. Woldman, Inc., Upper Montclair, N. J. METALLURGY, ENGINEERING.

WOLESENSKY, Edward, 1556 Bryan St., Arlington, Va. ORGANIC CHEMISTRY.

WOLF, Alfred, 2607 N. Boston Pl., Tulsa, Okla. PHYSICS.

WOLF, Carl Brandt, Botanist, Rancho Santa Ana Botanic Garden, Anaheim, Calif. BOTANICAL SCIENCES.

WOLF, Frederick Adolphus, Prof. of Botany, Duke Univ., Durham, N. C. BOTANICAL SCIENCES.

WOLF, Harry John, Reynolds Rsch. Assoc., Reynolds Rsch., Box 551, Glen Cove, N. Y. MINING AND METALLURGY.

WOLFE, Herbert Snow, Hd. Prof. Horticulture, Box 2025, Univ. of Fla., Gainesville, Fla. HORTICULTURE.

WOLFE, Jack Morris, Prof. and Dir., Dept. of Anatomy, Albany Med. Coll., Union Univ., Albany, N. Y. ANATOMY.

WOLFE, John B., Prof. of Psychol. and Hd. Dept., Univ. of Miss., University, Miss. PSYCHOLOGY.

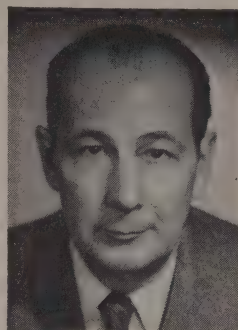
WOLFERTH, Charles Christian, Prof. of Med., Schl. of Med., Univ. of Pa., 3400 Prince St., Philadelphia, Pa. INTERNAL MEDICINE.

WOLFF, Harold George, Assoc. Prof. of Med. and Psychiatry, Cornell Univ. Med. Coll., N. Y., N. Y. NEUROLOGY AND PSYCHOLOGY.

WOLFF, Irving, Dir., Radio Tube Lab., R. C. A. Labs., Princeton, N. J. PHYSICS.

WOLFLE, Dael Lee, Exec. Secy., Amer. Psychol. Assn., 1515 Massachusetts Ave., Washington, D. C. PSYCHOLOGY.

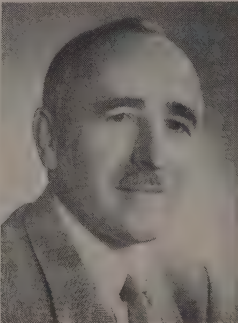
WOLFROTH, Melville Lawrence, Prof. of Chem. and Hd., Div. of Organic Chem., Ohio State Univ.,



Columbus, Ohio. ORGANIC CHEMISTRY; CARBOHYDRATES AND NATURAL PRODUCTS. b. Bellevue, Ohio, Apr. 2, 1900. s. Frederick and Maria Louisa (Sutter) W. Edn.: A.B., Ohio State Univ., 1924; M.Sc., Northwestern Univ., 1925; Ph.D., ibid., 1927. m. Agnes Louise Thompson, June 1, 1926. c.: Eva M.; Betty J.; Anne M.; Carl T. Exp.: Development Chemist, Natl. Carbon Co., Fremont, Ohio, 1917-18; Development Chemist, U. S. Gypsum Co., Gypsum, Ohio and Chicago, Ill., summers 1921-24; Rsch. Asst. in Chem., Ohio State Univ., Columbus, Ohio, 1922-24; Asst. Instr. in Chem., Northwestern Univ., 1924-27; Natl. Rsch. Council Fellow in Chem., Natl. Bureau of Standards, Wash., D. C., The Rockefeller Inst. for Med. Rsch., N. Y. C., The Ohio State Univ., 1927-29; Instr. in Chem., Ohio State Univ., 1929-30; Asst. Prof., ibid., 1930-36; Assoc. Prof., ibid., 1936-40; Prof., ibid., 1940—; Hd., Div. Organic Chem., ibid., 1948—. Hon. Pos.: Chmn., Div. Cellulose Chem., Amer. Chem. Soc., 1940; Chmn., Div. of Sugar Chem., ibid., 1948-52; Honor Award of the Div. of Sugar Chem., ibid. Mem.: Natl. Acad. Sci.; Amer. Acad. Arts and Sci.; Amer. Soc. Biological Chemists; Amer. Chem. Soc.; Chem. Soc. (London); A.A.A.S.; Amer. Assn. Cereal Chemists; Alpha Chi Sigma; Phi Beta Kappa; Sigma Xi; Phi Lambda Upsilon; Pi Mu Epsilon. War Record: Students Army Trng. Corps, 1918; Official Investigator, Natl. Defence Rsch. Com., 1940-45. Special Int.: Chem. of Carbohydrates and other Natural Products.

WOLFSON, Alfred M., Hd., Dept. of Biological Sciences, Murray State Coll., Box 115 College Station, Murray, Ky. BOTANY, MORPHOLOGY AND CYTOLOGY OF HEPATICAE. b. N. Y., N. Y., May 23, 1899. s. Moses and Etha (Finn) W. Edn.: B.S., Cornell Univ., 1921; M.A., Univ. of Wis., 1922; Ph.D., ibid., 1924. m. Marcelle Goffinet, May 10, 1926. c.: Nancy Dolly; Marianne. Exp.: Belgian Amer. Ednl. Foundation Fellow, 1924-26; National Rsch. Council Fellow, 1926-27; Rsch. Botanist, United Fruit Co., Boston, Mass., 1927-30; Prof. and Hd., Dept. of Biol. Sciences, Murray State Coll., Murray, Ky., 1930—. Mem.: Fellow, A.A.A.S.; Amer. Botanical Soc.; Amer. Forestry Assn.; Amer. Assn. Biol. Tchrs.; A.A.U. P.; Amer. Assn. Professional Biologists; Ky. Edn. Assn.; Natl. Geographic Soc.; Sigma Xi; Tri Beta. Contbr. to: Amer. Jour. Botany. War Record: World War I; Civilian Instr. Naval Air Cadet Trng., W.W.II. Special Int.: Morphology and Cytology of Hepaticae; Sex Determination and Spore Germination in Jungermanniales.

WOLLAN, Ernest Omar, Chf. Rsch. Scientist, Assoc. Dir. of Phys. Div., Oak Ridge Natl. Lab., Oak Ridge, Tenn. PHYSICS. b.



Glenwood, Minn., Nov. 6, 1902. s. Thomas Carl and Caroline (Gjeraset) W. Edn.: B.A., Concordia Coll., 1923; M.S., Univ. of Chicago, 1928; Ph.D., ibid., 1929. m. Adelaide M. Hov, Sept. 10, 1930. c.: Thomas C.; Kathryn May; John J. Exp.: Instr., Univ. of Chicago, 1930-32; Cosmic Ray Expedition to Spitzbergen and Swiss Alps, Summer, 1932; Natl. Rsch. Fellow, Technical Inst., Zurich, Switzerland, 1932-33; Rsch. Assoc., Univ. of Chicago, 1933-34; Asst. Prof., Washington Univ., St. Louis, Mo., 1934-38;

Physicist, Chicago Tumor Inst., 1938-39; Rsch. Assoc. and Asst. Prof., Univ. of Chicago, 1939-42; Sr. Physicist, Metallurgical Lab., Manhattan Project, 1942-44; Staff, Oak Ridge Natl. Lab., 1944—. Mem.: Fellow, Amer. Phys. Soc.; Peruvian Chem. Soc.; Sigma Xi; Gamma Alpha. Contrb. to: Phys. Rev.; Rev. Modern Phys.; etc. Special Int.: X-Ray Diffraction; Cosmic Rays; Health Phys.; Nuclear Phys.; Applications of Neutron Diffraction to Crystal and Magnetic Structure Problems.

WOLKOFF, Michael Ivanovitch, Rt. 3, Decatur, Mich. AGRICULTURAL CHEMISTRY.

WOLL, Frederic Albert, Prof. Emer. of Hygiene, City Coll. of N. Y., 679 E. 224th St., Bronx, N. Y., N. Y. MEDICINE, SOCIAL SCIENCES.

WOLLETT, Gay Haines, Hd., Dept. of Chem., Univ. of Miss., University, Miss. CHEMISTRY.

WOLMAN, Abel, Prof. of Sanitary Engrng., Johns Hopkins Univ., 211 Latrobe Hall, Baltimore, Md. SANITARY ENGINEERING.

WOLMAN, Leo, Prof. of Econ., Columbia Univ., N. Y., N. Y. ECONOMICS.

WOLMAN, Samuel, Asst. Prof. of Med., Johns Hopkins Univ., Baltimore, Md. MEDICINE.

WOOD, Albert Elmer, Asst. Prof. of Biol., Amherst Coll., Amherst, Mass. VERTEBRATE PALEONTOLOGY.

WOOD, Albert Gerard, Prof. of Biol., Grove City Coll., Grove City, Pa. PLANT PHYSIOLOGY.

WOOD, Ben D., Prof. and Dir. Coll. of Rsch., Columbia Univ., N. Y., N. Y. EDUCATIONAL PSYCHOLOGY.

WOOD, Darl Fulton, Tchr., Mishawaka H. S., 201 Miami Club Dr., Mishawaka, Ind. PHYSICS.

WOOD, Florence Dowden, Newark Colleges, Rutgers Univ., 40 Rector St., Newark, N. J. COMPARATIVE ANATOMY.

WOOD, Francis Carter, Prof. Emer. Cancer Rsch., Columbia Univ., N. Y., N. Y.; 110 Lydecker St., Englewood, N. J. PATHOLOGY.

WOOD, Frederick, Dean, Coll. of Arts and Sci., Univ. of Nev., Reno, Nev. MATHEMATICS.

WOOD, George C., retired, 948 52nd Ave., P. O. Box 836, St. Petersburg, Fla.

WOOD, Harland G., Biochem. Dept., Western Reserve Univ. Schl. of Med., Cleveland, Ohio. BIOCHEMISTRY.

WOOD, Harry Oscar, 220 N. San Rafael Ave., Pasadena, Calif. SEISMOLOGY.

WOOD, Horace Elmer, II, Prof. of Biol., Newark Colleges, Rutgers Univ., 40 Rector St., Newark, N. J. VERTEBRATE PALEONTOLOGY.

WOOD, Horatio Charles, Jr., Prof. of Pharmacol., Philadelphia Coll. of Pharm. and Sci., Philadelphia, Pa. PHARMACOLOGY.

WOOD, Jesse Ida, Assoc. Pathologist, Soils and Agril. Engrng., U. S. Bureau Plant Indus. Sta., Beltsville, Md. PLANT PATHOLOGY.

WOOD, Milo Nelson, Pomologist, U. S. Bureau Plant Indus. and Soils, Sacramento, Calif. POMOLOGY.

WOOD, Robert Williams, Johns Hopkins Univ., Baltimore 18, Md.

WOOD, Scott Emerson, Assoc. Prof. of Chem., Ill. Institute of Technology, Chicago, Ill. PHYSICAL CHEMISTRY. b. April 9, 1910, Fort Collins, Colo. s. Jesse R. and M. Louise (Scott) W. Edn: B.S., Univ. of Denver, 1930; M.S., ibid., 1931; Ph.D., Univ. of Calif., 1935. m. Marie Simmons of Pittsburgh, Pa., July 15, 1936. d. Samuel L. and Marie Katherine (Hogue) Simmons. c.: Edward Scott. Exp.: Shell Rsch. Fellow, Univ. of

Calif., 1934-35; Rsch. Assoc., Mass. Institute of Tech., 1935-40; Instr., Yale Univ., 1940-43; Asst. Prof., 1943-48, Assoc. Prof., Ill. Inst. of Tech., 1948—. Mem.: A.A.A.S.; A.C.S.; Amer. Phys. Soc.; Sigma Xi; Phi Lambda Upsilon. Contrb. to: Jour. of A.C.S.; Jour. of Chem. Phys.; Jour. of Phys. Chem.; Ind. and Engrng. Chem. Ph.D. Dissertation: Deviations of Carbon Tetrachloride and Silicon Tetrachloride from Raoult's Law. Hobby: Music. Listed in: A.M.S. Special Int.: Thermodynamics and Nonelectrolytic Solutions.

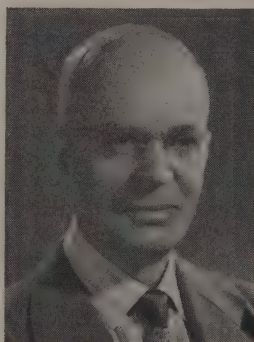
WOODARD, Florence May, Assoc. Prof., Econ., Univ. of Vt., 475 Main St., Burlington, Vt. GEOGRAPHY. b. Kingsburg, Quebec, Can., Oct. 22, 1900. d. Thomas Richard and Gertrude Helen (Bangs) W. Edn.: Ph.B., Univ. of Vt., 1922; M.A., Columbia Univ., 1927; Ph.D., ibid., 1936. Exp.: Instr., Econ., Univ. of Vt., Burlington, Vt., 1923-27; Asst. Prof., ibid., 1927-36; Asst. in Econ. and Sociol., Barnard Coll., N. Y., N. Y., 1930-31; Assoc. Prof., Univ. of Vt., Burlington, Vt., 1936—. Hon. Pos.: Vice-Pres., New England Geog. Assn. Mem.: Econ. History Assn.; Amer. Econ. Assn.; Assn. of Amer. Geographers; New England Geographical Assn.; Phi Beta Kappa; Kappa Alpha Theta; Klifa Club; League of Women Voters. Author: The Town Proprietors in Vt., The New England Town Proprietorship in Decline, 1936. Contrb. to: Econ. Geography. Special Int.: Econ. Geography and Econ. History of New England.

WOODARD, Helen Quincy, Biol. Chemist, Hd. Chem. Dept., Memorial Hosp., 44 E. 68th St., N. Y., N. Y. CHEMISTRY.

WOODARD, Parke Harold, Assoc. Prof. of Physiol., Univ. of Kans., Lawrence, Kans. PHYSIOLOGY.

WOODBOURNE, Russell Thomas, Assoc. Prof. of Anatomy, Schl. of Medicine, Univ. of Mich., Ann Arbor, Mich. GROSS ANATOMY.

WOODBURY, Angus Munn, Dir. of Ecological Rsch., Univ. of Utah, Salt Lake City, Utah. VERTEBRATE, ANIMAL AND GENERAL ECOLOGY.



b. July 11, 1886, St. George, Utah. s. John T. and Mary (Evans) W. Edn.: B.S., Brigham Young Univ., 1927; M.S., Utah, 1928; Ph.D., Calif., 1931; Post-Grad. Work, Wis.; Lake Itasca, Minn., 1940; Duke Univ., N. C., 1940. m. Grace Atkin of St. George, Utah, Jan. 15, 1909. d. John P. and Annie Walker Atkin. c.: Lowell A.; Marian; Max A.; Edith; Rae; Dixon M.; J. Walter. Exp.: With U. S. Forest Service, from Asst. Ranger to Deputy Supvr., Utah, 1909-20; U. S. Natl. Park Service, Zion Natl. Park, from Asst. to Park Naturalist, 1925-33; Instr. in Dixie Coll., St. George, Utah, 1925-27; Instr., Univ. of Utah, 1927-31; Asst. Prof., 1931-39; Assoc. Prof., 1939-42; Prof. of Zool., 1942-48; Head, Dept. of Vert. Zool., 1948-52; Dir. of Ecological Research, ibid., 1952—. Mem., Editorial Bd. of Ecology, 1947-49. Mem.: Comm. Western Div. of Ecol. Soc. of Amer., 1937, 1942; Mem., Bd. of Govs., Ecol. Soc. of Amer., 1950—; W. Div. Vice-Pres., Amer. Soc. of Ichthys. and Herps., 1941-42; Mem., Bd. of Govs., Amer. Soc. Ichthys. and Herps., 1947—; Fellow Herp. League, 1947—; Vice-Pres., Herp. League, 1949-53; Amer. Ornithologists Union; A.A.A.S.; Ecol. Soc. of Amer.; Amer. Soc. Ichthys. and Herp.; Sigma Xi; Cooper Club; W. Bird Banding Assn.; Amer. Mus. of Nat. Hist.; Biol. Soc. Wash.; Phi Sigma; Utah Acad. Sci.; Utah Edn. Assn.; Utah Audubon Soc.; etc. Author: The Reptiles of Utah, 1931; Birds of the Navajo Country, 1945; Studies of Desert Tortoise, 1948; Studies of a Snake Den, 1951; Check-list of Birds of Utah, 1949; Results of Pacific Gull-banding Project, 1951. Contrb. to: Auk; Sci.; Condor; Ecol.; Sci. Monthly; Nation's Schls.; Utah Acad.; Copeia; Audubon Mag.; Ecol. Monographs; Herpetologica; etc. Ph.D. Dissertation: Biotic Relationships of Zion Canyon, Utah with Spec. Ref. to Succession, Ecol. Monographs.

Listed in: A.M.S.; Utah's Distinguished Personalities; Naturalist's Dir.; Who's Who in the Northwest; Who's Who in Amer. Special Int.: Reptiles and birds of Utah, snake dens, desert tortoise ecology.

WOODBURY, Charles Goodrich, retired, 1801 Hoban Rd., N. W. Washington, D. C. **HORTICULTURE**.

WOODBURY, Robert A., Div. of Pharmacol., Univ. of Tenn. Coll. of Med., Memphis, Tenn. **PHARMACOLOGY AND PHYSIOLOGY**.

WOODBURY, Robert Morse, Chf. Statistical Service, Internal Labor Office, 3450 Drummond St., Montreal, Que., Can. **LABOR STATISTICS**.

WOODBURY, W. W., c/o IBM Labs., Poughkeepsie, N. Y. **COMPUTING MACHINES**.

WOODCOCK, Edward Fred, Assoc. Prof. of Botany, Mich. State Coll., East Lansing, Mich. **BOTANY, ANATOMY**.

WOODCOCK, Karl Stanley, Prof. and Hd., Dept. of Physics, Bates Coll., Lewiston, Maine. **ELECTRONICS**.

WOODELL, Charles R., Carborundum Co., Niagara Falls, N. Y. **PHYSICS**.

WOODFORD, Alfred Oswald, Prof. of Geol., Pomona Coll., Claremont, Calif. **GEOLOGY, GEOGRAPHY**.

WOODMAN, Leon Elmer, Prof. and Chmn., Dept. of Physics, Mo. Schl. of Mines and Metallurgy, Rolla, Mo. **PHYSICS**.

WOODRING, Wendell Phillips, Geologist, U. S. Geol. Survey, Washington 25, D. C. **GEOLOGY AND PALEONTOLOGY**.



b. Reading, Pa., June 13, 1891. s. James Daniel and Margaret (Hurst) W. Edn.: A.B., Albright Coll., 1910; Ph.D., Johns Hopkins Univ., 1916. Hon. Deg.: Sc.D., Albright Coll., 1952. m. Josephine Jamison, Feb. 9, 1918. c.: Julia Worth (Armstrong); Jane Hurst. Exp.: Geologist, Sinclair Central Amer. Oil Corp., 1917-18; Geologist, U. S. Geol. Survey, 1919-27, 1930—; Geologist in Chg., Geol. Survey of Republic of Haiti, 1920-22; Paleontologist, Tropical Oil Co., 1923; Prof. of Invertebrate Paleontology, Calif. Inst. of Tech., Pasadena, Calif., 1927-30. Hon. Pos.: Pres., Geol. Soc. Wash., 1947; Pres., Paleontol. Soc., 1948; Pres. Geol. Soc. Amer., 1953; Secy., Section of Geol. Sci., Eighth Amer. Sci. Cong., 1940; Award Penrose Medal, Geol. Soc. Amer., 1949. Mem.: Natl. Acad. Sci.; Amer. Philos. Soc.; Geol. Soc. Amer.; Amer. Assn. of Petrol. Geologists; Paleontol. Soc.; Geol. Soc. Wash.; Phi Beta Kappa; Sigma Xi. Author: Geol. of the Republic of Haiti, 1924; Miocene Mollusks from Bowden, Jamaica, 1925, 1928; Lower Pliocene Mollusks and Echinoids from the Los Angeles Basin, Calif., 1938; Geol. of the Kettleman Hills Oil Field, Calif., 1941; Geol. and Paleontol. of Palos Verdes Hills, Calif., 1948; Geol. and Paleontol. of the Santa Maria District, Calif., 1951. War Record: 74th Engrs., U. S. Army, 1918-19. Special Int.: Area Geol.; Stratigraphy; Cenozoic Invertebrate Paleontol.

WOODROOF, Jasper Guy, Food Technologist, Ga. Expt. Sta., Experiment, Ga. **FOOD PRESERVATION**.

WOODROW, Harold Wright, Prof. of Chem., Univ. of Redlands, Redlands, Calif. **ORGANIC CHEMISTRY**.

WOODROW, Herbert, Prof. and Hd., Dept. of Psychol., Univ. of Ill., Urbana, Ill. **PSYCHOLOGY**.

WOODROW, Jay Walter, Hd., Dept. of Physics, Iowa State Coll., Ames, Iowa. **PHYSICS**.

WOODRUFF, C. Eugene, Pathologist and Dir. of Lab., Wm. H. Maybury Sanatorium, Northville, Mich. **PATHOLOGY**.

WOODRUFF, Clarence Merrill, Instr. in Soils, Univ. of Mo., Columbia, Mo. **AGRICULTURE**.

WOODRUFF, John Grant, Chmn., Dept. of Geol. and Geography, Colgate Univ., Hamilton, N. Y. **STRUCTURAL GEOLOGY**.

WOODRUFF, Sybil, Prof. and Hd., Dept. of Home Econ., State Univ. of Iowa, Iowa City, Iowa. **FOOD CHEMISTRY**.

WOODS, Alan Churchill, Prof. of Ophthalmology, Johns Hopkins Univ., Baltimore, Md. **OPHTHALMOLOGY**.

WOODS, Albert F., Dir. Emer. and Ednl. Adviser, U. S. D. A., Washington, D. C. **BIOLOGY**.

WOODS, Andrew Henry, Prof. Emer. Psychiatry, Coll. of Med., Univ. of Iowa, 1100 N. Dubuque St., Iowa City, Iowa. **NEUROLOGY**.

WOODS, Baldwin Munger, Prof. of Mechanical Engrng. and Dir., Univ. Extension, Univ. of Calif., Berkeley, Calif. **MECHANICAL ENGINEERING**.

WOODS, Elizabeth L., Supvr. of Guidance, Los Angeles City Schls., 1205 W. Pico Blvd., Los Angeles, Calif. **CLINICAL PSYCHOLOGY**.

WOODS, Ella, Home Economist, Idaho Agri. Expt. Sta., Univ. of Idaho, Moscow, Idaho. **NUTRITION**.

WOODS, Justus Edmund, Asst. Prof. of Physics, Queens Coll., Flushing, N. Y. **THERMODYNAMICS**.

WOODS, Lloyd L., Hd., Dept. of Chem., Tex. Southern Univ., Houston, Tex. **ORGANIC CHEMISTRY**. b. Iola, Kans., Mar. 2, 1908. s. Arthur G. and Minnie (Montgomery) W. Edn.: A.B., Friends Univ., 1930; M.S., Kans. State, 1934; Ph.D., ibid., 1944. m. Dora Keeton, Aug. 15, 1932. c.: Elaine. Exp.: Prof. and Hd., Dept. of Chem., St. Augustine's Coll., Raleigh, N. C., 1931-38; Prof. of Chem. and Hd. Dept., Tex. Southern Univ., Houston, Tex., 1948—. Mem.: Kans. Acad. Sci.; Tex. Acad. Sci.; Amer. Chem. Soc.; A.A.U.P.; Kappa Alpha Psi; Beta Kappa Chi; Phi Lambda Upsilon. Contrb. to: Jour. Chem. Edn.; Jour. Amer. Chem. Soc.; Schl. and Society. Special Int.: Chem. of Pyrones; Chem. of Kojic Acid.

WOODS, Mark Winton, Cytologist, Natl. Cancer Inst., Natl. Inst. of Health, U. S. P. H. S., Bethesda, Md. **CYTOLOGY, PATHOLOGY**.

WOODWARD, Alvalyn Eunice, Asst. Prof. of Zool., Univ. of Mich., Ann Arbor, Mich. **PHYSIOLOGY**.

WOODWARD, Harold Edward, Chemist, E. I. du Pont de Nemours and Co., Jackson Lab., 27 Ten-



wick Dr., Penns Grove, N. J. **ORGANIC CHEMISTRY, DYES**. b. Worcester, Mass., July 5, 1888. s. Edward M. and S. Emma (Hemenway) W. Edn.: A.B., Amherst Coll., 1910; Ph.D., Columbia, 1912. m. Ethel Willcox, Oct. 15, 1912. c.: David W. Exp.: Bureau of Chem., U. S. Dept. of Agri., 1912-18; E. I. du Pont de Nemours and Co., Jackson Lab., 1918—. Mem.: Amer. Chem. Soc.; A.A.A.S.; Theta Delta Chi; Phi Beta Kappa; Phi Lambda Upsilon; Sigma Xi; Rotary.

Special Int.: Dyes.

WOODWARD, Herbert Preston, Dean and Prof. of Geol., Newark Coll., Rutgers Univ., Newark, N. J. **APPALACHIAN GEOLOGY**.

WOODWARD, Hubert Edmund, Dominion Analyst, Dominion of Can., Dept. Natl. Health and Welfare, 59 Victoria St., Toronto, Ont., Can. **BIOCHEMISTRY**.

WOODWARD, J. Guy, Rsch. Engr., R. C. A. Lab., Princeton, N. J. **ACOUSTICS**.

WOODWARD, Karl W., Prof. of Forestry, Univ. of N. H., Durham, N. H. **FORESTRY**.

WOODWARD, Richard Horace, Rsch. Assoc., Harvard Univ., Cambridge, Mass. **PHYSICS**.

WOODWARD, Robert Burns, Dept. of Chem., Harvard Univ., Cambridge, Mann. **ORGANIC CHEMISTRY**.

WOODWARD, Sherman Melville, Consulting Plan. Engr., Tenn. Valley Authority, 503 Union Bldg., Knoxville, Tenn. **HYDRAULIC ENGINEERING**.

WOODWORTH, Charles Edward, Entomologist, U. S. D. A., Field Lab., Box 616, Walla Walla, Wash. **ENTOMOLOGY, PHYSIOLOGY**.

WOODWORTH, Clyde Melvin, Prof. of Plant Genetics, Dept. Agron., Univ. of Ill., Urbana, Ill. **PLANT GENETICS**.

WOODWORTH, Robert Hugo, Prof. of Biol. Sci., Bennington Coll., Bennington, Vt. **BIOLOGY**.

WOODWORTH, Robert Sessions, Columbia Univ., N. Y. 27, N. Y.

WOODY, Thomas Walter, Prof. of Edn., Univ. of Pa., Philadelphia, Pa. **EDUCATION HISTORY**.

WOODYARD, Ella, Rsch. Dir., Frontier Nursing Service, Wendover, Ky. **PSYCHOLOGY**.

WOOLFOLK, E. Oscar, Prof. and Chmn., Dept. of Chem., Central State Coll., P. O. Box 311, Wilberforce, Ohio. **ORGANIC CHEMISTRY**. b. Tupelo, Miss., Mar. 9, 1912. s. Rev. E. O. and Irene (Slack) W. Edn.: B.A., Talladega Coll., 1934; M.S., Ohio State Univ., 1939; Ph.D., Univ. of Pittsburgh, 1949. m. Norma Branch, Dec. 23, 1944. c.: David L.; Denis M. Exp.: Tchrs., Public Schls., Memphis, Tenn., 1934-37; Rsch. Asst. to Dr. M. S. Newman, Ohio State Univ., 1938-40; Instr. in Chem. Dept., Clafin Coll., Orangeburg, S. C., 1940-42; In Chg., Chem. Labs. for the War Dept., Sciota Ordnance Plant, Marion, Ohio, 1942-43; Rsch. Chemist, U. S. Bureau of Mines, Pittsburgh, Pa., 1943-49; Prof. and Chmn., Dept. of Chem., Central State Coll., Wilberforce, Ohio, 1949—. Hon. Pos.: Vice-Pres., Central Region, Beta Kappa Chi Honorary Scientific Soc.; Dir., Midwestern Region of the Natl. Inst. of Sci. Mem.: Amer. Chem. Soc.: A.A.A.S.; Sigma Xi; Phi Lambda Upsilon; Beta Kappa Chi; Natl. Inst. of Sci.; Alpha Phi Alpha; A.A.U.P. Contrb. to: Jour. Amer. Chem. Soc.; Indus. and Engrng. Chem.; Fuel in Sci. and Practice; etc. Special Int.: Synthetic Organic, Dehydrogenation Studies, Characterization of Coal Hydrogenation Products, Molecular Complexes, Chromatography, Epoxide Ring-opening Reactions.

WOOLLEY, Dilworth Wayne, Mem., The Rockefeller Inst. for Med. Rsch., 66th St. and York Ave., N. Y. 21, N. Y. **BIOCHEMISTRY**. b. Raymond, Alberta, Can., July 20, 1914. s. Andrew Dilworth and Hattie (Schonfeld) W. Edn.: B.Sc., Univ. of Alberta, 1935; M.S., Univ. of Wis., 1936; Ph.D., ibid., 1938. Hon. Deg.: M.D., Univ. of Amsterdam, 1949. m. Janet McCarter, June 24, 1945. Exp.: Fellow, Rockefeller Inst. for Med. Rsch., 1939-43; Assoc., ibid., 1943-46; Assoc. Mem., ibid., 1946-48; Mem., ibid., 1948—. Mem.: Amer. Chem. Soc.; Soc. of Amer. Bacteriologists; Soc. Biol. Chemists; Soc. for Exptl. Biol. and Med.; Amer. Inst. of Nutrition; Harvey Soc.; N. Y. Acad. Med.; N. Y. Acad. Sci.; Natl. Acad. Sci. Author: A Study of Antimetabolites, 1952. Contrb. to: Jour. of Biological Chem.; Jour. Amer. Chem. Soc.; Jour. Nutrition; Proc. Soc. Exptl. Biol. and Med.; Jour. Exptl. Med.; Jour. Bacteriol.; Proc. Natl. Acad. Sci. Special Int.: Isolation and Mechanism of Action of Vitamins; Anti-vitamins; Isolation and Mode of Action of Hormones; Chemical Constitution of Live Cells.

WOOLPERT, Oram Clark, Technical Dir., Special Projects Div., Chemical Warfare Service, Camp Detrick, P. O. Box 531, Frederick, Md. **BACTERIOLOGY**.

WOOLRICH, Willis Raymond, Dean of Engrng., Prof. of Mech. Engrng. and Dir., Bureau Engrng. Rsch., Univ. of Tex., Austin, Tex. **MECHANICAL ENGINEERING**.

WOOSTER, Charles B., Rsch. Dir., Ciba Chemical Labs., Kilmington, Pa. **CHEMISTRY**.

WOOSTER, Harvey Alden, Prof. of Econ. and Hd. Dept., Oberlin Coll., Oberlin, Ohio. **ECONOMICS**.

WOOSTER, Lyman Dwight, Pres., Fort Hays Kansas State Coll., Hays, Kans. **ZOOLOGY, ECOLOGY**.

WOOTEN, Benjamin A., Jr., Instr. in Physics, Columbia Univ., N. Y., N. Y. **PHYSICS, OPTICS**.

WOOTEN, Kathleen Wilkinson, Hd., Health Dept. and Prof. of Health, Ga. State Coll. for Women, Milledgeville, Ga. **HEALTH EDUCATION**.

WORCESTER, Dean Amory, Prof. and Chmn., Dept. of Ednl. Psychol. and Measurements, Tchrs. Coll., Univ. of Nebr., Lincoln, Nebr. **EDUCATIONAL PSYCHOLOGY**.

WORCESTER, Philip George, Prof. and Hd., Dept. of Geol., Dean, Grad. Schl., Univ. of Colo., Boulder, Colo. **PHYSIOGRAPHY**.

WORCESTER, W. G., 720 Sask. Crescent E., Saskatoon, Sask., Can. **CERAMICS**.

WORK, Paul, Prof. of Vegetable Crops, Cornell Univ., Ithaca, N. Y. **VEGETABLE CROPS**.

WORK, Walter P., **SPEECH AND HEARING**.

WORK, William Roth, Asst. Dir., Coll. of Engrng. and Sci., Carnegie Inst. of Tech., Pittsburgh, Pa. **ELECTRICAL ENGINEERING**.

WORKING, Earl Booth, Dir. of Rsch., K. C. Working Chemical Co., 6251 Paramount Blvd., Long Beach, Calif. **COLLOID CHEMISTRY**.

WORKING, Holbrook, Economist and Prof. Prices and Statistics, Food Rsch. Inst., Stanford Univ., Stanford, Calif. **ECONOMICS**.

WORKMAN, E. J., Pres. and Dir., Rsch. and Development Div., N. Mex. Schl. of Mines, Box 6000, Sta. A., Albuquerque, N. Mex. **PHYSICS**.

WORKMAN, John Hiliary Andrew, Head Department of Economics, Appalachian State Tchrs. Coll., Box 122, Boone, N. C. **ECONOMICS**. b. Oct. 9, 1887, Cherryville, N. C. s. T. A. and Martha (Fisher) W. Edn.: A.B., Univ. of N. C., 1913; M.A., ibid., 1932; Ph.D., ibid., 1935. Exp.: Prin. H. S., N. C., 1913-17; Supt., Mebane S., 1917-18; Supt., Maxton Graded Schl., 1919-22; Co. Supt. Schls., Greene Co., N. C., 1922-25; County Supt. Schls., Carteret Co., 1925-31; Tchng. Fellow, Univ. N. C., 1931-33; Instr. Correspondence Bur., 1932-35; Instr. Dept. Edn., ibid., 1932-35; Acting



Head Department of Education, Presbyterian Coll., 1935-36; Reg. Educational Adviser, Farm Security Admin., Raleigh, N. C., 1936-40; Dir., State Survey of Farm Tenant Prog., 1935; Rsch. Vis. Edn., Chapel Hill, 1940-41; Prof. Soc. Sci., Atlantic Christian Coll., 1941-45; Dean, Piedmont Coll., Ga., 1945-46; Hd. Dept. Econ., Appalachian State Tchrs. Coll., 1946—; Dir. Resource-Use Edn. Workshop, ibid. Mem.: N. C. Edn. Assn.; N.E.A.; A.A.S.A.; A.A.U.P.; Mason; A. F. and A. M.; R.A.M.; Knights Templar;

A.A.O.N.M.S.; Rotary; Lions; Civic Clubs; Forum Club. Ph.D. Dissertation: The Administrative Reorganization of the North Carolina Public Schls. Author: History Company K 324th Infantry, 81st Division, 1919; A Study of The Small High Schls., N. C., 1931; A Study of Public Edn., N. C., 1935; The Schl. as an Integrating Force in Community Life, 1937; Handbook and Report Resource-Use Education Workshop A.S.T.C., 1949; and others. Contbr. to: Many Articles on County and State Edn. War Record: Corp. Co. K, 324th Inf., 81st Div., 1918-19; Overseas 11 mos., Meuse, Argonne Sector, Vosges Mts. Travel: U. S.; England; France; Italy. Spec. Int.: Schl. Admin. and Econ. Edn.; Visual Edn. Achievements of Gen. Int.: Initiated, organized and won an election for a County-wide, Eight-month Schl. Term, then organized a county unity system of schls. for Carteret Co. Hobbies: Photography; Farming.

WORKS, George Alan, Prof. Emer., Dept. of Edn., Univ. of Chicago, 242 Gateway Rd., Ridgewood, N. J. EDUCATION. b. Lincoln Twp., Eau Claire Co., Wis., May 14, 1877. s. Obadiah and Clarasia (Perry) W. Edn.: Ph.B., Univ. of Wis., 1904; M.S., *ibid.*, 1912; Ed.D., Harvard Univ., 1925. Hon. Deg.: LL.D., Wittenberg, 1934; LL.D., Luther Coll., 1938; LL.D., Southwestern, 1939. m. Saidee B. Coeper, Aug. 10, 1904. c.: Helen W.; Janet W.; Ruth M.; George A., Jr.; David P. Exp.: Tchrr., Wis. Schls., 1904-11; Instr. Rural Edn., Univ. of Wis., 1912-13; Asst. Prof., Univ. of



inn., 1913-14; Prof., Cornell Univ., 1914-27; Chmn., Div. of Edn., *ibid.*, 1926-27; Prof. Lib. Sci. and Dean, Grad. Lib. Schl., Univ. of Chicago, 1927-29; Pres., Conn. Agri. Coll., 1929-30; Prof. Higher Edn., Dean of Students and Univ. Ex. Comm., Univ. of Chicago, Chicago, Ill., 1930-42; Retired, July 1, 1942; Dir. of Various Edn. Surveys in N. Y., Tex., N. C., Ga., Ariz., Ill., Pa., and Hon. Pos.: Pres., North Central Assn. of Univ. and Secondary Schls., 1939-40; Dir., Natl. Sci. and Specialized Personnel, 1944-45; Secy., United Chap., Phi Beta Kappa, 1946-47. Hon. A.A.A.S.; Phi Beta Kappa; Phi Delta Kappa; Phi Kappa Phi. Author: Coll. and Univ. Library Systems, 1927. Co-author: The Land-Grant College, 1939; Rural Amer. Today, 1942. Contbr. to: J. Biol. and Soc. Special Int.: Botany, Univ. of Chicago. Lib. Problems Univ. of Chicago; Ednl. Problems.

WISLEY, Clair Lynnette, Hd. Biol. Dept., Youngstown Coll., Youngstown, Ohio. BIOLOGY.

WORNER, Ruby Kathryn, Textile Technologist, Southern Regional Rsch. Lab., 2100 Robert E. Lee Blvd., New Orleans, La. TEXTILES.

WORRALL, George H., 1029 Point View St., Los Angeles, Calif. PHYSICS, MATHEMATICS.

WORRELL, Lee Frank, Asst. Prof. of Pharmacy, Univ. of Mich., Ann Arbor, Mich. PHARMACEUTICAL CHEMISTRY.

WORSHAM, William Archer, Prof. of Chem., Hunter Coll., N. Y., N. Y. CHEMISTRY.

WORT, Dennis James, Prof. of Plant Physiol., Dept. of Botany, Univ. of B. C., Vancouver, B. C., Can. RADIATION.

WORTH, Charles Brooke, P. O. Box 4298, Tampa, Fla. TROPICAL MEDICINE, PATHOLOGY.

WORTHINGTON, Euphenia R., Univ. of Calif., 405 Hilgard Ave., Los Angeles, Calif. MATHEMATICS.

WORTHLEY, Harlan Noyes, Hd. Technical Development Dept., Rsch. and Development Div., Merck and Co., Inc., Rahway, N. J. ENTOMOLOGY.

WORTON, Albert G. C., Warren-Teed Products Co., 582 W. Goodale St., Columbus, Ohio. PHARMACEUTICAL CHEMISTRY.

WOTIZ, Herbert Henry, Asst. Prof. of Biochem., Boston Univ., Schl. of Med., 80 E. Concord St., Boston, Mass. ORGANIC AND BIOCHEMISTRY. b. Vienna, Austria, Oct. 8, 1922. s. Edward and Irene (Pollitzer) Wottitz. Edn.: B.Sc., Providence Coll., 1944; Ph.D., Yale Univ., 1951. m. Miriam S. Rose, June 15, 1947. c.: Harriet Sue; Robert Paul. Exp.: Rsch. Fellow, Mass. Memorial Hosps., 1950-52; Instr., Boston Univ., Schl. of Med., Boston, Mass., 1951-52; Asst. Prof., *ibid.*, 1953; Assoc. Dir., Hormone Rsch. Lab., Mass. Memorial Hosps., 1953—.



Amer. Chem. Soc.; A.A.A.S.; N. Y. Acad. Sci.; Sigma Xi; Gamma Alpha. War Record: Infantry and Ordnance Dept., World War II. Special Int.: Steroid Metabolism.

WRATHER, William Embry, Dir., Geol. Survey, 20 Dalecarlia Ave., Washington, D. C. PETROLEUM GEOLOGY.

WRIGHT, Albert Hazen, Prof. of Vertebrate Zool., Cornell Univ., Ithaca, N. Y. ZOOLOGY.

WRIGHT, Arthur William, Cyrus Strong Merrill Prof. of Pathol. and Bacteriol., Albany Med. Coll., Union Univ., Albany, N. Y. PATHOLOGY.

WRIGHT, Charles Conrad, Dean and Prof. of Econ., Bridgewater Coll., Bridgewater, Va. ECONOMICS.

WRIGHT, Frank, Lectr. in Chem., Northwestern Univ., Suite 3104, Pittsfield Tower, 33 N. Wabash Ave., Chicago, Ill. METABOLIC MEDICINE.

WRIGHT, Frank James, Prof. of Geol. and Geography, Denison Univ., Franville, Ohio. PHYSIOGRAPHY.

WRIGHT, Frederick Eugene, 2134 Wyoming Ave., N. W., Washington, D. C.

WRIGHT, Harry Noble, Pres. and Prof. of Math., City Coll. of N. Y., 3900 Greystone Ave., N. Y., N. Y. NUMBER THEORY.

WRIGHT, Harold Noel Grant, Assoc. Prof. of Pharmacol., Univ. of Minn. Med. Schl., Minneapolis, Minn. PHARMACOLOGY.

WRIGHT, Jessie Gertrude, Asst. Prof. of Botany, Univ. of Toronto, Toronto, Ont., Can. GENETICS.

WRIGHT, John Dutton, Founder, Press. Advisor, Wright Oral Schl. Deaf, 124 East End Ave., N. Y., N. Y. SPEECH TEACHING.

WRIGHT, John K., Dir., Amer. Geographical Soc., Broadway at 156th St., N. Y., N. Y. GEOGRAPHY.

WRIGHT, John Shepard, retired, Eli Lilly and Co., 740 S. Alabama St., Indianapolis, Ind. PHARMACOGNOSY.

WRIGHT, Norman, Dir. of Spectroscopy Lab., Dow Chemical Co., Midland, Mich. PHYSICS.

WRIGHT, Orville, 207 Lowe Bldg., Dayton, Ohio. ENGINEERING.

WRIGHT, Paul McCoy, Chmn., Dept. of Chem. and Geol., Wheaton Coll., Wheaton, Ill. PHYSICAL CHEMISTRY.

WRIGHT, Robert Claude, Physiologist, U. S. D. A., Plant Indus. Sta., Beltsville, Md. STORAGE FRUITS AND VEGETABLES.

WRIGHT, Sewall Green, Dept. of Zool., Univ. of Chicago, Chicago, Ill. GENETICS.

WRIGHT, Stillman, Aquatic Biologist, U. S. Dept. of Interior, Fish and Wildlife Service, Washington, D. C. FISHERY BIOLOGY.

WRIGHT, Sydney L., Endsmeet Farm, Wyncote, Pa.

WRIGHT, Walter Henry, Prof. of Prosthetic Dentistry and Dean, N. Y. Univ. Coll. of Dentistry, 209 E. 23rd St., N. Y., N. Y. DENTISTRY.

WRIGHT, Willard H., Scientist Dir., U. S. P. H. S. and Chf. Zool. Lab., Natl. Inst. of Health, Bethesda, Md. MEDICAL ZOOLOGY.

WRIGHT, William Hammond, 60 N. Keeble Ave., San Jose 26, Calif.

WRIGHT, Winthrop Robins, Prof. of Physics, Swarthmore Coll., Swarthmore, Pa. PHYSICS.

WRIGHTSTONE, Jay Wayne, Asst. Dir. of Rsch., Bd. of Edn., City of N. Y., Brooklyn, N. Y.; 21 Hickory Rd., Summit, N. J. EDUCATIONAL, PSYCHOLOGY RESEARCH.

WULF, Oliver Reynolds, Weather Bureau Regional Office, Gates and Crellin Labs., Calif. Inst. of Tech., Pasadena 4, Calif.

WULFECK, Wallace H., Vice-Pres. and Dir. of Rsch., Federal Advertising Agency, Inc., 385 Madison Ave., N. Y., N. Y. PSYCHOLOGY.

WULSIN, Frederick Roelker, Lectr. Sociol. and Anthropol., Tufts Coll., Medford, Mass.; 983 Memorial Dr., Cambridge, Mass. ANTHROPOLOGY.

WULZEN, Rosalind, Prof. of Zool., Ore. State Coll., Corvallis, Ore. PHYSIOLOGY.

WYCKOFF, Ralph Walter Graystone, Lab. of Phys. Biol., Natl. Inst. of Health, Bethesda 14, Md.

WYCKOFF, Robert C., Prof., Dept. of Physics, Univ. of Okla., Norman, Okla. SPECTROSCOPY AND METROLOGY.

WYER, Samuel S., retired, 1325 Cambridge Blvd., Columbus, Ohio.

WYLIE, Charles Clayton, Prof. of Astron., Univ. of Iowa, Iowa City, Iowa. METEORS, METEORITES.

WYLIE, Clarence Raymond, Sr., General Engrng. and Technical Consultant, Briggs Mfg. Co., 4621 Conner Ave., Detroit, Mich. ENGINEERING.

WYLIE, Lloyd Ritchie, Prof. of Astronomy and Director of Elgar Weaver Observatory Wittenberg Coll., Springfield, Ohio. ASTRONOMY. b. Idana, Kans., April 12, 1892. s. Oliver M. and Mary I. (Ritchie) W. Edn.: A.B., Park Coll., Parkville, Mo., 1914; M.A., Northwestern Univ., 1922; Ph.D., Northwestern Univ., 1932. m. Eula Treadway of Hollandale, Miss., October 7, 1941. d. Mr. and Mrs. M. A. Treadway. Exp.: 1917-20, Asst. Physicist, U. S. Bureau of Standards; 1920-24, Instr. in Astron., Northwestern Univ.; 1924-26, Instr. in Math., Ohio Wesleyan; 1926-34, Asst. Prof. of Math., Lake Forest Coll.; 1934-36, Assoc. Prof. of Math., Eastern Ill. S. T. C.; 1936-46, Astronomer, U. S. Naval Observ.; 1946—, Prof. of Astron. Dir., Elgar Weaver Observ., Wittenberg Coll., Springfield, Ohio. Mem.: A.A.A.S.; Amer. Astron. Soc.; Sigma Xi; Sigma Pi Sigma; Phi Gamma Delta. Contbr. to: Popular Astron.; Astron. Jour. Ph.D. Dissertation: The Orbit of Eros from Observations Made at the Dearborn Observ. War Record: Pvt., U. S. Army, 1917. Travel: Catalina Island. Listed in: A.M.S.; Who's Who in the Midwest.

WYLIE, Margaret, Prof. of Child Development and Family Relationship, Cornell Univ., Ithaca, N. Y. PSYCHOLOGY.

WYLIE, Robert Bradford, Prof. of Botany, Univ. of Iowa, Iowa City, Iowa. MORPHOLOGY.

WYMAN, Donald, HORTICULTURE.

WYMAN, Jeffries, Assoc. Prof. of Biol., Harvard Univ., Cambridge, Mass. BIOLOGY.

WYND, Frederick Lyle, Rsch. Prof., Dept. of Botany, Mich. State Coll., East Lansing, Mich. PLANT BIOCHEMISTRY; CHEMISTRY OF SOIL PRODUCTIVITY; SOIL CHEMISTRY. b. Normal, Ill., July 28, 1904. s. Robert Smith and Elizabeth Anne (Knott) W. Edn.: B.S., Univ. of Ore., 1928; B.A., ibid., 1929; M.A., ibid., 1930; Ph.D., Wash. Univ., 1933. m. Harriet Ryniker, Sept. 14, 1942. c.: Robert Walter. Exp.: Post Doctorate Rsch. Fellow, Wash. Univ., St. Louis, Mo., 1933-36; Post Doctorate Fellow, Univ. of Mo., 1936-37; Asst. Prof. of Botany, Univ. of Mo., 1937-38; Asst. Prof. of Botany, Univ. of Ill., 1938-45; Chmn., Dept. of Bot. and Plant Pathol., Mich. State Coll., 1945-48; Rsch. Prof., Dept. of Botany and Plant Pathol., ibid., 1948—. Mem.: B. P. O. Elks. Co-author: The Fungi, 1952. Contbr. to: Amer. Naturalist; Torreyia; Amer. Fern Jour.; Annals Mo. Botanical Garden; Orchid Rev., London; Amer. Midland Naturalist; Lloydia; Soil Sci.; Food Rsch.; etc. Special Int.: Chem. of Soil Fertility; Soil Chem.; Plant Composition and Feeding Value of Pasture herbage.

XAN, John, Hd., Chem. Dept., Howard Coll., Birmingham 6, Ala. CHEMISTRY, ORGANIC AND



BIOCHEMISTRY. b. Tripoli, Greece, Sept. 2, 1893. s. Demetrius Xanthopoulos. Edn.: A.B., Kalamazoo Coll., 1918; M.S., Univ. of Chicago, 1922; Ph.D., *ibid.*, 1926. m. Erna Oleson. c.: Dixie Lee. Exp.: Prof. of Chem. and Hd. of Dept., Sioux Falls Coll., S. D., 1922-24; Prof. of Chem., Ottawa Univ., Kans., 1926-27; Prof. and Hd. of Dept. of Chem., Battle Creek Coll., Mich., 1927-30; Prof. of Chem. and Hd. of Dept., Howard Coll., Birmingham, Ala., 1930

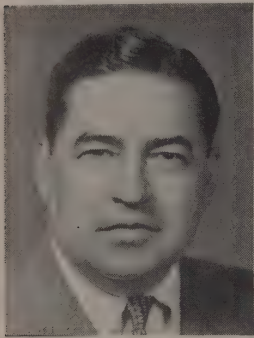
— Hon. Pos.: Chmn. of Alabama Section, Amer. Chemical Soc., 1936; Treas., Ala. Acad. of Sci., 1937-47; Pres., *ibid.*, 1947-48; Editor of Jour., 1948—. Mem.: A.A.A.S.; A.A.U.P.; Amer. Chem. Soc.; Amer. Inst. of Chemists; Sigma Xi; Recipient of the A.C.S. James Flack Morris Award for outstanding achievement in techng. chem., 1953; Ala. Acad. of Sci.; Kappa Phi Kappa; Gamma Sigma Epsilon; Mason; Lions Club. Author: Experiments in Physico-Biol. Sci., 1946;

Syllabus Physico-Biol. Sci., 1950; Outlines and Lab. Manual for Semi-Micro Qualitative Analysis, 1948. Contrb. to: Jour. Amer. Chem. Soc.; Jour. Ala. Acad. of Sci.; Jour. Chem. Edn. War Record; Private, U. S. Army, 1918. Gen. Int.: At Present Building a 21-inch Cyclotron, the southernmost in the U. S. Special Int.: Rsch.—(Ph.D.) Molecular Rearrangement of Hydrazine of Hydrazine Hydrate. (Later) Oxydation of Mercaptans; Acid-Base Equilibrium; Foods.

XAVIER, Sister Mary Francis (Welhoefer), Chmn., Dept. of Chem., Mt. Mary Coll., Milwaukee, Wis. PHARMACEUTICAL CHEMISTRY. b. June 20, 1895, Waterloo, Wis. d. John M. and Theresa Blaschka W. Edn.: B.S., De Paul Univ., 1920; A.M., *ibid.*, 1926; Ph.D., Univ. of Wis., 1936. Exp.: Registrar, St. Mary's Coll., Prairie du Chien, Wis., 1921-29; Chmn., Dept. of Sci., *ibid.*, 1921-29; Prof. of Chem. and Chmn. of Dept., Mt. Mary Coll., Milwaukee, Wis., 1929—. Mem.: Amer. Chem. Soc., Amer. Pharm. Assn.; Soc. for Study of Alchemy and Early Chem.; Catholic Round Table of Sci.; Sigma Xi; Rho Chi; Sigma Delta Epsilon; Delta Epsilon Sigma; Alpha Delta Theta; Kappa Mu Epsilon. Contrb. to: Jour. of the Amer. Pharm. Assn.; The Science Counselor; Badger Pharmacist; Pharmaceutical Archives. Special Int.: Amer. Peppermint Oil; Translation and Commentary, Statutes of Gild of Physicians, Apothecaries and Merchants—Florence—14th Cent. Translation of Early Amer. Documents.

YACORZYNSKI, George Kassimer, Assoc. Prof. of Nervous and Mental Diseases, Northwestern Med. Univ., Chicago, Ill. MEDICAL PSYCHOLOGY. b. November 21, 1907, New Haven, Conn. s. Kazimer and Maria (Kamodzinska) Y. Edn.: B.A., Univ. of Wash., 1932; M.S., *ibid.*, 1934; Ph.D., Northwestern Univ., 1937. m. Coralie E. Ratliff of Medicine Hat, Alberta, Canada, Oct. 6, 1934. d. Fred and Margaret Palmer Ratliff. c.: Jennifer Anne. Exp.: Tchng. Fellow, Univ. of Wash., 1931-35; Asst. in Psychol., Northwestern Univ., 1935-37; Rsch. Assoc. and Post-Grad. Fellow, Northwestern Univ., 1937-38; Instr. in Nervous and Mental Diseases, Northwestern Univ. Med. Schl., 1938-40; Assoc. in Nervous and Mental Diseases, *ibid.*, 1940-43; Asst. Prof. of Nervous and Mental Diseases, *ibid.*, 1943-45; Assoc. Prof., *ibid.*, 1945—. Mem.: Amer. Psychol. Assn.; Sigma Xi; A.A.A.S. Contrb. to: Scientific Med. and Psychol. Jour. Author: Med. Psychology: A Basis for Psychiatry and Clin. Psychology. Listed in: A.M.S.: Who's Who in Chicago and Ill. Special Int.: Psychopathology and Psychoneurology.

YADOFF, Oleg, Rsch. Prof., Manhattan Coll., Consulting Eng., Electronatom Corp., Rsch. Assoc., Columbia Univ., Pres., Electron. Dusting Corp., 51 W. 81st St., N. Y., N. Y. PHYSICS; ELECTRO-STATICS; ELECTRONICS; FLUID MECHANICS; AEROSOLS.



b. Rostov-on-Don (Russia), June 14, 1902. s. Jean and Sophie (Hasselbrink) Y. Edn.: Bach. Degree, Math. and Philos., Univ. of Paris, 1939; Dr. of Sci. Degree in Math., 1946. m. Sophie Owsianico, July 20, 1933. c.: Sophie-Sonia. Exp.: Asst. Department of Phys. and Exptl. Mech., Faculty of Sci., Univ. of Paris, 1931-33; Prof. and Director of Studies, Schl. of Engrs., 1933-46; Scientific Consulting to Fluid Mechanics Institute, Sorbonne, 1932-46; Prof. of Physics and Prof. in chg. of Rsch., Inst. Henri Poincare and Faculty of Sci., Univ. of Paris, 1935-46; Rsch. Assoc., Columbia Univ., City of N. Y., 1947-51. Hon. Pos.: Hon. Pres. of the French Engr.-Dr. Assn. (Sorbonne). Mem.: The Amer. Math. Soc.; The Amer. Physical Soc.; The Amer. Inst. of Physics; The N. Y. Acad. of Sci.; Faculty Club of Columbia Univ. Author: Scientific and Tech. Publications. Ph.D. Dissertation: Study on the Removal of Elec. Charges by Intense Air Jet, 1939. War Record: Scientific Consulting, Supreme Hdqtrs., Allied Exped. Force; Medal of Freedom with bronze palm; Citation and Dip. by Gen. D. D. Eisenhower (U. S. Army); Medal of Merit, Amer. Legion Air Post 501, and Paris Post No. 1; Harmon's Diploma of Honor, Ligue Intern. Aviateurs; Hon. Mem., Armed Forces Communications Assn.; Legion of Hon., War Cross with palm (French Army); The King's Medal for Serv. in the Cause of Freedom (British Army). Hobbies: Natural Sciences; Aviation.

1931-33; Prof. and Director of Studies, Schl. of Engrs., 1933-46; Scientific Consulting to Fluid Mechanics Institute, Sorbonne, 1932-46; Prof. of Physics and Prof. in chg. of Rsch., Inst. Henri Poincare and Faculty of Sci., Univ. of Paris, 1935-46; Rsch. Assoc., Columbia Univ., City of N. Y., 1947-51. Hon. Pos.: Hon. Pres. of the French Engr.-Dr. Assn. (Sorbonne). Mem.: The Amer. Math. Soc.; The Amer. Physical Soc.; The Amer. Inst. of Physics; The N. Y. Acad. of Sci.; Faculty Club of Columbia Univ. Author: Scientific and Tech. Publications. Ph.D. Dissertation: Study on the Removal of Elec. Charges by Intense Air Jet, 1939. War Record: Scientific Consulting, Supreme Hdqtrs., Allied Exped. Force; Medal of Freedom with bronze palm; Citation and Dip. by Gen. D. D. Eisenhower (U. S. Army); Medal of Merit, Amer. Legion Air Post 501, and Paris Post No. 1; Harmon's Diploma of Honor, Ligue Intern. Aviateurs; Hon. Mem., Armed Forces Communications Assn.; Legion of Hon., War Cross with palm (French Army); The King's Medal for Serv. in the Cause of Freedom (British Army). Hobbies: Natural Sciences; Aviation.

YAGLE, Elizabeth Marguerite, Serologist, Henry Ford Hosp., W. Grand Blvd. and Hamilton Ave., Detroit, Mich. SEROLOGY.

YANCEY, Patrick Henry, Prof. and Chmn. of the Dept. of Biol., Spring Hill Coll., Mobile, Ala. PHYSIOLOGY. b. Tampa, Fla., Oct. 20, 1896. s. William Paul and Philomena (Oakes) Y. Edn.: A.B., Gonzaga Univ., 1918; A.M., *ibid.*, 1919; Ph.D., St. Louis Univ., 1931. Exp: Instr. in Biol., Spring Hill Coll., Mobile, Ala., 1919-23; Colegio de S. Francisco Javier, Ona Burgos, Spain, and Laboratorio Biologico de Sarria Barcelona, Spain, 1923-25; Woodstock Coll., Woodstock, Md., 1925-27; St. Stanislaus' Novitiate, Cleveland, Ohio, 1927-28; St. Louis Univ., St. Louis, Mo., and Marine Biological Lab., Woods Hole, Mass., 1928-31; Prof. of Biol. and Head of the Dept., Spring Hill Coll., Mobile, Ala., 1931—. Mem.: Amer. Assn. of Zoologists; A.A.A.S.; Amer. Microscopical Soc.; Amer. Genetics

Assn.; Genetics Soc. of Amer.; Amer. Museum of Natural Hist.; Ala. Acad. of Sci.; Mobile Acad. of Sci.; Beta Beta Beta; N. Y. Zoological Soc.; Tenn. Acad. of Sci.; Sigma Xi; Assn. of Southeastern Biologists; Royal Spanish Soc. of Natural History. Contrb. to: Amer.; Thought; Proc. Soc. Exptl. Biol. and Med.; Jour. Ala. Acad. Sci.; Sci. Counselor; Jesuit Sci. Bull.; Biol.; Medelian; Laboureaux. Special Int.: Physiology and Philosophy of Biol.

YAGLOU, Constantin Prodromos, Prof. of Indus. Hygiene, Harvard Schl. of Pub. Health, 55 Shattuck St., Boston, Mass. AIR



HYGIENE. b. Jan. 26, 1896, Constantinople, Turkey. s. Prodromos and Helen (Petropoulos) Y. Edn.: B.S. in M.E., Robert Coll., Schl. of Engrng., 1919; M.M.E., Cornell Univ., Grad. Schl., 1920. Hon. Deg.: M.A., Harvard Univ., 1947. m. Jane L. Finn of Boston, Mass., June, 1927. d. Henrietta and Patrick Finn. c.: Edward. Exp.: Rsch. Engr., Amer. Soc. Heating and Ventilating Engrs. Rsch. Lab., Pittsburgh, Pa., 1921-25; Instr. of Ventilation, Harvard Schl.

of Pub. Health, 1925-27; Asst. Prof. of Indus. Hygiene, *ibid.*, 1927-38; Assoc., *ibid.*, 1938; Prof., *ibid.*, 1947. Mem.: Amer. Soc. Heating and Ventilating Engrs.; Amer. Pub. Health Assn.; A.A.A.S.; Sigma Xi; Delta Omega. Contrb. to: Jour. Amer. Soc. Heating and Ventilating Engrs.; Jour. A.M.A.; Amer. Indus. Hygiene Assn., etc. Special Int.: Air Hygiene, including effects of Heat, Cold, Humidity, Radiation, Atmospheric Pollution, Clothing and Housing on Comfort and Health; Control of Environment by Ventilation and Air Conditioning.

YANNEY, Benjamin Franklin, Johnson Prof. Emer. Math., Coll. of Wooster, 354 E. Bowman St., Wooster, Ohio. MATHEMATICS.

YANOVSKY, Elias, Sr. Chemist, Eastern Regional Lab., U. S. D. A., Chestnut Hill, Philadelphia, Pa. CHEMISTRY.

YANT, William P., Mine Safety Appliances Co., Pittsburgh, Pa. PROTECTIVE EQUIPMENT.

YARBOROUGH, Joseph Ussery, Prof. of Psychol., Southern Methodist Univ., Box 333, S. M. U. Sta., Dallas, Tex. PSYCHOLOGY.

YARBROUGH, Mary E., Prof. of Chem., Meredith Coll., Raleigh, N. C. BIOCHEMISTRY.

YARNALL, D. Robert, Pres., Yarnall Waring Co., Philadelphia, Pa. MECHANICAL ENGINEERING.

YARNELL, Sidney Howe, Sr. Geneticist, U. S. Regional Vegetable Breeding Lab., P. O. Box 844, Charleston, S. C. PLANT BREEDING.

YATES, Dorothy Hazeltine, Consulting Psychologist and Assoc. Prof. of Psychol., San Jose State Coll., San Jose, Calif. PSYCHOLOGY.

YEAGER, Albert Franklin, Prof. of Horticulture and Assoc. Dir. Biol. Inst., Univ. of N. H., Durham, N. H.

YEAGER, J. Franklin, Entomologist, Bureau Entomol. and Plant Quarantine, U. S. D. A., Agri. Rsch. Center, Beltsville, Md. INSECT PHYSIOLOGY.

YEARGERS, Frank H., District Mgr., Schlumberger Wall Surveying Corp., Houston, Tex. GEOLOGY, ENGINEERING.

YEATON, Chester Henry, Prof. of Math., Oberlin Coll., Oberlin, Ohio. MATHEMATICS.

YELLOTT, John Ingle, Dir. of Rsch., Locomotive Dev. Commn., Bituminous Coal Rsch., Inc., Box 225, Dunkirk, N. Y.



APPLIED THERMODYNAMICS AND ENGINEERING EDUCATION. b. Bel Air, Md., Oct. 25, 1908. s. John I. and Mildred (Nelson) Y. Edn.: B.S., Johns Hopkins Univ., 1931; M.M.E., *ibid.*, 1933. m. 1st Judith M. Williams, May 12, 1934, (div.). m. 2nd, Barbara Leslie Jordan, June 2, 1951. Exp.: Grad. Student in Mech. Engrng., Johns Hopkins Univ., Baltimore, Md., 1931-33; Instr. in Mech. Engrng., Univ. of Rochester, Rochester, N. Y., 1933-

34; Instr. and Asst. Prof., Mech. Engrng., Stevens Inst. of Tech., Hoboken, N. J., 1934-40; Prof., Mech. Engrng. and Hd. of Dept., Ill. Inst. of Tech., Chicago, Ill., 1940-43; Dir., Inst. of Gas Tech., *ibid.*, 1943-45; Dir. of Rsch., Locomotive Dev. Comm., Bituminous Coal Rsch., Inc., Dunkirk, N. Y., 1945—. Hon. Pos.: Chmn., Power Div., Amer. Soc. of Mech. Engrs., 1948-49; Chmn., Gas Turbine Power Div., 1949-50. Mem.: Amer. Soc. of Mech. Engrs.; A.A.A.S.; Newcomen Soc.; Alpha Delta Pi; Pi Tau Sigma; Tau Beta Pi; Sigma Xi; Mary Club; Mohawk Club; Shorewood Country Club; R. Mach. Club; Devon Yacht Club; Registered Mech. Engr., Md. and N. J. Contrb. to: Trans. A.S.E.; Power; Power Generation; Engrng. and Engr. London. Gen. Int.: A.S.M.E. Jr. Award, 1934; Pi Sigma Gold Medal of A.S.M.E., 1939. Special Condensation of Flowing Steam; Production of High Vacuum with Steam Jet Ejectors; Systems of Coal Pulverization and Gasification; Dev. of Oil-Fired Gas Turbine for Locomotive Service.

YERKES, Robert Mearns, Prof. Emeritus, Psychology, Yale Univ. Schl. of Medicine, 333 Cedar St., New Haven 11, Conn. **PSYCHOBIOLOGY.** b. May 26, 1876, Breadysville, Pa. s. Sir Marshall and Susanna Addis (Carrell) Y. Edn.: A.B., Ursinus, 1897; A.B., Harvard Univ., 1898; A.M., *ibid.*, 1899; Ph.D., *ibid.*, 1902. Hon. Degrees: LL.D., Ursinus, 1923; D.Sc., Wesleyan Univ., 1923; M.A., Yale, 1931. m. Ada Watterson of Cleveland, Ohio, 1905. d. Robert Watterson; Caroline Norton. c.: Roberta Watterson; David Norton. Exp.: Tchr. and Investigator, Harvard, 1903; Asst. Prof., Comparative Psychol., 1908-17; Psychol. to Psychopathic Hosp., Boston, 1913-17; Prof. Psychol. and Dir. Psychol. Lab., Univ. of Minn., 1917-19 (absent on leave, Milit. Duty); Chmn., Rsch. Information Service, Natl. Rsch. Coun., 1919-24; Prof. Psychol., Inst. of Psychol., Yale, 1924-29; Prof. Psychobiology, 1929-44; Prof., Emer., 1944—; Organized and Directed Yale Lab. of Primate Biol., Orange Park, Fla., 1929-41. Hon. Pos.: Chmn., Comm. for Rsch. in Problems of Sex, Natl. Rsch. Coun., Fellow, Amer. Acad. of Arts and Sci.; A.A.A.S. Mem.: Natl. Acad. of Sci.; Amer. Psychol. Soc.; Amer. Psychol. Assn.; Amer. Physiol. Soc.; Soc. Exptl. Biol. and Med.; Amer. Soc. Naturalists; Soc. of Mammalogists; Cosmos Club. Author: *The Dancing Mouse: A Study in Animal Behavior*, 1907; *Introduction to Psychol.*, 1911; *Methods of Studying Vision in Animals*, with J. B. Watson, 1911; *Outline of a Study of the Self*, with D. W. LaRue, 1914; *A Point Scale for Measuring Mental Ability*, with R. S. Hardwick and J. W. Bridges, 1915; *The Mental Life of Monkeys and Apes—A Study of Ideational Behavior*, 1916; *Psychol. Examining in the U. S. Army*, with others, 1921; *Chimpanzee Intelligence and Its Vocal Expressions*, with B. W. Learned, 1925; *Almost Human*, 1925; *The Mind of a Gorilla*, 1927-28; *The Great Apes*, with A. W. Yerkes, 1929; *Chimpanzees: A Lab. Colony*, 1943. War Record: Major, Sanitary Corps, Natl. Army, 1917-18; Expert Consultant to The Sec. of War, Problems of Personnel and Psychol. Warfare, 1941-42. Listed in: *Who's Who in Amer.*; A.M.S.

YOKAM, Gerald Alan, Prof. of Edn. and Dir. Courses Elem. Edn., Univ. of Pittsburgh, Pittsburgh, Pa. **EDUCATION.**

YNTEMA, Leonard Francis, Dir. of Rsch., Fansteel Metallurgical Corp., North Chicago, Ill. **INORGANIC CHEMISTRY.**



b. St. Johns, Mich., July 29, 1892. s. Douwe B. and Mary E. (Loomis) Y. Edn.: A.B., Hope Coll., 1915; A.M., Univ. of Ill., 1917; Ph.D., *ibid.*, 1921; D.Sc., Hope Coll., 1927. m. Margaret Jeannette Busey, Aug. 29, 1923. c.: Douwe Busey; George Busey; Mary Katherine. Exp.: Chemist, Bur. of Aircraft Production, 1917-19; Natl. Rsch. Fellow, 1921-23; Instr., Univ. of Ill., 1923-25; Assoc. Prof., *ibid.*, 1925-27; Asst. Prof., *ibid.*, 1927-30; Prof. of Chem. and Hd. Dept., *ibid.*, 1930-43; Dir. of Rsch., Fansteel Metallurgical Corp., 1943—. Hon. Pos.: Chmn., Ill. Sect., Amer. Chem. Soc., 1927. Mem.: Amer. Chem. Soc.; A.A.A.S.; Electrochem. Soc.; Amer. Inst. Chem.; Alpha Chi Sigma; Sigma Xi; Phi Lambda Upsilon; Phi Eta. Contrb. to: Jour. Amer. Chem. Soc.; Jour. Optical Soc. Amer.; Indus. and Engrng. Chem.; Jour. Physical Chem., etc. Special Int.: Inorganic Chem., Rare Earths, Electrochem. of Nonaqueous Solutions, Metallurgy of Refractory Metals.

YOCOM, Harry Barclay, Prof. of Zool., Univ. of Ore., Eugene, Ore. **PROTOZOOLOGY.**

YOCUM, Lawson Edwin, Prof. of Botany, George Washington Univ., Washington, D. C. **PLANT PHYSIOLOGY.**

YODER, Lee Owen, Prof. and Hd., Dept. of Geography, Drake Univ., Des Moines, Iowa. **GEOGRAPHY, GEOLOGY.**

YODER, Lester, Rsch. Asst. Prof., Iowa Agri. Expt. Sta., Ames, Iowa. **CHEMISTRY.**

YOE, John Howe, Prof. of Chem., Univ. of Va. Cobb Chemical Lab., Charlottesville, Va. **ANALYTICAL CHEMISTRY.**

YOST, Don Merlin Lee, Calif. Inst. of Tech., Pasadena 4, Calif. **INORGANIC CHEMISTRY.**

YOUTEN, William John, Physical Chemist, Boyce Thompson Inst. Plant Rsch., Inc., 1986 N. Broadway, Yonkers, N. Y. **STATISTICS.**

YOUNG, Anne Sewell, Prof. Emer. Astron., Mt. Holyoke Coll., South Hadley, Mass.; 737 Alden Rd., Claremont, Calif. **ASTRONOMY.**

YOUNG, Arthur W., Prof. and Hd., Dept. of Plant Indus., Tex. Technol. Coll., Lubbock, Tex. **SOIL BACTERIOLOGY.**

YOUNG, Benjamin P., Assoc. Prof. of Zool., Cornell Univ., Ithaca, N. Y. **PROTOZOOLOGY, HELMINTHOLOGY.**

YOUNG, Dixie, Tex. State Coll. for Women, Denton, Tex. **PROTOZOOLOGY.**

YOUNG, Donald Ramsey, Exec. Dir., Social Sci. Rsch. Council and Prof. of Sociology, Univ. of Pa., Philadelphia, Pa. **SOCIOLOGY.**

YOUNG, Edna Hill, **SPEECH AND HEARING.**

YOUNG, Elizabeth Barber, Hd. Dept. and Prof. of Edn., Greensboro Coll., Greensboro, N. C.

YOUNG, Elrid Gordon, Prof. of Biochem., Dalhousie Univ., Halifax, N. S., Can. **BIOCHEMISTRY.**

YOUNG, George Husband, Exec. Asst. Dir., Mellon Inst. Indus. Rsch., Pittsburgh, Pa. **ORGANIC CHEMISTRY.**

YOUNG, Harry Curtis, Chf., Dept. of Botany and Plant Pathol., Ohio Agri. Expt. Sta., Wooster, Ohio. **PLANT PATHOLOGY.**

YOUNG, Harold Edle, Asst. Prof. of Forest Mensuration, Univ. of Maine, Orono, Maine. **FOREST MENSURATION AND FOREST PHOTOGRAMMETRY**. b. Arlington, Mass., Sept. 4, 1917. s. Harry Rosen and Rosa (Kaplan) Y. Edn.: B.S., Univ. of Maine, 1937; M.F., Duke Univ., 1946; Ph.D., *ibid.*, 1948. m. Audrey London, Feb. 20, 1943. c.: Marjorie; Susan; Emily; Michael. Exp.: Field Asst., U. S. Forest Service, 1937, 1938-39; Foreman, *ibid.*, 1939-40; Timber Cruiser, Duke Power Co., 1941; Tchg. Asst., Duke Univ., summer 1947 and 1948; Instr., Duke Univ. of Maine, 1948-49; Asst. Prof., Univ. of Maine, 1949—.

Mem.: Soc. of Amer. Forestry; Ecol. Soc.; Amer. Soc. Plant Physiol.; Biometrics Soc.; Amer. Statistical Assn.; Amer. Soc. Photogrammetry; Soil Sci. Soc. Amer.; A.A.A.S.; Sigma Xi; Xi Sigma Pi. Contbr. to: Jour. Forestry; Ecology; Photogrammetric Engrng. War Record; Capt., Corps. of Engrs., 1942-46. Special Int.: Rsch. in Forest Photogrammetry, Forest Mensuration and Tree Physiol.; Specialized Knowledge in Field of Forest Mensuration; Tree Growth and Photo Interpretation Rsch.

YOUNG, Holylande Denune, Chemist, Argonne Natl. Lab., Univ. of Chicago, Chicago, Ill. **CHEMISTRY**.

YOUNG, John Albion, Jr., c/o Sun Oil Co., P. O. Box 1270, McAllen, Tex. **PALEONTOLOGY**.

YOUNG, John Paul, retired, 205 Devon Rd., Ithaca, N. Y. **BOTANY**.

YOUNG, Leigh Jarvis, Prof. of Silviculture, Univ. of Mich., Ann Arbor, Mich. **SILVICULTURE**.

YOUNG, Martin Dunaway, Officer in Chg. Malaria Rsch. Lab., Natl. Inst. of Health, P. O. Box 1344, Columbia, S. C. **PARASITOLOGY**.

YOUNG, Martin Tranthan, Entomologist, Bureau Entomol. and Plant Quarantine, U. S. D. A., 800 S. Lincoln St., Tallulah, La. **ENTOMOLOGY**.

YOUNG, Orville Louis, Assoc. Prof. of Agricultural Education, Ill. State Normal Univ., Normal, Ill. **AGRICULTURAL ENGINEERING**. b. October 26, 1898, Cannelton, Ind. s. William and Rose (Hinton) Y. Edn.: B.S., Purdue Univ., 1921; M.S., Ohio State Univ., 1931; Ph.D., Pa. State Coll., 1948. m. Mae Young of Cannelton, Ind., July 15, 1921. d. Dr. and Mrs. E. Young. Exp.: Tchr., McConnells-ville, Ohio, 1921-26; Tchr., Germantown, Ohio, 1926-34; Tchr., W. Chester, Ohio, 1934-39; Asst. Prof. of Agril. Edn., Ill. State Normal Univ., 1939-48; Assoc. Prof., *ibid.*, 1948—. Mem.: Sigma Xi; Phi Delta Kappa; Kappa Delta Pi; Gamma Sigma Delta; Pi Gamma Mu; etc. Ph.D. Dissertation: In-Service Up-Grading of Tchr. of Vocational Agriculture. Author: Rural Arithmetic, 1949; also articles and pamphlet. Hobbies: Magic; Wood-working. Listed in: Who's Who in Chicago and Ill.; Who's Who in the Midwest.

YOUNG, Paul Campbell, 2924 University Blvd., Dallas, Tex. **PSYCHOLOGY**.

YOUNG, Philena A., Prof. of Chem., Wells Coll., Aurora, N. Y. **CHEMISTRY**.

YOUNG, Robert Armstrong, Assoc. Horticulturist, Bureau Plant Indus., Soils and Agri. Engrng., Beltsville, Md. **HORTICULTURE**.

YOUNG, Rowland Lawrence, Mem., Tech. Staff, Bell Telephone Labs., 463 West St., N. Y., N. Y. **ENGINEERING**.

YOUNG, Vernon Alphas, Prof. and Hd., Dept. of Range and Forestry, Tex. A. and M. Coll., College Station, Tex. **RANGE MANAGEMENT**.

YOUNG, Vive Hall, Prof. of Plant Pathol. and Hd. Dept. of Pathol., Agri. Expt. Sta., Univ. of Ark., Fayetteville, Ark. **PLANT PATHOLOGY**.

YOUNG, William Caldwell, Assoc. Prof. of Anatomy, Univ. of Kans., Lawrence, Kans. **ENDOCRINOLOGY**.

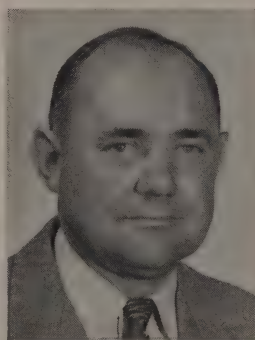
YOUNG, William Ernest, Dir., Elem. Edn., N. Y. State Edn. Dept., 10 Freeman Rd., Albany, N. Y. **EDUCATION**.

YOUNG, Rowland Lawrence, Electrical Engr., 447 No. Maple Ave., East Orange, N. J. **COMMUNICATION, SAFETY, STANDARDS**. b. Philadelphia, Pa., Oct. 3, 1886. s. William Rowland and Kate (Lawrence) Y. Edn.: B.S., Univ. of Pa., 1907; E.E., *ibid.*, 1928; P.E., Univ. of State of N. Y., 1936. m. Elizabeth Darlington Cope, Sept. 2, 1911. c.: William Cope. Lawrence Darlington; Katherine Ingram; Margaret Lawrence. Exp.: Pipe Line and Reservoir Construction, Pa. R.R. and Amer. Pipe Mfg. Co., 1905-06; Engr. Apprent., Westinghouse Electric, Pittsburgh, Pa., 1907-09; Dist.



Mgr., McGraw Pub. Co., 1909-10; Instr., Math., Carnegie Inst. of Tech.; Asst. Mgr., "Metallurgical and Chemical Engrng." and Edit. Staff, "Electrical World," New York City, 1910-11; Amer. Tel. and Tel. Co., N. Y. Headq. in charge power Engrng., 1911-19; Dept. of Devel. and Rsch., *ibid.*, 1919-34; Power Maintenance Engr., Bell Telephone Lab., N. Y. C., 1934-35; Power Maint., *ibid.*, Safety and Standards, 1935-49; Electrical Engr., East Orange, N. J. Hon. Pos.: Amer. Standards Assn. Standards Council, 1932-49; A.I.E.E. Standards Com.; Greater N. Y. Safety Council. Mem.: Fellow, A.A.A.S.; A.I.E.E.; A.S.S.E.; National Safety Council and Tel. Pioneers of Amer.; Soc. of Amer. Military Engrs.; Sigma Xi. Author: Greater N. Y. Safety Council "War Time Safety Rules," 1943; Safety Rules for Industry, 1946. Contbr. to: A.I.E.E., Electrical Engrng.; Trans. Bell Sys. Tech. Jour.; T.F.T.; A.S.A. Standardization. Gen. Int.: Holder of Patents on Storage Battery Operations and on Automatic Voltage Control, in general use throughout bell system since 1920. Special Int.: Communications-Telephone Power Plants, Storage Batteries, Safety of Equipment and Personnel, Industrial Standards.

YOUNG, William Gould, Prof. of Chem. and Dean of Div. of Phys. Sci., Univ. of Calif., Los Angeles, 955 Harvard St., Santa Monica, Calif. **ORGANIC CHEMISTRY**. b. July 30, 1902, Colo. Springs, Colo. s. Henry A. and Mary E. (Salisbury) Y. Edn.: A.B., Colo. Coll., 1924; M.A., *ibid.*, 1925; Ph.D., Calif. Inst. of Tech., 1929. m. Helen Graybeal, Pueblo, Colo., June 4, 1926. d. Mr. and Mrs. G. L. Graybeal. Exp.: Rsch. Asst., Coastal Lab., Div. of Plant Biol., Carnegie Inst., 1925-27; Rsch. Fellow, Amer. Petroleum Inst., Calif. Inst. of Tech., 1927-28; DuPont Fellow, 1928-29; Natl.



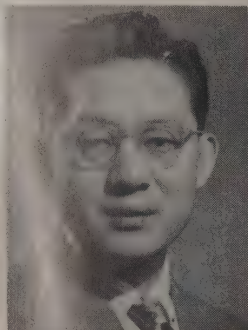
Rsch. Fellow, Stanford Univ., 1929-30; Instr., Univ. of Calif., Los Angeles, 1930-31; Asst. Prof., Chem., 1931-38; Assoc. Prof., Chem., *ibid.*, 1938-43; Chmn., Dept. of Chem., 1940-48; Prof. of Chem., *ibid.*, 1943—; Fac. Rsch. Lectr., 1947; Rsch. Fellow, Harvard Univ., Spring Term, 1940. Hon. Pos.: Natl. Acad. of Sci., 1951; Mem., Com. on the Professional Trng. of Chem., 1941-49; Chmn., 1949; Chmn., Div. of Organic Chem., Amer. Chem. Soc.,

1948-49. Mem.: Phi Lambda Upsilon; Sigma Xi; Delta Epsilon; A.C.S.; Kappa Sigma. Contbr. to: Jour. A.C.S.; Jour. Org. Chem.; Jour. Biol. Chem. Ph.D., Dissertation: The Synthesis and Analysis of the Normal Butenes. War Record: A Principal Investigator for Natl. Defense Rsch. Com., 1941-43. Hobbies: Golf, Fishing, Gardening. Listed in: A.M.S.; Who's Who in the Western Hemisphere; Who's Who in Calif.; Who's Who in Amer. Special Int.: Allylic Rearrangements, Displacement Reactions of Allylic Compounds, Allylic Grignard Reagents.

YOUNGKEN, Heber Wilkinson, Jr., Asst. Prof. of Pharmacognosy, Coll. of Pharmacy, Univ. of Wash., Seattle, Wash. PHARMACOGNOSY.

YOUTZ, Richard Pardee, Asst. Prof. of Psychol., Barnard Coll., Columbia Univ., N. Y., N. Y. LEARNING.

YUAN, Shao Wen, Assoc. Prof. of Aeronautical Engrng., Poly. Inst. of Brooklyn 4525 Henry Hudson Pkwy. Riversdale 71, N. Y. AERONAUTICS. b. Shanghai, China, April 16, 1914. s. Tian and Chieh Huang (Chien) Y. Edn.: B.S., Univ. of Mich., 1936; M.S., Calif. Inst. of Tech., 1937; A.E., Stanford Univ., 1939; Ph.D., Calif. Inst. of Tech., 1941. m. Hui Chih Hu, Nov. 5, 1950. Exp.: Chf. of Structures, Timm Aircraft Corp., 1940-41; Rsch. Engr., Vidal Rsch. Corp., 1941-42; Rsch. Engr., The Glenn Martin Co., 1942-43; Chf. of Rsch. and Vibration, McDonnell Aircraft Corp., 1943-45; Rsch. Adviser, Poly. Inst. of Brooklyn, 1945-49;



Rsch. Adviser, Poly. Inst. of Brooklyn, 1945-49;

Assoc. Prof., *ibid.*, 1949—. Mem.: A.A.A.S.; Inst. Aero. Sci.; Sigma Xi. Contbr. to: J. A. S.; Quart. Applied Math. Special Int.: Transpiration Cooling of Rocket and Jet Motors; Helicopter Vibration and Rotor Blade Aerodynamics; Turbulent Boundary Layer.

YOWELL, Everett I., Dir., Cincinnati Observatory, Cincinnati, Ohio. ASTRONOMY.

YUDKIN, Arthur M., Ophthalmologist, Yale Schl. of Med., Yale Univ., New Haven, Conn. OPHTHALMOLOGY.

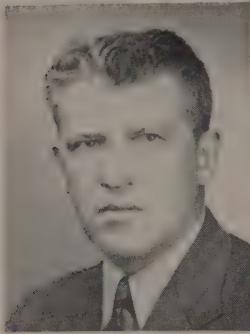
YUNCKER, Truman George, Prof. and Hd., Dept. of Botany, DePauw Univ., Greencastle, Ind. SYSTEMATIC BOTANY.

YUNKER, Edwin Arthur, Prof. of Phys., and Chairman of Department, Ore. State Coll., Corvallis, Ore. ELECTRONICS. b. July 31, 1901, Gresham, Ore. s. Louis and Viola (Forsyth) Y. Edn.: B.A., Univ. of Calif., 1924; Ph.M., Univ. of Wis., 1930; Ph.D., Stanford Univ., 1940. m. Gertrude Helen Harry of Jerome, Idaho, September 15, 1927. c.: Elaine Marie; Wayne Harry. Exp.: Prof. of Phys., Ore. State Coll., 1945—; Chmn., Dept. of Physics, 1949—. Mem.: Amer. Physics Soc.; A.A.A.S., (Fellow); Inst. Radio Engrng.; Sigma Xi; Phi Kappa Phi; Sigma Pi Sigma; Eta Kappa Nu. Ph.D. Dissertation: Scientific Instruments, Terrestrial Magnetism, and Atmospheric Electricity. Hobbies: Hunting; Fishing; Boating. Listed in: A.M.S.; Who's Who in Ore.; Who's Who on the Pacific Coast.

YUST, Harold Robert, Rsch. Entomologist, U. S. Bureau Entomol. and Plant Quarantine Lab., 534 E. Walnut St., Whittier, Calif. ENTOMOLOGY.

YUSTER, Sam, Univ. of Calif. at Los Angeles, Los Angeles, Calif. PETROLEUM PRODUCTION RESEARCH.

ZAHL, Harold A., Dir. of Rsch., Signal Corps Engrng. Lab., Ft. Monmouth, N. J. **PHYSICS.** b. Chatsworth, Ill., Aug. 24, 1904. s. Arthur Herman and Bertha (Dieber) Z. Edn.: B.S., North Central Coll., 1927; M.S., Univ. of Iowa, 1929; Ph.D., ibid., 1931. m. Vera Virginia Hiller on Dec. 17, 1948.



c.: James Frederick; Christopher Allen. Exp.: Rsch. Physicist, Signal Corps Engrng. Lab., 1931-42; Army Officer assigned to Signal Corps Engrng. Lab., 1942-46; Dir. of Rsch., ibid., 1946—. Mem.: Fellow, Amer. Phys. Soc.; Fellow, Inst. of Radio Engrs.; Armed Forces Communications Assn.; Internatl. Scientific Radio Union; Amer. Soc. for Engrng. Edn., Army Rsch. Comm.; Gamma Alpha; Sigma Xi. Author: The Romance of Phys., 1931. Contrb. to: Phys. Rev.; Jour. of Applied Phys.; Rev. of Scientific Instruments; Phys. Today; Proc. of the Inst. of Radio Engrs.; Jour. of Engrng. Edn.; Sky and Telescope. Special Int.: Phys.; Electronics.

ZABEL, Roland Meyer, Westinghouse Electric and Mfg. Co., Engrng. Div., Bloomfield, N. J. **PHYSICS.**

ZACHARIASEN, Frederik William Houlder, Univ. Chicago, Chicago 37, Ill.

ZANETTI, Joaquin Enrique, Prof. of Chem., Dir. Chem. Labs., Columbia Univ., N. Y., N. Y. **CHEMISTRY.**

ZANT, James Howard, Professor of Mathematics, Okla. Agricultural and Mechanical Coll., 148 S. Redwood Drive, Stillwater, Okla. **MATHEMATICS.** b. September 17, 1897, Breckenridge, Tex. s. John Solomon and Elizabeth (Loving) Z. Edn.: A.B., Southern Meth. Univ., Dallas, Tex., 1920; A.M., Columbia Univ., 1924; Ph.D., ibid., 1934. m. Ruth Skinner, Denison, Tex., June 14, 1923. d. Mr. and Mrs. Geo. W. Skinner. c.: Mary Elizabeth Zant Lewis, Martha Nell Zant Hardy. Exp.: Assoc. Prof. of Math., Southeastern State Tchrs. Coll., Durant, Okla., 1923-30; Prof. of Math., Okla. A. and M. Coll., 1930—; Act. Hd., ibid., 1942-46, Prof. and Asst. Hd., ibid., 1946-51; Dir. of Instruction of Okmulgee Br., 1946-48; Prof. Math., Okla. A. and M. Coll., Stillwater, Okla., 1951—. Mem.: Math. Assn. of Amer.; A.S.E.E.; Phi Delta Kappa; Kappa Delta Pi; Pi Mu Epsilon; Sigma Alpha Epsilon. Author: Elem. Math. Concepts, 1940; Tehng. Plan for Unit of Work in Math., 1935; Basic Math.—A Workbook, 1947; Coll. Algebra and Trigonometry, 1953. Contrb. to: Amer. Math. Monthly; Jour. of Eng. Edn.; Natl. Math. Mag.; Math. Tchrr.; Sci.; Edn. and Phi Delta Kappan; Schl. Sci. and Math. Ph.D. Dissertation: Tehng. Plan for Unit of Work in Math. War Record: Inf., 1918. Listed in: A.M.S.; Who's Who in the Central States.

ZARISKI, Oscar, Prof. of Math., Harvard Univ., Cambridge 38, Mass. **MATHEMATICS.** b. Kobrin, U.S.S.R., Apr. 24, 1899.



s. Bezalel and Anna (Tennenbaum) Z. Edn.: Dottore di Matematica, Univ. of Rome, Italy, 1923. Hon. Deg.: M.A., Harvard Univ. m. Yole Cagli, Sept. 11, 1924. c.: Raffael; Vera Laetitia. Exp.: Fellow Internatl. Edn. Bd., 1924-26; Johnston Scholar, Johns Hopkins Univ., 1927-29; Assoc., ibid., 1929-32; Assoc. Prof., ibid., 1932-37; Prof., ibid., 1937-45; Rsch. Prof. of Math., Univ. of Ill., 1946-47; Prof. of Math., Harvard Univ., 1947—. Mem.: Amer. Math. Soc.; Math. Assn. Amer.; A.A.A.S.; Natl. Acad. Sci.; Amer.

Acad. Arts and Sci.; Amer. Philos. Soc.; Instituto Lombardo delle Scienze; Acad. Sci. of Peru; Math. Soc. Sao Paulo. Author: Italian Translation of "Was sind und was sollen die Zahlen" and "Stetigkeit und irrationale Zahlen" (by R. Dedekind), and Historical Critical Notes, Rome, 1926; Algebraic Surfaces, Berlin, 1935. Contrb. to: Amer. Jour. Math.; Annals Math.; Trans. Amer. Math. Soc. Gen. Int.: Cole Prize in Algebra, Amer. Math. Soc., 1944. Special Int.: Algebraic Geometry; Modern Algebra.

ZAPFFE, Carl, Mgr., Iron Ore Properties, Northern Pacific Ry. Co., P. O. Box 93, Brainerd, Minn. **GEOLOGY.**

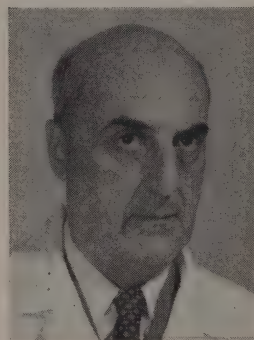
ZARAFONETIS, Chris John Dimiter, Asst. Prof., Dept. of Internal Med., Med. Schl., Univ. of Mich., Ann Arbor, Mich. **INTERNAL MEDICINE.**

ZARET, Matthew E., Electro-acoustical Rsch. Engr., Sonotone Corp., Elmsford, N. Y. **ACOUSTICS.**

ZARTMAN, Ira Forry, Muhlenberg Coll., Allentown, Pa. **PHYSICS.**

ZAUMEYER, William John, Sr. Pathologist, U. S. D. A., U. S. Horticultural Field Sta., Beltsville, Md. **PLANT PATHOLOGY.**

ZECHMEISTER, Laszlo K. E., Prof. of Organic Chem., Calif. Inst. of Tech., Pasadena, Calif. **ORGANIC CHEMISTRY.** b. Győr, Hungary, May 14, 1889. s. Charles and Irene (Mocsary) Z. Edn.: Dr. ing. Eidg. Techn. Hochschule Zurich, Switzerland. m. Elizabeth Sulzer, Mar. 16, 1947. Exp.: Asst. Kaiser Wilhelm Inst., Belin-Dahlem, 1912-14; Instr., Roy. Danish Vet. Agric. Acad., Copenhagen, 1921-23; Prof. of Chem., Medical Schl., Univ. of Pécs, Hungary, 1923-40; Prof. of Organic Chem., Calif. Inst. of Tech., 1940—. Mem.: Amer. Chemical Soc.; Royal Danish Acad. of Sci.



Author: Organic Chem., 1930-32; Principles and Practice in Chromatography, 1941; Progress in Chromatography, 1938. Contrb.: Jour. Amer. Chem. Soc.; Archives Biochem. Biophys.; Harvey Lectures; Sci.; Ann. N. Y. Acad. Sci.; Proc. Natl. Acad. Sci.; Jour. Biol. Chem.; Experimentia; Enzymologia; Etc. Special Int.: Chem. and Spectroscopy of Organic Natural Products, Carotenoids, Carbohydrates, Fluorescent Substances, Stereochemistry of Cistrans Compounds (natural and synthetic), and Some Biological Relationships. Methods of Chromatography; Carcinogenic Compounds.

ZECKWER, Isolde T., Asst. Prof. of Pathol., Univ. of Pa. Med. Schl., Philadelphia, Pa. **PATHOLOGY.**

ZELLER, John Henry, In Chg., Swine Investigations, Agril. Rsch. Admin., U. S. Dept. of Agri., Beltsville, Md. **SWINE INVESTIGATIONS.** b. Shippensburg, Pa., Oct. 5, 1894. s. William M. and Mary Ellen (Steiger) Z. Edn.: B.S., Pa. St. Coll.; M.A., George Washington Univ. m. Helen Webb, Sept. 10, 1919. c.: William Webb. Exp.: Continuously Engaged in Swine Rsch. Activities of the Bureau of Animal Indus., U. S. D. A., 1917—. Mem.: A.A.A.S.; Amer. Soc. Animal Production; Wash. Acad. Sci.; Amer. Genetics Soc.; Phi Kappa Phi; Phi Gamma Mu. Contrb. to: Farmers Bull.; etc. War Record: U. S. Naval Air Force,



World War I. Gen. Int.: The Development of Superior Inbred Lines of Meat-Type Hogs Derived from Crossbred Foundations of Danish Landrace with other Breeds. Special Int.: Breeding, Progeny Testing, Management, Feeding and Nutrition, and Physiol. of Swine.

ZIEGLER, Margaret May, Assoc. Prof. of Psychol., Univ. of Ga., Athens, Ga. **GENERAL, SOCIAL AND GENETIC PSYCHOLOGY.**

ZELENY, Anthony, Prof. Emer. Physics, Univ. of Minn., 1933 E. River Terrace, Minneapolis, Minn. **PHYSICS.**

ZELENY, John, Prof. Emer. Physics, Yale Univ., 44 Cold Spring St., New Haven, Conn. **PHYSICS.**

ZELENY, Lawrence, Chf., Standardization Resch. and Testing Div., Grain Branch, U. S. D. A., Washington, D. C. **AGRICULTURAL BIOCHEMISTRY.**

ZEMANSKY, Mark Waldo, Prof. of Physics, City Coll., N. Y. 31, N. Y. **PHYSICS.** b. N. Y., N. Y., May 5, 1900. s. Abraham Philip and Rebecca (Cohen) Z. Edn.: B.S., City Coll. of N. Y., 1921; A.M., Columbia Univ., 1922; Ph.D., ibid., 1927. m. Adele Cohen, Sept. 25, 1932. c.: Philip L.; Herbert D. Exp.: Instr., The City Coll., 1925-32; Asst. Prof., ibid., 1932-38; Assoc. Prof., ibid., 1938-49; Prof., ibid., 1949—. Hon. Pos.: Pres., A.A.P.T., 1951. Mem.: Fellow, Amer. Physical Soc.; A.A.P.T.; Sigma Xi; Netherlands Physical Soc.; A.A.U.P.; Zeta Beta Tau; Phi Beta



Kappa; Sigma Xi; Sigma Pi Sigma. Author: *Resonance Radiation and Excited Atoms*, 1934; *Heat and Thermodynamics*, 1937; *College Physics*, 1947; *Univ. Physics*, 1949. Contrb. to: *Physical Rev.*; *Amer. Jour. Physics*; *Rev. of Scientific Instruments*; *War Record*; *Student Army Trng. Corps*, 1918. Gen. Int.: *Assoc. Editor, Amer. Jour. Physics*. Special Int.: *Thermodynamics and Low Temperature Physics*; *Coll. Tchng.*

ZENER, Clarence, Westinghouse Rsch. Labs., E. Pittsburgh, Pa. **SOLID STATE PHYSICS.**

ZENTMYER, George Aubrey, Jr., Asst. Plant Pathologist, Citrus Expt. Sta., Univ. of Calif., Riverside, Calif. **PLANT PATHOLOGY.**

ZERBAN, Frederick William, Chemist in Chg., N. Y. Sugar Trade Lab., 113 Pearl St., N. Y., N. Y. **SUGAR CHEMISTRY AND TECHNOLOGY.**

ZERFAS, Leon Grotius, Assoc. Prof. of Med., Med. Schl., Ind. Univ., Indianapolis, Ind. **BIOCHEMISTRY, MEDICINE.**

ZIEGLER, James, Rsch. Specialist, Smithsonian Inst., D. C. Balboa, Canal Zone. **BIOLOGY.** b. Chicago, Ill., Dec. 12, 1886. s. Vaclav and Johanna (Veckero) Z. Edn.: Univ. of Ill., 1911. m. Maria Louisa Gutierrez, Nov. 3, 1913. c.: Ella. Exp.: Entomologist, Isthmian Canal Commn., 1911-13; Dir. General, Exposicion Nacional de Panama conmemorativa de la apertura del Canal de Panama, 1914-1915; Prof. of Botany, Zool., Anatomy, Instituto Nacional de Panama, 1915-18; Entomologist, The Panama Canal, 1918-21; Specialist in Tropical Insects, U. D. Dept. of Censor, World War I;



Agri., 1921-25; Technical

Entomologist, Bureau Entomol. and Plant Quarantine, 1926-53; Curator, Barro Colorado Island Biological Area, 1923-53; Resident Mgr., Canal Zone Biol. Area, 1945—; Rsch. Specialist, Smithsonian Inst., 1952—. Hon. Pos.: Gold Medal, Sci., Natl. Inst. of Panama; Gran Prix, Sci., Exposicion Nacional de Panama; Pro Ecclesia et Pontifice Gold Medal and Diploma (Pope Pius XI); Byrd II Antarctic Expedition; Vazco Nunez de Balboa condecoracion (Panama); Fundacion Internacional Eloy Alfaro (Ecuador). Contrb. to: *Annals Entomol. Soc. Amer.* Special Int.: *Marine Borers*; *Mollusks of Panama*; *Termites*; *Fruit Flies*; *Flight of Malaria Mosquitos*.

ZIEGLER, Edwin Allen, Retired Prof. Forest Econ. and Management, Univ. of Fla., College Park, Lewisburg, Pa. **FOREST ECONOMICS, FOREST MANAGEMENT.** b. Rebersburg, Pa., Sept. 20, 1880. s. Thos. R. and Lydia Anna (Yearick) Z. Edn.: A.B., Franklin and Marshall Coll., 1902; A.M., ibid., 1916. Hon. Deg.: Sc.D., Franklin and Marshall Coll., 1923. m. Rebecca J. Moyer, 1905. m. 2nd, Josephine Elizabeth Kreider, 1935. c.: Elizabeth R.; Joanna R.; Miriam M. Exp.: Prin. Rebersburg H. S., 1902-03; Chief Forest Mensuration, U. S. Forest Service, 1903-09; Dir., Pa. State Forest Schl., 1910-29; Sr. Forest Economist, So. Forest Expt. Sta., New Orleans, La., 1929-31; Hd., Forest Rsch. Pa. Dept. Forests and Waters, Harrisburg, Pa., 1932-37; Prof., Forest Econ. and Management, Univ. of Fla., 1937-51; Consulting Forester, 1938—. Hon. Pos.: Past Pres. Pa. Acad. of Sci.; Secy. State Comm. to Report Forest and Mineral Land Taxation in Pa.; Past Chmn., Gulf Sect., Alleghany Sect. and S. E. Sect., Soc. Amer. Foresters. Mem.: Fellow, Soc. Amer. Foresters; Fellow, A.A.A.S.; Phi Sigma Kappa; Xi Sigma Pi; Sigma Xi. Author: *Co-Author, Revised Woodsman's Handbook*, 1909. Contrb. to: *Jour. Amer. Forestry*; *Report Pa. Acad. Sci. War Record*; *W. W. I. Maj. Special Int.: Forest Econ., Finance, Management.*



ZIEGLER, Edwin Eugene, Consulting Pathologists, 37 E. Orange St., Lancaster, Pa. **HEMATOLOGY AND CLINICAL PATHOLOGY.** b. Williamsport, Pa., Aug. 14, 1904. s. Calvin Henry and Mary E. (Houseworth) Z. Edn.: A.B., Geo. Wash. Univ., 1927; M.D., ibid., 1928. m. Margaret Smuck, Oct. 19, 1929. c.: Edwin E., Jr.; Thomas W. Exp.: Intern, Geo. Wash. Univ. Hosp., 1928-29; Physician and Pathologist, U. S. Veterans Admin., 1929-37; Pathologist, U. S. Marine Hosp., U. S. P. H. S., Boston, Mass., 1938-42; Pathologist, St. Luke's Hosp., Bethlehem, Pa., 1942-45; now Consulting Pathologist, St. Joseph's Hosp., Lancaster, Pa., Good Samaritan Hosp., Lebanon, Pa., Columbia Hosp., Columbia, Pa., Hershey Hosp., Hershey, Pa., and Atlee Medical Group, Lancaster, Pa. Mem.: Fellow, A.M.A.; Fellow, A.A.A.S.; Amer. Coll. Physicians; Coll. Amer. Pathologists; Amer. Soc. Clinical Pathologists; Pa. Soc. Clinical Pathologists; Philadelphia Pathol. Soc.; Lancaster Co. Med. Soc.; Amer. Assn. Pathologists and Bacteriologists; AKK Med. Frat. Contrb. to: *Jour. Lab. and Clinical Med.*; *Med. Annals of Dist. of Columbia*; *Jour. Aviation Med.*; *A.M.A.*; *Arch. Pathol.*; *Annals Internal Med.*; *Jour. Amer. Dental Assn.*; *Annals of Surgery*. Special Int.: *Pathology*; *Clinical Pathol.*; *Hematology*; *Physiol. Med. Rsch.*

ZIEGLER, Nicholas Alexander, Rsch. Metallurgist, Rsch. Labs., Crane Co., 4100 S. Kedzie Ave., Chicago, Ill. **METALLURGY.**

ZIERER, Clifford Maynard, Prof. of Geography, 405 Hilgard Ave., Los Angeles, Calif. **GEOGRAPHY**

ZIES, Emanuel George, Chemist, Geophysical Lab., Carnegie Inst. of Wash., Washington, D. C. **BIO-CHEMISTRY.**

ZIGLER, Michael Jacob, Prof. and Chmn., Dept. of Psychol., Wellesley Coll., Wellesley, Mass. **PSYCHOLOGY, NEUROPHYSIOLOGY.**

ZIMMER, John Todd, Curator, Dept. of Birds, Amer. Museum Natural History, N. Y., N. Y. **ORNITHOLOGY.**

ZIMMERMAN, Carle Clark, Assoc. Prof. of Sociology and Tutor, Harvard Univ., Cambridge, Mass. **SOCIOLOGY.**

ZIMMERMAN, H. M., Montefiore Hosp., N. Y., N. Y. **PATHOLOGY.**

ZIMMERMAN, Jane Dorsey, Columbia Univ., N. Y. **C. SPEECH AND HEARING.**

ZIMMERMAN, Lester Irwin, Prof. of Physics, Harris Tchrs. Coll., St. Louis, Mo.

ZIMMERMAN, Percy White, Plant Physiologist, Boyce Thompson Inst. Plant Rsch., Inc., 1086 N. Broadway, Yonkers, N. Y. **PLANT PHYSIOLOGY.**

ZIMMERMANN, Arnold Albert, Prof. of Anatomy, Coll. of Med., Univ. of Ill., 1853 W. Polk St., Chicago, Ill. **EMBRYOLOGY.**

ZIMMERSCHIED, Charlotte Emma, Asst. Prof. of Astron. and Physics, Southern Ill. State Normal Univ., Carbondale, Ill.

ZINN, Justin, Prof. of Geology, Dept. of Geology and Geography, Mich. State Coll., East Lansing, Mich. **GEOLOGY.** b. May 13, 1903. Bronson, Mich. s. Clyde E. and Elizabeth (Heltzel) Z. Edn.: B.S., Univ. of Mich., 1928; M.S. in Geology, Mich. Coll. of Mining and Technology, 1930; Ph.D. in Geology, Univ. of Wis., 1933. m. Angela T. Conte of Ishpeming, Mich., Dec. 5, 1936. d. Joseph and Constance Conte. c.: Constance K., Justin J., Alan C., Vicki Ann. Exp.: Instr. in Geol., Mich. Coll. of Mining and Tech., 1929-30; Rsch. Assoc. in Geol., Univ. of Wis., 1932-33; Ednl. Adv., C. C. C., 1934-36; Instr. in Geol., Mich. State Coll., 1937-40; Asst. Prof. in Geol., ibid., 1940-44; Asst. Prof., Physical Science, 1944-45; Assoc. Prof., Physical Sci., 1945-48; Prof., 1948-52; Prof. of Geology, ibid., 1952—. Mem.: Phi Beta Kappa; Sigma Xi; Sigma Gamma Epsilon; Phi Kappa Phi; Sigma Rho; A.I.M.E.; A.A.A.S.; G.S.A. Ph.D. Dissertation: Upper Huronian of the Marquette District, Mich.

ZINN, Walter Henry, Dir. of Lab., Argonne Natl. Lab., Chicago, Ill. **PHYSICS.**

ZINSZER, Harvey Alfred, Hd., Dept. of Physics and Astron., Fort Hays Kansas State Coll., Hays, Kans. **PHYSICS, ASTRONOMY.**

ZIRKLE, Conway, Prof. of Botany, Univ. of Pa., Philadelphia, Pa. **BOTANY.**

ZIRKLE, Raymond E., Prof. of Botany and Dir., Inst. Radiobiology and Biophysics, Univ. of Chicago, Chicago, Ill. **RADIATION BIOLOGY.**

ZISMAN, W. A., Naval Rsch. Lab., Washington, D. C. **LUBRICATION.**

ZOBELL, Claude E., Prof., Microbiol., Scripps Institute, Univ. of Calif., La Jolla, Calif. **BACTERIOLOGY; OCEANOGRAPHY.** b. Provo, Utah, Aug. 22, 1904. s. E. A. and Stella Mae (Davis) Z. Edn.: So. Idaho Coll. of Edn., 1922-24; B.S., Utah State Agri. Coll., 1927; M.S., ibid., 1929; Ph.D., Univ. of Calif., 1931. m. Margaret Harding of Logan, Utah, June 5, 1930. d. Geo. D. Harding. c.: Karl Mark; Dean Harding. m. Jean Switzer, May 5, 1946, of Knoxville, Tenn. d. J. A. Switzer. Exp.: Prin., Rigby, Ida., Elem. Schl., 1924-26; Instr. in Bact., Utah State Agri. Coll., 1928-29; Thompson Scholar, Univ. of Calif., 1929-

31; Rsch. Assoc. at Hooper Foundation for Med. Rsch., 1931; Instr., 1932-36; Asst. Prof., 1936-42; Assoc. Prof. of Microbiology, 1942-48, Scripps Inst. of the Univ. of Calif.; Assoc. at Univ. of Wis., 1938-39; Assoc. at the Woods Hole Oceanographic Inst. During Summer of 1939. Hon. Pos.: Hon. Mem., Byrd Antarctic Expedition II; Dir., Amer. Petrol. Inst. Rsch. Project 43A; Special Fellow, Rockefeller Foundation, 1947-48; Visiting Lectr., Princeton Univ., 1948. Mem.: A.A.A.S.; Amer. Biol. Soc.; Amer. Assn. Petroleum Geol.; A.C.S.; Amer. Soc. Limnol. and Oceanogr.; Western Soc. Naturalists; Soc. Gen. Microbiol.; Soc. of Amer. Bact.; Ecol. Soc. of Amer.; Natural Hist. Soc. of San Diego; Sigma Xi; Phi Kappa Phi. Author: Marine Microbiology, 1946. Contrb. to: Oil Weekly; Petroleum World; Quart. Rev. Biol.; Jour. Bact.; Sci.; Biol. Bull.; Jour. Marine Rsch.; Ecology; Sci. Monthly; Bull. Amer. Assn. Petrol. Geol. Ph.D. Dissertation: Cultural Requirements and Metabolism of the *Brucella* Group. War Record: Special Rsch. Work for Amer. Petroleum Inst.; Rsch. on Fouling of Ship Bottoms. Travel: N. Amer.; Europe; Britain; Far East; Australia. Hobbies: Tennis; Gardening; Photography. Listed in: A.M.S.; Naturalists' Dir.; Who Knows— and What.

ZOLENAS, Anthony J., Jr., Post Inspector General, Apt. 1, Main Dr., Army Med. Center, Washington, D. C. **HOSPITAL PHARMACY.**

ZON, Raphael, Doswell Ave., St. Paul, Minn. **FORESTRY.**

ZOOK, Leslie Lewis, Agronomist, Soils, Fertilizer and Irrigation, U. S. D. A., N. Platte, Nebr. **AGRONOMY.**

ZOTTU, Paul D., Consulting Engr. and Physicist, 95 Country Club Rd., Newton Centre, Mass. **INDUSTRIAL ELECTRONICS.**

ZSCHEILE, Frederick Paul, Assoc. Prof. of Agron. and Assoc. Biochemist, Expt. Sta., Coll. of Agri., Univ. of Calif., Davis, Calif. **BIOCHEMISTRY.**

ZUBIN, Joseph, Instr. in Psychiatry, Columbia Univ., N. Y., N. Y. **PSYCHOLOGY.**

ZUCKERMAN, Herbert G., 900 Mendocino Ave., Berkeley, Calif. **SEED POTATOES.**

ZUKER, William Berdette, Vice-Pres. and Prof. of Chem., Univ. of Dubuque, 2050 University Ave., Dubuque, Iowa. **CHEMISTRY.**

ZUNDEL, George Lorenzo Ingram, Asst. Prof. of Plant Pathol., Pa. State Coll., State College, Pa. **USTILAGINALES.**

ZUPKO, Arthur George, St. Louis Coll. of Pharmacy, St. Louis, Mo. **PHARMACOLOGY.**

ZWERMANN, Carl H., 806 W. Main St., Robinson, Ill.

ZWICK, Karl G., Asst. Prof. of Dermatology and Syphilology, Univ. of Cincinnati, Cincinnati, Ohio. **DERMATOLOGY.**

ZWICKY, Fritz, Prof. of Astrophysics, Calif. Inst. of Tech., Pasadena, Calif. **PHYSICS, ASTRONOMY.**

ZWORYKIN, Vladimir Kosma, Dir. of Rsch., Vice-Pres. and Technical Consultant, RCA Labs. Div., Princeton, N. J. **PHYSICS; ELECTRONICS.** b. Mouron, Russia, July 30, 1889. s. Kosma and Elaine (Zworykin) Z. Edn.: E.E., Petrograd. Inst. of Tech., 1912; Ph.D., Univ. of Pittsburgh, 1926. Hon. Deg.: D.Sc., Brooklyn Poly. Inst., 1938. m. Tatiana Vasilieff. c.: Nina and Elaine. 2nd m. Dr. Katherine Plevitsky. Exp.: Engaged in Rsch. with Westinghouse Elec. and Mfg. Co., 1920-29; Dir. of Electronic Rsch., RCA Mfg. Co., 1929-42; Assoc. Rsch. Dir., RCA Labs., 1942-45; Dir. of



29; Thompson Scholar,

Univ. of Calif., 1929-

Electronic Rsch., *ibid.*, 1946—; Vice-Pres. and Technical Consultant, RCA Labs. Div., Radio Corp. of Amer., 1947—. Hon. Pos.: Natl. Rsch. Council; Mem. on Sensory O.S.R.D.; Chevalier, French Legion of Honor. Mem.: Fellow, Inst. of Radio Engrs.; Fellow, Amer. Inst. Elec. Engrs.; Fellow, Amer. Phys. Soc.; Fellow, A.A.A.S.; Fellow, N. Y. Acad. Sci.; Amer. Acad. of Arts and Sciences; Amer. Phys. Soc.; Natl. Acad. Science; Sigma Xi; Electron Microscope Soc. of Amer.; Officer, French Acad. of Sci.; Soc. of Motion Picture and TV Engrs.; Eminent Mem., Eta Kappa Nu Assn. Co-author: Photocells and Their Application, 1932; Television, 1940; Electron Optics and the Electron

Microscope, 1945; Photoelectricity and Its Application, 1949. Contbr. to: Proc. Inst. of Radio Engrs.; Jour. Institution of Elec. Engrs. (London); Phys. Rev.; Jour Applied Phys.; Jour. Optical Soc. Amer.; Proc. Soc. Motion Picture Engrs.; Jour. Franklin Inst.; Elec. Engrng.; Electronics; Sci.; etc. War Record: Signal Corps, Russian Army, 1914-18. Gen. Int.: Development of Electronic TV; Inventor of Iconoscope and Perfection of Kinescope (tv viewing tube); Development of Secondary Emission Multipliers, Image Tubes, Electron Microscope, Industrial TV Equipment and various other Electronic Devices. Special Int.: Television; Phys. Electronics; Photoelectricity; Electron Optics.

